

University of Pécs, Faculty of Health Sciences

Head of the Doctoral School:
Prof. Dr. József Bódis

Rector and Member of the Hungarian Academy of Sciences

**Limited Forensic Assessability of Soft Tissue Injuries.
Contrastive Terminological Analyses of Hungarian, Austrian and
German Medical Diagnostic Reports**

PhD Dissertation

Katalin Fogarasi

Head of the Doctoral Programme:

Prof. Dr. Gábor Kovács L. Regular Member of the Hungarian Academy of
Sciences

Supervisors:

Dr. Gábor Rébék-Nagy, Head of the Department of Languages for Specific
Purposes, Faculty of Medicine, University of Pécs (Hungary)

Prof. Dr. Thomas Riepert, Deputy Head of the Department of Forensic
Medicine, Medical Center of the Johannes Gutenberg-University of Mainz
(Germany)

Pécs

2012

TABLE OF CONTENTS

PREFACE.....	01
1. INTRODUCTION.....	02
1.1. Writing medical reports.....	02
1.2. Audience of reports.....	02
1.3. Medical diagnostic reports on injuries (MDRI).....	02
1.4. Linguistic approach to MDRI.....	03
1.5. Professional communication in medicine.....	03
1.5.1. Principles of effective communication.....	03
1.5.2. Language for Specific Purposes (LSP).....	04
1.5.3. Layers of Languages for Specific Purposes (LSP).....	05
1.6. Genre analysis in medicine	06
1.6.1. Concepts of discourse and genre.	06
1.6.2. Discourses and genres in medicine	07
1.7. The genre of medical diagnostic report (MDR) on injuries	09
1.7.1. Generic characteristics.....	09
1.7.2. The forensic discourse in the continental and the Anglo-Saxon legal system.....	10
1.7.3. The role of MDRI in the forensic discourse of Germany, Austria and Hungary.....	10
1.7.4. Terminology depicting injuries in Germany, Austria and Hungary.....	12
1.7.5. Forensic problems with ambiguous MDRI and their possible consequences.....	13
1.7.6. Linguistic analyses previously conducted on the terminology of forensic medicine.....	14
1.8. Terminological analysis in medicine	14
1.8.1. Theory of terminology	14
1.8.2. Quality criteria of LSP and terminology: unambiguousness versus synonymy	12
1.8.3. Determinacy and indeterminacy	17
1.8.4. Medical terminology.....	18
1.8.5. Analysis of genre-specific collocations or lexico-grammatical patterns	19

2.	GOALS AND HYPOTHESES.....	22
2.1.	Description of the genre MDRI.....	22
2.2.	Interdiscursivity in MDRI.....	22
2.3.	Contrastive terminological analysis.....	22
2.4.	Hypotheses.....	23
3.	MATERIAL AND METHODS.....	24
3.1.	Sources of forensic files.....	24
3.2.	Exclusion and inclusion criteria.....	24
3.3.	Methods of collecting forensic files.....	25
3.4.	Macro- and microstructure of the corpus.....	25
3.5.	Methods of statistical analysis.....	26
3.6.	Difficulties of creating a well-balanced corpus pertaining to file numbers.....	28
3.7.	Methods of corpus analysis.....	28
3.8.	Methods of collocation analysis.....	29
4.	RESULTS.....	30
4.1.	Results of general statistics.....	30
4.1.1.	Cause of injuries.....	30
4.1.2.	Primary treating doctors.....	31
4.1.3.	Registration of the exact time of treatment.....	31
4.1.4.	Registration of the consumption of alcohol and narcotics.....	32
4.2.	Assessability of MDRI by the expert opinions.....	32
4.3.	Terms describing soft tissue injuries.....	33
4.4.	Terms for soft tissue injuries in the Hungarian sub-corpus.....	34

4.4.1. Terms depicting soft tissue injuries in parts A and B of the Hungarian MDRIIs.....	34
4.4.2. Comparison of terms in parts A and B of the Hungarian MDRIIs.....	35
4.4.3. Comparison of Hungarian and Latin diagnoses (B) in the Hungarian sub-corpus...	35
4.4.4. Terms used in Hungarian expert opinions (C).....	36
4.4.5. Regional differences in the use of terms in Hungary.....	39
4.5. Terms describing soft tissue injuries in the Austrian sub-corpus.....	39
4.5.1. Terms depicting soft tissue injuries in parts A and B of the Austrian MDRIIs.....	39
4.5.2. Comparison of terms in parts A and B of the Austrian MDRIIs.....	39
4.5.3. Terms used in Austrian expert opinions (C).....	40
4.5.4. Regional differences in the use of terms in Austria.....	42
4.6. Terms describing soft tissue injuries in the German sub-corpus.....	42
4.6.1. Terms depicting soft tissue injuries in parts A and B of the German MDRIIs.....	42
4.6.2. Comparison between terms in parts A and B of the German MDRIIs.....	43
4.6.3. Terms used in German expert opinions (C).....	44
4.6.4. Regional differences in the use of terms in Germany.....	45
4.7. Comparison between the use of terms in Austrian and Hungarian MDRIIs.....	47
4.8. Comparison between terms in the Austrian and German MDRIIs.....	49
4.9. Comparison between terms in the Hungarian, Austrian and German MDRIIs.....	51
4.10. Correlation between injuries in descriptions (A), diagnoses (B) and expert opinions (C).....	52
4.10.1. Correlation between described (A) and diagnosed (B) injuries in Hungary, Austria and Germany.....	52
4.10.2. Correlation between described (A) and assessed (C) injuries in Hungary, Austria and Germany.....	53
4.10.3. Statistical correlation between diagnosed (B) and assessed (C) injuries in Hungary, Austria and Germany.....	54

4.10.4.	Correlation between the synonymous group correspondence variables A-B and B-C	55
4.11.	Synonymous groups of unidentifiable injuries in A, B and C.....	55
4.11.1.	The synonymous group ‘tenderness on pressure’ in parts A, B and C of the files....	56
4.11.2.	The synonymous group ‘bruise’ in parts A, B and C of the files.....	57
4.12.	The largest synonymous group ‘lacerated wound’ in parts A, B and C of the files...	58
4.13.	Registered characteristics of soft tissue injuries.....	58
4.13.1.	Registration of size.....	59
4.13.2.	Registration of numbers of injuries.....	61
4.13.3.	Registration of shape.....	62
4.13.4.	Registration of further characteristics of injuries.....	62
4.13.5.	Distribution of the characteristics in descriptions.....	65
4.13.6.	Influence of recorded characteristics of injuries on the assessability of MDRI.....	65
4.14.	Registration of the exact location of soft tissue injuries.....	66
4.15.	Registration of location.....	67
4.15.1.	Registration of location in the Hungarian sub-corpus.....	68
4.15.2.	Registration of location in the Austrian sub-corpus.....	70
4.15.3.	Registration of location in the German sub-corpus.....	71
4.16.	Lexico-grammatical analysis.....	73
4.16.1.	Lexico-grammatical analysis of the Hungarian sub-corpus.....	73
4.16.2.	Lexico-grammatical analysis of the Austrian sub-corpus.....	74
4.16.3.	Lexico-grammatical analysis of the German sub-corpus.....	75
5.	DISCUSSION.....	78
5.1.	The genre of MDRI.....	78
5.2.	Interdiscursivity.....	78
5.3.	Subjective symptoms of patients as unidentifiable injuries.....	79
5.4.	Terms lacking specification as unidentifiable injuries.....	79

5.5.	Synonymy.....	80
5.6.	Inconsistent use of nominal collocations.....	87
5.7.	The role of genre-specific nominal collocations.....	89
5.8.	Various levels of terminologisation.....	90
5.9.	Different levels of professionalism.....	93
5.10.	Important circumstances and characteristics of injuries not registered precisely....	94
5.11.	Forensic assessability.....	95
5.12.	Comparison of the Hungarian, Austrian and German ways of recording injuries...	96
5.13.	Need for standardisation.....	97
6.	CONCLUSION.....	100
	REFERENCES.....	102
	TABLE OF GRAPHS AND CHARTS.....	109
	APPENDIX.....	114
	OWN PUBLICATIONS.....	167
	ACKNOWLEDGEMENT.....	170

LIST OF ABBREVIATIONS

- DIN = Deutsches Institut für Normung
- EGP = English for General Purposes
- ESP = English for Specific Purposes
- GP = General practitioner
- ICD = International Statistical Classification of Diseases and Related Health Problems
- ISO = International Standards Organisation
- KWIC = Key Word in Context
- LGP = Language for General Purposes
- LSP = Language for Specific Purposes
- MDRI = Medical Diagnostic Report on Injuries
- SFL = Systemic Functional Linguistics
- SPSS = Statistical Package for the Social Sciences

"Gutta cavat lapidem non vi sed saepe cadendo."

(A drop of water hollows the stone, not with force but by falling often.)

Ovidius: Epistulae ex Ponto 4, 10 5

Preface

The communication of medical and health care professionals has been regarded for thousands of years as a very closed system which has never allowed laypeople to become part of it. On the one hand, laypeople do not possess the knowledge of the medical background and the specific code system which is called medical terminology. On the other hand, patients are not required to understand everything said by physicians about their conditions. However, over the years medicine has overlapped with an increasing array of scientific fields which has contributed greatly to its technical and methodological development. Nowadays, disciplines focusing on and interacting with various aspects of medical research operate on the border areas of health sciences.

In accordance with the core message of the quote above, this study is meant to be one of the drops which started to fall on the stone of medical professional communication from the direction of linguistics in the 20th century. These drops are not there to form the stone's inner structure or alter its essence. They merely observe its development and come into contact with its surface again and again by exchanging ideas and ways of thinking.

Applied linguistics has realised that the empirical exactness of natural sciences is needed for the objectification of linguistic research. Just as linguistics has been enriched with these aspects of the sciences including medical sciences, the latter might also adopt some suggestions from the field of humanities in order to establish valuable and effective cooperation resulting in a new, long-lasting 'dripstone' formation.

1. INTRODUCTION

1.1. Writing medical reports

Writing reports on diagnostic findings is an obligatory part of every physician's work all over the world. It is required by hospital administration, the patient, the patient's GP or another medical doctor having referred the patient, and sometimes by the physician him/herself as research material. A diagnostic report must contain the patient's medical history, the present symptoms, examinations along with their results and records of the treatment applied. In cases of using invasive diagnostic or therapeutic methods the steps of interventions are also to be recorded.

1.2. Audience of reports

While formulating medical diagnostic reports physicians probably do not regard patients as their audience because at the same time they must also inform patients of their conditions and further treatment in person. Patient consultation takes place in a way that patients are able to understand, while findings are predominantly written for colleagues at hospitals or other medical institutions. However, according to the regulations of different countries, medical records either belong to the patients, or patients may at least view their reports and receive a copy of them.

1.3. Medical diagnostic reports on injuries (MDRI)

When injuries are caused by accidents or assaults, patients are usually treated at departments of traumatology. The primary issue in such circumstances is providing first aid, and in many cases, saving lives or preventing long-term health complications. Physicians have to make decisions very quickly being aware of the fact that their decisions affect not only the patients' lives but sometimes also the lives of their family. Besides this kind of stress and grave responsibility they are also obliged to register each case for the reasons mentioned above.

From a linguistic point of view, medical reports are regarded as products of the combination of two aspects: the exact results of examinations on the one hand, and the complex everyday life influenced by both personal and cultural factors, on the other (Demeter 2010: 223). They represent a kind of written language used for medical purposes. So, MDRI – as any other kinds of written genres - can be analysed at the lexical, syntactical and semantical levels.

1.4. Linguistic approach to MDRI

The present study aims to conduct linguistic research on medical diagnostic reports which register injuries caused by accidents and assaults, with a focus on soft tissue injuries. The analysis is performed using the methods of applied linguistics combining with those borrowed from other social sciences such as ethnology and sociology, as well as with those of structural linguistics. As the present thesis focuses on linguistic problems affecting the communication in health care practice, within this frame there is no possibility to perform a comprehensive critical analysis of the underlying linguistic theories. However, the essential linguistic concepts will be presented to make their role in medical setting clear.

1. 5. Professional communication in medicine

1.5.1. Principles of effective communication

Communication can be defined as an action in which information is transferred between parties through different transmission relaying systems (Kurtán 2003: 13, translated by the author). The communicative situation can only be regarded as successful, if the information arrives at the receiver without any transformation or alteration. According to Grice's theory (1975), this action always requires the cooperation of the parties through keeping the following principles in mind: 'make your conversational contribution such as is required, at the stage at which it occurs, by the accepted purpose or direction of the talk exchange in which you are engaged' (Grice 1975: 45). The four essential rules formulated by Grice (1975: 45-46) should be observed by the speaker. These rules called the *Conversation Maxims* on quantity, quality, relation and manner of the contribution include:

‘1. Maxim of Quantity

- *Make your contribution as informative as required.*

- *Do not make your contribution more informative than is required.*

2. Maxim of Quality

- *Do not say what you believe to be false.*

- *Do not say that for which you lack adequate evidence.*

3. Maxim of Relation:

- *Be relevant.*

4. Maxim of Manner:

- *Avoid obscurity of expression.*

- *Avoid ambiguity.*

- *Be brief (avoid unnecessary prolixity).*

- *Be orderly.* ‘

(Grice 1975: 45-46)

According to Sperber and Wilson, “the Principle of Relevance is easier to conform than Grice’s maxims”, so they “challenge Grice’s distribution of requirements of successful communication into four maxims” (in Rébék-Nagy 2000: 58).

1.5.2. Language for Specific Purposes (LSP)

Relevance may be a crucial point, especially in professional communication, which was characterised by Harris as a kind of sublanguage in the 1960s (in Kurtán 2003: 40). A *sublanguage* includes all the linguistic devices applied by professionals in specific domains in order to make themselves understood on the basis of common professional knowledge. For Harris, this sublanguage is part of a very closed system which differs from general language in certain grammatical, lexical, syntactical and semantic aspects.

The Prague Linguistic Circle claims that in a professional setting the use of language for a special function became even more highlighted (Kurtán 2003: 41). Consequently, the situation the language is used in became more and more important. On the basis of this theory, in 1978 Halliday established the term *register*, meaning a functional language variation, in which linguistic features were defined in terms of their situational characteristics (Bowles 2012: 45). Each group of users has specific *register systems* applicable to the activities carried out by its members (Kurtán 2003: 43-44, Kurtán 2006: 935). In medical terminology, register means all types of communication performed in medical settings. The participants of these situations include both professionals and patients. In today’s applied linguistics, the commonly accepted term is Language for Specific Purposes (LSP), which describes the use of a language in specific situations, based on professional knowledge. It has been observed that this language is usually characterised by specific lexical, grammatical and syntactical phenomena.

One of the most famous definitions of professional communication or Language for Specific Purposes was established by Lothar Hoffmann (1984: 53):

‘Fachsprache – das ist die Gesamtheit aller sprachlichen Mittel, die in einem fachlich begrenzten Kommunikationsbereich verwendet werden, um die Verständigung zwischen den in diesem Bereich tätigen Menschen zu gewährleisten.’

‘Language for Specific Purposes – it means the totality of all language devices used in professional communication, in order to provide for the understanding between people acting in this field.’
(translated by the author of the present study.)

1.5.3. Layers of languages for specific purposes (LSP)

Hoffmann (1984: 58-71) introduced the notion of layers of LSP. It allows for the differentiation of horizontal and vertical layers, showing non-hierarchical and hierarchical types of relationship between different fields.

Chart 1. Layers of medical communication, based on Hoffmann's, Ischreyt's, Möhn's and Pelka's theories

Vertical layers	Horizontal layers			
	Theoretical examples		Clinical examples	
	Anatomy	Pathophysiology	Gynaecology	Traumatology
Scientific level (the highest)	Communication among professionals (e.g. between <i>two traumatologists</i>)			
Professional colloquial level	Communication between professionals of different fields (e.g. between <i>a traumatologist and a GP</i>)			
Workshop level (the lowest)	Communication between professionals and laypeople (e.g. between <i>a traumatologist and a patient</i>)			

Borrowed from Hoffmann (1984: 65), Ischreyt (1965 in Roelke 1999: 38), Möhn and Pelka (1984 in Kurtán 2003: 48)

The horizontal layers usually show the arrangement of professional fields. The layers can be established in three professional areas: science, technology and institutions. According to this system, medicine belongs to the horizontal layer of the science area, among chemistry, physics and biology etc. Within medical communication, theoretical (like anatomy, pathophysiology etc.) and clinical fields (surgery, gynaecology etc.) can be identified as the main areas. The vertical layering follows an arrangement on the basis of the level of abstraction within the framework of a specific field. In the middle of the 1960s Ischreyt defined the three basic levels of abstraction: scientific level, professional colloquial level and workshop level (in Roelke 1999: 38). Hoffmann (1984: 65) develops this theory further, differentiating between 5 levels of abstraction from the highest to the lowest level, according to the criteria of the level of abstraction, the form of speech, the area or milieu of use and the participants. Combined with theoretical milieus these are described as the following:

- 'A: theoretical basic sciences – the highest level: artificial symbols for elements and relations*
 - B: experimental sciences – artificial symbols for elements, and natural ones for relations*
 - C: applied sciences and technology – natural language with a higher portion of professional terms and strictly determined syntax*
 - D: material production – natural language with a higher portion of professional terms but a relatively unbound syntax*
 - E: consumption – the lowest level: natural language with few professional terms and unbound syntax.'*
- (Hoffmann 1984: 65)

Another principle for classification was proposed by Möhn and Pelka in 1984 (in Kurtán 2003: 48) differentiating between central and peripheral levels of professional communication on the basis of the different specificity of language use. Their criterion was the expression of professionalism within the profession (= *fachintern* – among professionals of the same field), between professions (= *interfachlich* – between professionals of different fields) and outside professions (= *fachextern* – between professionals and laymen, addressing a general audience of laymen).

Applied to the medical situation, the levels above can describe the function of language use in different medical situations. Considering the use of language, e.g. in a department of traumatology, it can be observed that physicians must be able to switch between all these levels of communication while communicating with researchers, colleagues, nurses and other (not necessarily professional) staff, patients and relatives of patients. The more specific terminology, which is present, the higher the level of abstraction is the communication.

1.6. Genre analysis in medicine

1.6.1. Concepts of discourse and genre

The communication of medical professionals has been the subject of linguistic research since the second half of the 20th century. Since analyses of the language of specific social groups have been carried out since the 1970s, the communication among health care professionals has been regarded as a specific discourse. Discourse analysis in applied linguistics originates from the social sciences and can be defined as

‘a body of theoretical concepts and descriptive techniques that place centrally the interactive aspect of linguistic events. It is complementary to the tradition of formal descriptive linguistics and anchors its observations to accepted linguistic categories through realisation statements (...). It also offers an explanatory dimension for those patterns which cannot be fully accounted for by non-interactive linguistics’ (Sinclair 1980: 253).

Another definition by Trappes-Lomax (2004: 134) focuses on the mutual interaction of different fields of social sciences in the practice of discourse analysis describing it as “the study of language viewed communicatively and/or of communication viewed linguistically” i.e. examining the language in use, in a specific situation and in a specific culture.

The communication of specific discourses takes place in different types of texts depending on the topic and the goal of interaction. These types of texts (written or oral) are called genres, e.g. research articles or conference presentations being

'a recognisable communicative event characterised by a set of communicative purpose(s) identified and mutually understood by the members of the professional or academic community in which it regularly occurs. Most often it is highly structured and conventionalised with constraints on allowable contributions in terms of their intent, positioning, form and functional value.'

(Swales 1990: 58, Bhatia 1993: 13)

The group of people being able to understand each other within a language group was defined by Gumperz (1982) as a speech community. According to Swales (1990: 24-27), specific groups of society form the so called discourse communities, especially in academic and research settings.

For Swales, discourse community is characterized by the following features:

- *'it has a broadly agreed set of common public goals*
- *has mechanisms of intercommunication among its members*
- *uses its participatory mechanisms primarily to provide information and feedback*
- *utilises and hence possesses one or more genres in the communicative furtherance of its aims*
- *in addition to owning genres, it has acquired some specific lexis*
- *has a threshold level of members with a suitable degree of relevant content and discorsal expertise.'* Swales (1990: 24-27)

Thus, the communication of health care providers can be regarded as the interaction within a discourse community, especially in academic context. Consequently, this group does not use a special language but a particular language for special purposes (Rébék-Nagy 2010: 199).

1.6.2. Discourses and genres in medicine

Genres of professional discourses have mainly been characterised by Swales (1990) and Bhatia (1993). Since then much research has been conducted, especially on professional medical genres, on medical English research articles (Rébék-Nagy 2000), on abstracts of medical research articles (Salager-Meyer 1991, 1994), on diachronic analyses of the same subject (Salager-Meyer-Defives-Hamelinsck 1996), as well as on English medical case reports (Warta 2006, 2008). Furthermore, comparative studies of genres in different cultural settings have been published (Busch-Lauer 1995), and research has been done on the stylistic development of medical genres (Ylönen 1993, 1999), as well as on genres of specific fields of

medicine, even in different cultures e.g. English language contact-induced features in Hungarian discharge reports (Keresztes 2010). Prior to the present study, only one genre analysis was there to be found on medical reports describing their structure in Malaysian hospitals by Gurcharan (1998). The latter study revealed structural characteristics of medical reports in 20 hospitalised cases in different branches of medicine (internal medicine, surgery, orthopaedics, ophthalmology and paediatrics).

Today, specific genre analysis is considered as the most effective and acknowledged method of analysing professional language in use because ‘it has become much more situated than it was in the 1990s, with genre studies now relating texts more closely to institutional cultures and practices’ (Bowles 2012: 48). It has been a multi-disciplinary activity (Bhatia 2002: 3) with the objective of understanding realities of the complexity and the dynamically changing language (Bhatia 2002: 4). Therefore, analysts have to understand discursive practices of members of different disciplinary cultures (Bhatia 2002: 14), so it is not enough to base their observations exclusively on the written text materials. In contrast, not only should they analyse the way the text is constructed, but also “the way it is likely to be interpreted, used and exploited in specific context.” Therefore it is crucial that they examine the text in a genre and the genre in its social usage (Bhatia 2002: 17).

A special, yet less investigated field of research in the frame of professional communication in medicine, is the work-related communication between physicians. It covers inter alia contexts of making decisions and solving problems at work, expressions of the connection between decision making and professional responsibility, as well as the purpose of making someone’s expertise credible (Demeter 2010: 229).

In the medical context, there is also another type of discourse, which takes place between health care professionals and laypeople. Analyses of the written type of health care provider - patient communication belong mainly to the field of genre analysis. Drug information leaflets (Hegedűs 2009) or health-related websites (Csongor 2011) are examples of studies on this issue, which have been carried out recently.

The methods of genre analysis include the descriptions of the scenes and communicative situations the genre can be located in, its structural features as well as its syntactical, semantical and pragmatical characteristics. These facilitate the thorough understanding of professional language use in a specific context (cf. Kurtán 2010).

1.7. The genre of medical diagnostic report (MDR) on injuries

1.7.1. Generic characteristics

In each case, physicians are required to describe the appearance of each alteration in order to establish their diagnoses. Therefore, reports usually consist of four 'moves' registering the patient's identification, past medical history, and the most important issues of the current appointment, namely the present complaints and findings followed by the applied treatment (Gurcharan 1998: 4: 43). The same components of reports are recommended to physicians worldwide in the so called SOAP (*subjective, objective, assessment, and plan*) note system developed by Weed in 1964 'intending to improve the quality and continuity of client services by enhancing communication among the health care professionals and by assisting them in better recalling the details of each client's case' (Cameron et al. 2002: 286). On the other hand, when recording injuries (formulating MDRI), the audience of the reports is not always a medical professional from the same field. Occasionally, in the case of a law suit being initiated later, a court-appointed forensic expert is asked to give an expert opinion on the injuries, based on the medical report.

Considering the discursal and functional characteristics of these special reports (MDRI), they must be differentiated from 'common' MDRs (not written on injuries). Thus, Swales' (1990: 24-27) description of a discourse community can be applied to the situation, when a forensic expert is involved, and the following characteristics can be stated:

- it has the goal of assessing the severity and the underlying mechanisms of injuries in a legal case and give answers to the case-relevant questions asked by the court
- it is the treating physicians who primarily provide experts with information on injuries, although they can also be asked for further information by experts, making it a two-way communication
- the discourse utilises and possesses a specific genre of MDRI
- besides owning a genre, it has acquired some specific lexis on types of injuries
- the participants are clinicians (sometimes GPs) and forensic experts, both parties having a suitable degree of relevant content and discursal expertise.

Consequently, MDRI can be regarded as a genre with a discourse community differing from that of MDRs. The present study aims at examining this specific genre of written professional language which facilitates the intercommunication between representatives of different medical fields.

1.7.2. The forensic discourse in the continental and the Anglo-Saxon legal system

The characteristics of a specific discourse between forensic experts and physicians listed above need some clarification. The activity of medical experts includes the professional presentation of complex evidence based on the expert's level of expertise and establishing connections between evidence and crime (Kereszty 2008: 22). However, there is a difference in function between the continental and the Anglo-Saxon legal systems.

While in the continental or civil law (which is prevalent in European countries and their former colonies) expert witnesses are 'independent medical experts' appointed by the court (Kereszty 2008: 22), in the Anglo-Saxon (i.e. precedent or case law) system 'nothing (...) limits the parties in calling expert witnesses of their own selection' (Bronstein 2012: 213).

The most important aspects of appointing forensic experts in the continental law originate from the German-type continental jurisdiction (Kereszty 2008: 22) being the expert's *expertise* and *impartiality* (Ulsenheimer 2008: 657). In contrast, these aspects are not always necessarily characteristic of the expert witnesses in Anglo-Saxon law. Because of this difference, the present study only analyses MDRI's *within* the continental legal system, where forensic experts act as impartial interpreters of medical findings.

1.7.3. The role of MDRI's in the forensic discourse of Germany, Austria and Hungary

Although the laws of Germany, Austria and Hungary stem from the continental legal system, the role of MDRI's in these particular countries differs slightly.

In several cities of Germany, an institution for performing immediate examination of injured people called outpatient forensic clinics (*Forensische Ambulanz*) has recently been established in university forensic departments. It allows patients to ask for an expert opinion in case they want to report an offence after an injury.

Thus, the German system facilitates an undelayed examination by the forensic expert, even if the patient is in need of urgent hospitalisation. In such cases the expert appointed by the prosecution examines the proband in hospital and describes the injuries in person. Hospitalised patients will usually have received first aid by the time the forensic expert arrives at the hospital, so MDRI's by clinicians may be taken into account, too. The same applies to findings of diagnostic imaging examinations and their professional interpretations by physicians in the specific field.

As opposed to the German system, in Austria injuries are usually assessed by forensic experts solely on the basis of clinical findings. In other words, forensic experts receive the medical files relevant for the case and formulate their expert opinions retrospectively, and without having examined the proband personally. In Austria the injured can be examined by forensic experts only in exceptional cases, which is possible e.g. in the Forensic-Clinical Centre of Graz.

In Hungary, the forensic assessment of injuries works the same way as in Austria. The only slight difference is that in Hungary, as concerns a lawsuit, the findings of the injuries are required by the prosecution written on a specific form called ‘visual findings’ (látlelet).

According to the Administrative Regulation No. 16 of the Hungarian Institute of Forensic Medicine in the Health Care Act of 1997, physicians must give a detailed description of injuries in a registered form, in order to facilitate forensic assessment.

According to the regulations above, ‘visual findings’ must contain the personal data of the patient, followed by the following specific information about the physical status and the injuries:

- date of treatment
- circumstances of the injury and of the arrival at the medical care unit
- complaints in connection with the injury
- general physical condition
- neurological state (reflexes)
- signs of alcohol consumption
- external injuries (listed according to anatomical locations, depth, width, shape and specific characteristics in case of the wounds (edges, side-walls, margins, basis, surroundings, entry and exit holes)
- findings of imaging examinations
- type of medical care
- diagnoses in Latin and Hungarian
- assessment of the healing time

In practice, ‘visual findings’ are meanwhile fed into the computer, following the structure of the official form. So, these are always formulated retrospectively, based on the medical files of the patient written at the time of acute treatment.

1.7.4. Terminology depicting injuries in Germany, Austria and Hungary

Even though the practice of dealing with MDRI is different in these three countries, some similarities can also be found in the ways language is used for this specific purpose. The historical background of the German-Austrian-Hungarian territory is described by Sótonyi (2009: 11-13) as following:

The first book on forensic medicine was published by János Jakab Neuhold between 1700 and 1738, though only as a manuscript with the title *Introductio ad jurisprudentiam medicam*. In 1781 the first university textbook on forensic medicine was written in Vienna by Josephus Jacobus Plenck entitled *Elementa Medicinae et chirurgiae forensis*, in Latin language too (Sótonyi 2009: 11). This book was used all over Europe as a university textbook. One year later its Hungarian translation was published in Budapest by Sámuel Rác as the first fundamental technical literature on surgery (Keszler 2009: 114, Kapronczay 2009: 163, Bajnóczky 2011).

In 1793 forensic medicine was established as an autonomous discipline and subject at the University of Trnava, also within the Austro-Hungarian Monarchy. (The university was moved to Budapest in 1777 and still remains as the University Eötvös Loránd.) One of the first lecturers of the new discipline was Ferenc Schraud who wrote three textbooks on legal issues in 1795 *Aphorisma de politica medica*, in 1797 *De forensibus judicium et medicorum relationibus* and in 1802 *Elementa medicinae forensis*. Two of these were also published in Hungarian.

In 1793 the first department of ‘state medicine’ was established in Budapest, which was transformed into the second department of forensic medicine in Europe in 1890 (Bajnóczky 2011). In Vienna the first department was established in 1804. It was the first of its kind in the German speaking world. In Germany, medical opinions were written on ambiguous causes of death at the University of Leipzig since 1532, and the first basic textbook *Rationale vulnerum lethaliu judicium* was published by Gottfried Welsch in 1660.

Within the Monarchy, Hungarian physicians wrote their books in Latin although they were teaching in German and Hungarian, while European university textbooks were translated from Latin and German into Hungarian. It has been observed that numerous Hungarian medical terms are word-for-word translations of the German ones describing the same phenomena (Keszler 2009: 107). In addition, the discipline of forensic medicine was established in Latin

terminology, and was transferred to German through the Austrian tradition. Consequently, the history, as well as the communication on forensic medicine are presumably deeply interwoven in these three countries.

1.7.5. Forensic problems with ambiguous MDRI and their possible consequences

In Hungary, forensic experts have called attention to the fact that many injuries cannot be assessed due to insufficient clinical descriptions, although a specific form for describing injuries exists (Szabó 2008). A study carried out by an insurance physician has also shown that between 2001 and 2005 the claims of 517 patients were refused by an insurance company due to insufficient or ambiguous medical documentation (Löke 2006).

In case the assessment by a forensic expert cannot be accomplished due to insufficient registration of injuries or inconsistent terminology, further examinations must be conducted. However, soft tissue injuries cannot be properly assessed at a later date because by then the healing process will have started and the appearance of injuries (e.g. that of haematomas and superficial wounds) may have changed significantly. The re-examination of fractures also involves a financial aspect, although it facilitates an easier reassessment. Besides financial consequences, an unsuccessful reconstruction of injuries may also have legal and ethical impacts. If the underlying mechanism and the weapon involved cannot be assessed in certain soft tissue injuries, only a less serious injury can be proved. Consequently, the defendant cannot be convicted of the crime he might have committed but only of a less serious one. Thus, victims are neither served justice nor can they claim appropriate compensation for immaterial or material damage. Therefore, according to the German forensic expert Prof. Horst Leithoff, 'in some phases of life, a well-pondered and correct medical diagnostic report is more important for the patient than medication' (Schwerd 1986: 261, translated by the author).

For this reason, linguistic analysis has started to reveal underlying terminological problems. It has been found that the terminology of different wound types and other injuries is not applied consistently by traumatologists in Hungary. The same study also suggested that this confusion of terms is probably due to different terms used for the same injuries in surgery and forensic medicine (Fogarasi 2010a). This phenomenon corresponds to the theory of interdiscursivity meaning the 'variety of discursive processes and professional practices, often resulting in mixing, embedding, and bending of generic norms in professional contexts' (Bhatia 2010).

Another analysis indicated that in many cases important information is missing in descriptions of injuries (Fogarasi 2011).

In Germany, a medical survey has been conducted on the documentation of injuries caused by domestic violence between 2003 and 2006 (Wagner 2010) at the Department of Accident Surgery at the Johannes Gutenberg University of Mainz. It showed that a lot of injuries were not described in detail and the use of terms was not precise enough for a later forensic assessment. It might raise a massive legal problem as victims of domestic violence do not usually report the case to the police immediately, so no immediate forensic examination is performed. In these cases, injuries are hard to reconstruct later for the purposes of the police investigation or trial. With the findings of the studies above in mind, linguistic research started to examine the level of terminologisation first in the technical literature of this medical field.

1.7.6. Linguistic analyses previously conducted on the terminology of forensic medicine

Since 2009, parallel linguistic studies have been performed to examine how terms of injuries are described in university textbooks in Hungary. The contrastive analysis of the technical literature in forensic medicine, which has been applied at Hungarian universities for the last 40 years (Fazekas 1972, Buris 1991, Sótonyi 1996 and Sótonyi-Keller 2008), showed that the use of the term '*seb*' ('*wound*') is not consistent in regards to either the definitions or to the descriptions of wound characteristics (Fogarasi 2010b, 2011). A similar analysis of German university textbooks (Schwerd 1986, Maresch-Spann 1987, Brinkmann-Madea 2004, Madea 2006 and Penning 2006) verified that in Germany two different terms are used in the technical literature for 'lacerated wound'. Another finding was that there were several synonymous terms referring to haematomas detected in the German technical literature (Fogarasi 2012). As a continuation and completion of these previous studies, the present thesis aims at a thorough terminological analysis of a large-scale corpus of forensic files.

1.8. Terminological analysis in medicine

1.8.1 Theory of terminology

The science of terminology originates with Eugen Wüster, an engineer, who was committed to promoting the international standardisation of electricity in the 1930s. In 1972 Wüster laid

the general foundations for the basic concepts of terminology in his work *Allgemeine Terminologielehre / General Theory of Terminology* (Fischer 2010a: 53).

Since then, terminologies in several disciplines have been described and analysed, either in a prescriptive or in a descriptive way. The former helps international communication or the communication within factories or companies with or without international relations. This type of terminology work aims at the terminological standardisation which is predominantly needed in technical and natural sciences. Standardisation is defined as a regulating intervention with connections between conceptual and terminological systems as well as the conscious arrangement of terms (Hoffmann 1984: 25). Since 1952 the International Organisation of Standardisation (ISO) has been coordinating the international standardisation of technical terminology (Nuopponen 2003). In contrast, descriptive terminology aims to detect the terminology of a professional field either systematically or in single cases (Fischer 2010b: 72).

The word *terminology* has a broad meaning today: it includes all the *terms* belonging to a professional field, the *science of terminology* or *terminology studies* and the practical work with terms as *terminology work* or *terminological work* (including planning, management and training within one or between several languages) at the same time (Nuopponen 2003). Some researchers regard the science of terminology as a discipline dealing with the basic principles of arranging terms from a prescriptive aspect (Roelcke 1999: 107), while others hold the view that a “theory can never be *prescriptive* because a theory is a unit of coherently integrated axioms or essentials which permit the *description* of an object, its properties, its relations and operations within a specific framework” (Cabr  Castellv  2003: 177).

Gathering, processing, presenting and using terminology can be called terminological lexicography or *terminography*. As portfolios of terminology are usually processed in electrical databases, their processing is more and more often referred to as *terminology management* (Mur th 2002: 36), even German. According to Mur th (2010: 27), LSP *lexicography* means arrangement and research of dictionaries in LSP, and it is always carried out on a semasiological basis i.e., on the basis of designation or nomination (F ris 2005: 68). W ster’s original theory (W ster 1974) also emphasised the onomasiological approach. Mur th (2002: 36) states that today LSP *terminography* and LSP *lexicography* seem to converge, since both are interested in producing databases and dictionaries.

As for terminology work or management, the word *term* must be defined, as it does not seem to have a widely accepted meaning in the terminology of terminology theory. Fischer (2010b: 47) points out that in linguistics the word *term* usually means both the *concept* (*Begriff*) or *unit of knowledge* (*Denkelement*) and the *nomination* (*Benennung*) belonging to it. However, Wüster differentiated between the two, and based his theory on the priority of concepts to which nominations need to be assigned (Wüster 1974). Fischer also draws attention to the fact that not even organisations of standardisation (DIN = Deutsches Institut für Normung) and ISO (International Organisation for Standardisation) define *term* in the same way. Since there are also non-linguistic terms e.g. in the terminology of music (Fóris 2005: 35), (Bérces 2011: 23), in which cases it is more adequate to use the word *designation* (*Bezeichnung*) (Fischer 2010b: 47).

1.8.2. Quality criteria of LSP and terminology: unambiguousness versus synonymy

In professional terminology it is also a natural requirement that terms are clear and that professionals know what is meant by each term. One might think it is an obvious requirement for general language. However, in general language, expressions have great variety, which enriches language and enables speakers to move between different social or stylistic layers of language. Usually, there are three main types of problematic word relations, especially in written language: synonymy, homonymy and polysemy.

Synonymy represents the phenomenon that different terms or words have the same meaning e.g. the verbs *to look for* or *to search for*. So, in synonymy several nominations belong to the same concept, whereas in *homonymy* the same nomination represents completely different objects (e.g. *bank* as a financial institution, or the area of land by a river). A specific type of homonymy is *polysemy*, where the same nomination refers to different subjects but originating from a semantic relation (e.g. *root* of a plant and *root* of the tooth or *stool* as a kind of seat and *stool* as the medical term for *excrement*). The process in which words from general language become terms in a specific professional setting representing a polysemous relation is called terminologisation (Fluck 1996: 50).

According to Wüster (1974, in Fischer 2010b: 50), in order to prevent the presence of polysemy and synonymy, terms must fulfil the criteria of “unambiguousness” or “unambiguity” (*Eindeutigkeit*) and “complete” or “absolute unambiguousness” (*Eineindeutigkeit*). The latter is hard to translate into English so the English expression given

above is only an attempt here to express an augmented meaning. Fischer (2010b: 50) draws the attention to the fact that this translation problem might have led to great differences even between the criteria given in the German DIN and the English ISO standardisation requirements. As defined by Wüster, *unambiguousness* (*Eindeutigkeit*) means, that there is only one concept to be assigned to one nomination. Consequently, it also allows the same concept to be described by other nominations. However, *complete unambiguousness* (*Eineindeutigkeit*) postulates that one concept is to be described only by one nomination. Therefore, while *unambiguousness* allows for the phenomenon of synonymy, *complete unambiguousness* does not (Fischer 2010b: 51).

Hoffmann (1984: 163) supplements the two criteria described by Wüster and lists seven quality criteria, which professional terms should fulfil. In translation provided by the author of the present study, these are *profession specificity* (*Fachbezogenheit* = belonging to a specific LSP system), *conceptuality* (*Begrifflichkeit* = being a designation of a concept), *accuracy* (*Exaktheit* = being isolated from other terms through accurate definition), *unambiguousness* (*Eindeutigkeit* = designation of a very specific concept in a LSP), *complete unambiguousness* (*Eineindeutigkeit* = term describing one specific concept which is, analogously, only described by the one specific term), *self-consistency* (*Selbstdeutigkeit* = being understandable even without context) and crispness (*Knappheit* = being short and economic).

By now, all these postulates have been extended or altered by many linguists, who often take into account the grammatical system of the respective language or the duration of use (Kurtán 2003: 171). Within terminology including a range of words from the most professional terminology through trivial varieties to laymen's language, some individual disciplines possess bindingly determined sets of terms called nomenclatures. These usually contain terms for specific objects as opposed to terminology depicting abstract concepts and categories (Hoffmann 1984: 162). In medicine very few disciplines possess a nomenclature, especially anatomy, histology and embryology.

1.8.3. Determinacy and indeterminacy

To isolate a specific term from other terms in meaning (*monosemy*), a definition is required. For this, terms are to pass through a process of abstraction (Fóris 2005: 51). The classical way of creating definitions originates from Aristotle, who stated that three components of a definition are necessary: the term (*definiendum*), a connecting link (definitor, usually a verb)

and the explanation (*definiens*) (cf. Klár-Kovalkovszky 1955: 34). The latter consists of two parts, namely the main category or genre (*genus proximum*) and specific features or characteristics (*differentia specifica*). Since then there have been several principles of definitions formulated in LSP, e.g. according to prototypes or examples described by Roelcke (1999: 54-61). According to these theories it is essential to formulate a definition for each term in order to avoid synonymy and polysemy.

However, Roelcke (1999: 63) draws attention to the fact that the exact meaning of certain terms becomes unambiguous in a specific professional context, even if they lack exact definitions. Another important aspect is that in several social and human disciplines it is absolutely beneficial to have synonymous terms, and the same applies to professional texts written for audiences of laypeople (Fisher 2010b: 59). Temmerman et al. underline that some meanings are not to be defined exactly, because certain categories are stored in our minds as prototypes (Temmerman 2000, in Fischer 2010b: 55). However, in the intercommunication of medical professionals (e.g. in MDRIs) unambiguous terminology should be expected.

1.8.4. Medical terminology

Another reason of *indeterminacy in medicine* is also described by Temmerman et al. (Smith-Ceusters-Temmerman 2005: 649-650), arguing with Wüster's postulate of a definition calling it 'Wüsteria'. If a new phenomenon is encountered in reality, the communities involved need to agree on a term they will use "to refer to this kind of entity" without having a concept of what it exactly is. 'Almost all disorder terms are introduced not because we already have clear definition reflecting their known characteristics, but because we have a pool of cases', as it is stated in the article of Smith-Ceusters-Temmerman (2005: ibd).

According to the recent studies on creating definitions of as well as the postulation of monosemy, needs vary with the disciplines which have to be respected and accepted in terminology management (Fischer 2010b: 56-57). Wiese (1999) points out that standardisation seems to be very difficult in the disciplines of medicine, as communication is based on very wide-ranging and interwoven communication structures both horizontally and vertically. Thus the question may be raised what the requirements of medical diagnostic reports are in this regard. She also suggests that a wide range of synonymous varieties might originate from a mixture of Latin or Ancient Greek-based, trivial words and English loan words even as abbreviations (Wiese 1999). Until the 18th century, medical terminology consisted exclusively of Latin and Greek words, but since then, the knowledge of these

ancient languages has been fading more and more (Fluck 1996: 91), so they had to be replaced with terms from national languages. In addition, mixtures of ancient and national languages emerged. 'Nosologic (based on the manifestation and pathophysiology of illnesses) name-giving for new phenomena often fails because today's worldwide biomedical knowledge is not sufficient. The same applies to aetiological nominations' (Wiese 1999: 1281).

For statistical purposes, International Statistical Classification of Diseases and Related Health Problems (ICD) lists the most common diagnoses occurring in everyday practice. However, in many cases they are not specific enough and there is no suitable nomination to be found, even for a common entity.

In conclusion, it can be stated that modern terminological research in the field of medicine must find the way how to describe and assess terms of different disciplines. In addition, the needs of disciplines must be specified in cooperation with professionals to find out how linguistics could be helpful to arrange and manage their terminology.

1.8.5. Analysis of genre-specific collocations or lexico-grammatical patterns

In the studies mentioned in 1.8.5 and 1.8.6 most differences in terminology were found in connection with terms consisting of more than one word element e.g. '*repszett seb*' or '*zúzott seb*' ('lacerated wound') in Hungarian. These terms usually consist of a main category depicting the type of injury e.g. 'wound' and an adjective or participle specifying it e.g. 'lacerated'. These always occur together in professional technical literature as a phrase of two elements belonging strongly together and resulting in a specific meaning which combines the meanings of both elements.

In general linguistics such phrases are analysed in the linguistic field of phraseology. In general language, words occurring together very frequently are called collocations. As opposed to idioms (expressions having a figurative meaning, which cannot be deduced from the individual meanings of their components, e.g. 'to take someone under your wing'), the meaning of collocations is not figurative. Collocations consist of a base (a word with a general meaning, e.g. 'egg') and a collocator (word with a specific meaning, e.g. 'scrambled'). Most frequently one element is a verb e.g. 'to take part in sth'. These structures need to be distinguished from idiomatic word combinations because their meanings can be deduced from the meanings of the components. These kinds of word combinations can be

characterised by ‘a strongly restricted meaning potential of one element, the relation of semantic dependency and co-occurrence of the elements due to convention’ (Reder 2006: 77 translated by the author).

In applied linguistics, there has been a discussion about how multi-word terms should be dealt with in LSP. Some authors consider multi-word terms to be specific lexical units, which are quite similar to collocations. The only difference between terms and collocations is that multi-word terms do not allow a textual modification. Some of them even resemble stronger phraseological units because they are motivated figuratively based on a metaphoric or metonymic relation e.g. ‘Grüner Star’ (‘glaucoma’) or Hühnerauge (‘corn’) (Worbs 1998). Others claim that differences between collocations in general language and compound terminology entries in LSP are of a lexical rather than of a grammatical nature. Consequently there are only discourse-specific relations between words occurring together (Thomas 1992).

According to the ‘lexicogrammar approach’, which is derived from Systemic Functional Linguistics (SFL), collocations in LSP texts should be analysed as ‘the typical lexical and grammatical environment of a sign as it is habitually used in naturally occurring texts or discourse’ (Gledhill 2011: 6). Lexical or grammatical constructions can not be defined properly without examining their typical contextual use (co-text) (Gledhill 2011: 7). By means of this approach, collocations also provide a basis for the coherence in a text, which implies that the whole text is meaningful (Halliday-Hassan 1976: 285, in Reder 2006: 41). They serve as a ‘linking device’ contributing to grammatical and semantic cohesion (meaningful relations between words in the text) (Gledhill 2011: 12). Consequently, on the basis of concordancing software, which analyses the lexical and textual surroundings of a word in context, discourse-specific word patterns can be observed. These are called ‘*lexico-grammatical patterns*’ (Gledhill 2011: 14).

In the present study, lexical and grammatical items in MDRI are analysed in their environment using the function Key Word in Context (KWIC) of concordancing software. Therefore, all kinds of genre-specific word combinations are regarded as *lexico-grammatical patterns* of MDRI. However, in accordance with the terminological approach as well, word combinations typically occurring together and having a definition together are considered as genre-specific nominal collocations within the generic term lexico-grammatical pattern in this study.

According to the dependence grammar, lexico-grammatical patterns are due to the grammatical or semantic valency of words. Valency means the ability of a word to bind other words to itself which are adaptable to the grammatical or semantic slots which the particular word opens in an expression. To put it another way, the number of slots, and, therefore, the number of governed elements is the valency (Tesnière 1980, in Ágel 2000: 40). In the case of adjectives and verbs it is regarded as equal with the so called government. Studies have been conducted on the subject as to whether modifications of verbal valency in the case of verbs can be observed in LSP. One of these showed that verbal valences are capable of being reduced or broadened in a professional context (Simmler 2006). The valency of nouns was only later discovered, and it was first examined in nouns which originate from verbs (deverbatives). These nouns seem to keep the government of the original verb or, in case the rection of the verb is an accusative object, it varies between the genitive, prepositional phrases and adjectival constructions. In German, compound words are also very common. (Hözlner 2007: 169-220). Original nouns, however, also seem to have valencies either in the form of a genitive object (die Ohrfeige des Vaters = the flap of the father) or in the form of an adjective (väterlicher Rat = fatherly advice). Both usually realise the agent or the object (Hözlner 2007: 239). These kinds of grammatical or semantic nominal valencies might finally result in collocations, in which the adjective or participle is the collocator part (Caro Cedillo 2004: 87). In LSP genre-specific use of collocations was observed in medicinal genres (Toporowska Gronostaj – Sköldberg 2010) and in contrastive studies of different scientific fields (Wallner 2010, Caro Cedillo 2004).

To reveal lexico-grammatical patterns and nominal collocations, concordance analysis is used in applied linguistics, which means the examination of words in their environments (i.e. in their co-texts). The Key Word in Context (KWIC) function of concordancing softwares facilitates the analysis of single-word and multi-word terms, showing five words on both sides which surround a specific word. The analysis of the environment of a specific term which may reveal word patterns in texts is called *concordance analysis*.

Lexico-grammatical patterns are organised and connected at the textual level. In the present study also genre-specific grammatical structures were analysed which ‘facilitate linking and dependency relations between the components of the text’ (Beaugrunde-Dressler 1981 in Károly 2010: 78.)

2. GOALS AND HYPOTHESES

2.1. Description of the Genre MDRI

The present study aims to analyse the genre of MDRI from a linguistic point of view in order to describe the genre and to find out to what extent forensic assessment is influenced by the use of terms. Due to the common origin of forensic communication in *Hungary, Austria and Germany* as well as their similar legal tradition, MDRI from these three countries are compared in order to reveal similarities and differences in the clinical perception of injuries. It also intends to describe typical lexico-grammatical word patterns which can be detected in MDRI and to contrast them between the three analysed countries. As forensic assessment of *soft tissue injuries* is often hindered at a later date, and adequate terminology is highly important for a forensic reconstruction, the analysis concentrates on injuries of the soft tissue.

2.2. Interdiscursivity in MDRI

Physicians in Hungary, Austria and Germany do not always seem to be aware of the fact that their documentation might at some point constitute legal evidence, and thus their target audience does not always consist of physicians of the same speciality. This might result in *interdiscursivity*. In order to establish the extent to which this confusion happens, a contrastive textual analysis should be performed. Since no universally valid rules are taught about describing injuries and physicians usually acquire the skill of writing reports in practice by taking the example of their colleagues and predecessors (Lippert 1999: 1972), the level of LSP professionalism used in reports should be examined within medical communication. The present study aims at the linguistic analysis of this genre at a structural, terminological and lexico-grammatical level to detect communication problems in a larger-scale corpus and to find their possible reasons.

2.3. Contrastive terminological analysis

The extent of terminologisation in MDRI is also analysed to measure and compare the level of professionalism between the three countries. As there should be no synonymous or polysemic terms in a strict terminology prepared for standardisation, their existence is to be proved and semantic relations are to be described in comparison with the other two languages. In terminological analysis, the use of nominal phrases in this genre is described from a semantic point of view. In order to reveal possible terminological divergences reflecting the

different approaches of physicians and forensic experts, the present thesis also includes examination of terms used by forensic experts. Terms used for characteristics of soft tissue injuries are listed which also allows for the analysis of the registered information content. The main goal of the study is to examine the use of terms, to assess their level of terminologisation and to contrast the terminological equivalents in the three countries.

2.4. Hypotheses

The insufficiency in forensic reconstruction of soft tissue injuries are caused by interdiscursivity of too high degree due to the following factors in all three countries:

1. Use of terms with various levels of terminologisation not having a (defined) denotative meaning.
2. Inconsistent use of nominal collocations due to different classifications of injuries in other fields of medicine.
3. Frequent occurrence of synonymy.
4. Diverse implementation of the same concepts and different ways of recording injuries.
5. Numerous words borrowed from various levels of professionalism within medical communication.
6. Missing essential information e.g. exact localisation and wound characteristics which result in limited forensic assessability of soft tissue injuries.

Previous studies listed in **1.7.5.** and **1.7.6.** suggested that communication problems might be due to terminological ambiguousness, the present study was undertaken to examine the terminology of MDRI's cited in Hungarian, German and Austrian forensic files as well as to analyse terms in the forensic literature in these countries.

3. MATERIAL AND METHODS

3.1. Sources of forensic files

For the present study, 339 forensic files were collected from institutes of forensic medicine all over Hungary. Out of the six Hungarian institutions, two were university departments, while the others were Institutes of Forensic Experts and Forensic Research (IFEFR i.e. ISZKI = Igazságügyi Szakértői- és Kutatóintézet in Hungarian), which are the forensic centres in every large town of the country. Most forensic files on soft tissue injuries can be found in these centres because it is predominantly regional centres that deal with less complicated injuries caused by accidents and assaults. More specifically, 60 files were collected from the Department of Forensic Medicine at the University of Debrecen, 57 ones from the IFEFR in Szekszárd, 62 ones from the IFEFR in Győr, 51 ones from the IFEFR in Kaposvár, 58 ones from the Department of Forensic Medicine at the University of Pécs and 51 ones from the IFEFR in Veszprém.

For the purpose of comparison, 56 files were provided by the Department of Forensic Medicine at the Johannes Gutenberg University of Mainz, Germany, 50 were made available by the Forensic Department of the University of Freiburg, Germany, and 101 files were obtained from the Department of Forensic Medicine at the University of Graz, Austria. In Austria, which is not characterised by territorial differences in administration, Graz was the sole source of files.

3.2. Exclusion and inclusion criteria

The minimum number of collected files in each institute was 50, but some institutes provided a few extra ones for the research, as a precaution. The most important inclusion criterion was that files contain a copy, or at least some word-for-word quotation of the MDRI, on which the expert opinion was based, even if a later personal forensic examination of the patient took place. (The latter is only possible in Germany, as explained earlier in the Introduction). The second inclusion criterion was that MDRI contains descriptions of soft tissue injuries. Additional injuries of the skeletal system were not considered as exclusion criteria. The files date back to the period between 1995 and 2011, as a diachronic analysis was not the subject of the present research. The third inclusion criterion was that all files were the records of closed cases.

3.3. Methods of collecting forensic files

MDRIs and the related forensic expert opinions were obtained in agreement with the directors of the institutes, and the support of the doctoral supervisor of this thesis. Forensic files (i.e. MDRIs + forensic expert opinions) were released in digital format from Austria.

In Hungary, forensic expert opinions were provided in digital format, and MDRIs either in the same way, or as photocopies of completed forms. In case the files were stored digitally in the databases of the institutes, they were provided for the present study after all personal data had been deleted, and only the registration numbers remained which ensured patient anonymity. The digital storage of files also allowed for a randomised extraction of files using the search word 'injury'.

In Hungary MDRIs are sometimes stored as a photocopy of the handwritten form, or in digital format, which are coequal. In case the institute only provided a photocopy of the handwritten MDRI for this study, personal data were cut out of the photocopies in the course of the data processing to protect the anonymity of the individuals involved in the incident.

In Germany, however, the MDRIs and the forensic expert opinions were only released in print for security reasons, so they had to be typed out, and thus digitalised. Personal data was omitted during transcription, which was monitored by the institute.

When creating copies of the documents in each country, the source materials were handled in accordance with the regulations concerning personal rights, and with the permission of the heads of the departments.

3.4. Macro-and microstructure of the corpus

For the research method of corpus analysis the files were processed in corpora. In this study it means a collection of texts belonging to the same genre and having the same macrostructure. The corpus was divided into three sub-corpora according to the source countries, i.e. a Hungarian, German and Austrian one. Depending on the regions the files were collected from, a further eight sub-corpora were established within the Hungarian and German sub-corpora: six Hungarian and two German ones.

As only the MDRI and the expert opinions were needed for the analysis, only 3 parts of each file were taken into consideration:

- the description of injuries from the quoted MDRI (all injuries including soft tissue injuries), which is designated part A in the corpus,
- the diagnoses of the same MDRI, pertaining to the descriptions, designated part B in the corpus,
- and the related expert opinion, designated part C.

This microstructure allowed a comparison within the files and between files of one country or of different countries, too. Within one file, the descriptions (part A) and injuries diagnosed (part B) by the physician as well as the expert opinions (part C) were compared. General physical condition and neurological state (e.g. reflexes) were not part of the corpus because they are neither general nor do they strictly belong to the external appearance of soft tissue injuries. Terms for present complaints were examined among the medical findings because they are not to be separated from each other.

This structure made it possible to analyse how often synonymous terms of descriptions (A) were considered in the diagnoses (B), and how often they were in agreement with the opinion of the forensic expert (C). It was possible to investigate how terms describing non-specific injury (e.g. tenderness, pain, contusion, bleeding) were diagnosed (in B) by physicians, and how they were assessed by forensic experts (C). While examining forensic assessability, the criterion of regarding an MDRI as only partially assessable was that it was explicitly referred to by the forensic expert in the relevant expert opinion.

3.5. Methods of statistical analysis

Parts A, B and C of each file as well as the general information registered (e.g. the date of treatment, cause of injury), were processed in a chart in Microsoft Excel 2003. Terms describing injuries and their localisations were featured in parallel in the rows of the chart, in German, Hungarian and Latin, and contrasted in Parts A, B and C as in the columns of the chart. This was followed by transferring the localisation of each injury in Parts A, B and C into Excel.

In Hungary, both the diagnoses (part B) and the related localisations were also registered in Latin, which also allowed a contrastive analysis between the Hungarian and the Latin

terminology of the diagnoses and their localisations. Although in Austria MDRI contain the diagnoses in Latin, similarly to the Hungarian ones, they are never quoted in forensic files, so there was no possibility to include these in this corpus. In the parallel columns of A, B and C terms describing the same injury were listed, which facilitated a straightforward comparison. Since in some description parts (A) of MDRI the same injury was often described by two words, columns for part A were doubled in the Excel chart and summarised for statistics. The same applies to the expert opinions (part C), as they often described injuries by two terms, too. The characteristics of injuries were entered in parallel to the physician's description with each injury being the following: margins, side-walls, edges, tissue bridges, base of wound/wound bed, direction, surrounding tissue, size, depth, number of injuries, colour or age and shape. In the localisation of each injury, special attention was paid, whether or not the affected side of the body was registered and if the affected side was documented consistently through the parts A, B and C. Numeric codes were only assigned to descriptions of *soft tissue injuries*, sorted in the two following main categories, which had further sub-categories in German, Latin and Hungarian:

- I. main type:
 - 1. injuries without epithelial lesion e.g. 'haematoma'
 - 2. injuries with epithelial lesion e.g. 'incised wound'
 - 3. unidentifiable terms (without exact definition of an injury, e.g. 'tenderness')
- II. subtype: 33 synonymous groups of terms in Hungarian, Latin and German (see Appendix Chart 1.)

As the Hungarian sub-corpus consists of 339 files, i.e. about three times as many as the German and the Austrian ones, data were analysed in percentages, in order to facilitate a well-balanced contrastive analysis with the German and Austrian sub-corpora. In Germany, most patients are examined by the forensic expert personally, and the expert opinions (part C) of the German files are usually much more detailed i.e. contain significantly more injuries, than the descriptions (part A) and diagnoses (part B) registered by physicians. Consequently, in certain statistical analyses it was not possible to compare the German files with the other two sub-corpora.

The level of significance accepted in the present study was $p < 0.05$, just as it is widely prevalent in the natural sciences. However, the object of the present research is not of the natural sciences, and the data analysed were quite subjective due to individual assessment of injuries both by physicians and forensic experts. Consequently, in this study even a

significance level slightly higher than 0.05 might show a tendency of validity. The statistical analysis was performed with Statistical Package for the Social Sciences (SPSS) 19.

3.6. Difficulties of creating a well-balanced corpus pertaining to file numbers

As data were processed in two different ways, it was difficult to establish how many files should be processed for analysis. Besides the statistics summarising all injuries recorded in Hungary, Germany and Austria, there was another table on general information e.g. date, time, type, assessability. In the statistics of injuries one *injury*, in the general statistics of the files one *file* was regarded as one case. Only on the basis of file-codes and injury-codes was it possible to examine relations between terminology, information content and assessability. The numbers of *files* in the German sub-corpus (106) approximately concur with those of the Austrian one (101). However, when considering the numbers of *injuries*, the Hungarian sub-corpus (1119) is better compared with the German one (1015), due to the extremely detailed registrations of injuries on personal examination by German forensic experts. Consequently, it was not possible to extract 100 files from each sub-corpus for the purpose of comparison and, at the same, time to create a well-balanced corpus pertaining to the numbers of files.

Therefore, the analysis focused on retaining the representativeness of the sub-corpora. The total number of files collected also facilitated a comparison of higher validity between regional differences. The third reason for keeping the total number of the collected files in the corpus was that numerous data were missing from each file. So, each analysis was performed on different amounts of data, as columns with missing data were not taken into consideration by the SPSS statistics programme.

3.7. Methods of corpus analysis

Forensic files were processed in txt file format and examined using the function Key Word in Context (KWIC) of the concordancing software WordSmith 5.0. In the forensic files, single-word and multi-word terms were examined in their co-text and their distributions between the three sub-corpora compared. For the purpose of a statistical comparison between the sub-corpora, they had to be lemmatised. The software allowed the analysis of terms for wound characteristics and their textual arrangement around the terms for injuries in a sentence. The sizes of sub-corpora are measured in *tokens*, which mean the count of words separated by spaces in a text. The size of the Hungarian sub-corpus was 27 335 n (tokens), the German one 28 879 n, and the Austrian one 25 827 n.

3.8. Methods of collocation analysis

As already mentioned in 1.8.6, terms depicting soft tissue injuries are diverse in the technical literature of forensic medicine and some of them even lack exact definitions. Consequently, from a linguistic point of view, it was difficult to establish which word combinations found in the corpus were synonymous with the officially applied ones. In the present study, the collocations detected in the sub-corpora were added to numeric codes, based on the collocations found in the technical literature (Fazekas 1972, Buris 1991, Sótonyi 1996, Maresch-Spann 1987, Brinkmann-Madea 2004, Madea 2006 and Penning 2006). Collocations, in which the collocator was a linguistic synonym of the one found in the technical literature, were marked by the same code as the terms used in university textbooks. All terms were translated into English word for word in order to show shades of meanings and to facilitate comparison between the terms used in the three countries analysed. The most frequent terms detected in the corpus compared to the terms defined in technical literature are summarised in Chapter 5.

4. RESULTS

4.1. Results of general statistics

General data registered in MDRI were analysed by general statistics. It complied with the basic requirements on the circumstances of injuries included in the Hungarian ‘visual findings’ which are regarded as essential for a forensic reconstruction of the injuries.

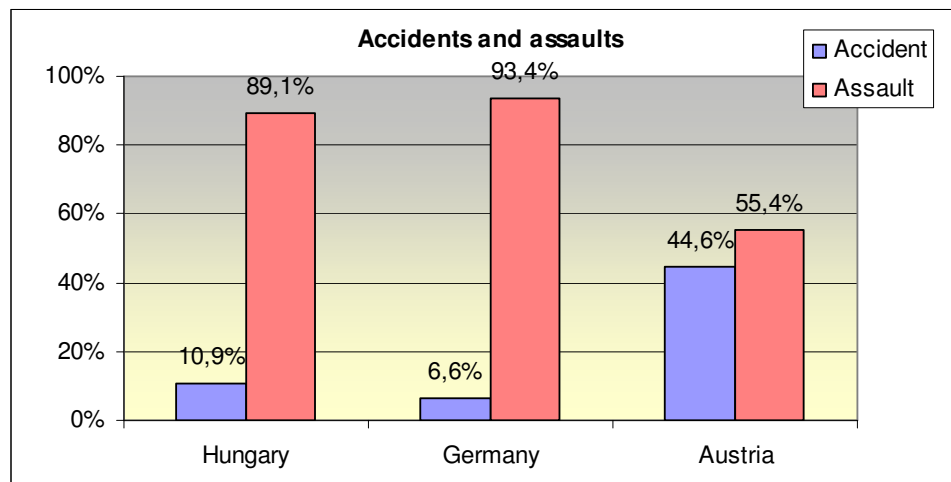
These are:

- accident or assault
- date and time of treatment
- circumstances of the injury and of the arrival at the medical care unit
- alcohol consumption

4.1.1. Cause of injuries

As a general piece of information it was compared how many accidents and assaults in the MDRI were documented in the corpus. However, it cannot be compared with the countries’ own statistics because usually only MDRI containing terminology of soft tissue injuries were included in the corpus. In accidents multiple injuries typically affect not only soft tissues but also bones and joints. The underlying cause of injuries in the present corpus is demonstrated in Graph 1.

Graph 1. Causes of injuries in Hungary, Germany and Austria

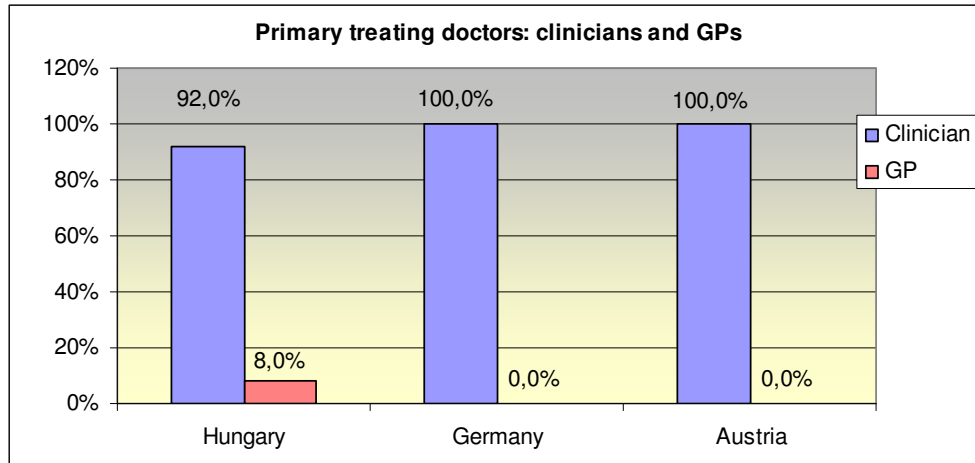


The considerably higher number of accidents in Austria might be due to the fact that there were more MDRI on skiing and road accidents resulting in soft tissue injuries instead of broken bones. The distribution according to regions is shown in Chart 2 in the Appendix.

4.1.2. Primary treating doctors

Diagnostic reports included in the corpus were formulated by clinicians and GPs. Graph 2 shows the distribution of clinicians and GPs the MDRI in the corpus were created by.

Graph 2. Primary treating doctors the MDRI were created by in Hungary, Germany and Austria

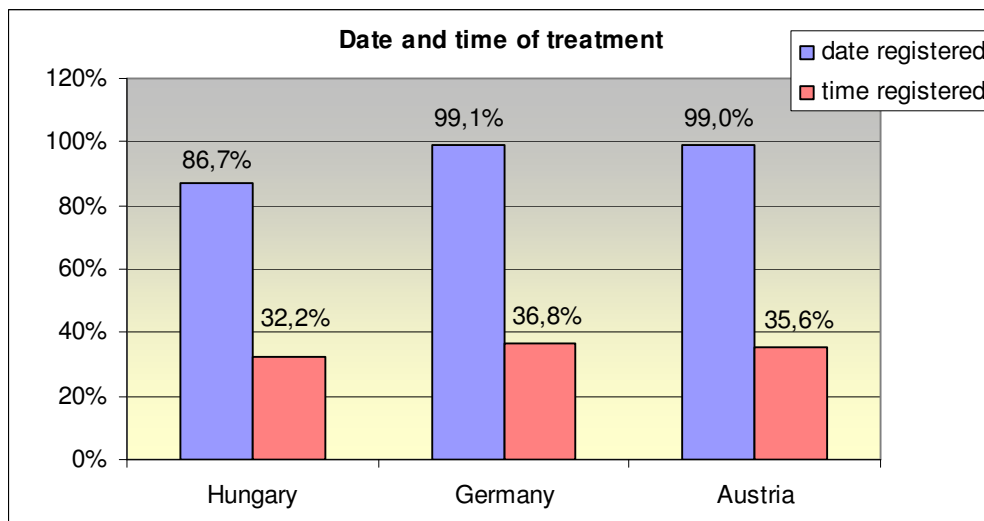


According to the present statistical analysis, most MDRI used later as evidence are written in hospitals by clinicians. The distribution of the specialties of physicians in the different regions is shown in Chart 3 in the Appendix.

4.1.3. Registration of the exact time of treatment

The analysis showed that in most German and Austrian MDRI the date of providing first aid was registered, however, in some cases not even the day was recorded, which is mostly specific to Hungary.

Graph 3. Registration of the exact time of treatment in Hungary, Germany and Austria

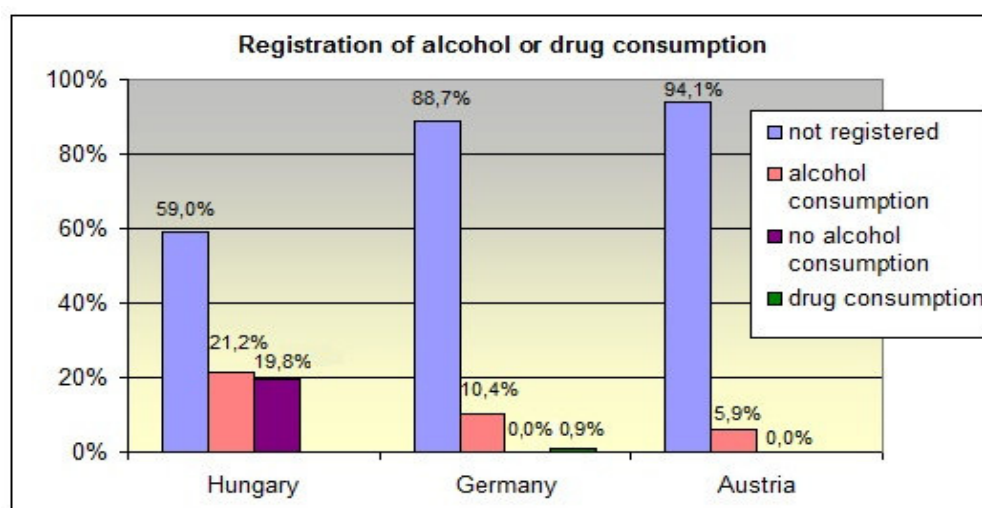


Similar percentages of exact time indication are missing in all the three countries, which might affect the accurate reconstruction of certain injuries by experts. The proportions of the registered times and dates in Hungary, Germany and Austria are represented in Graph 3. The distribution of the registered time aspects according to regions is represented in Charts 4.a and 4.b. in the Appendix.

4.1.4. Registration of the consumption of alcohol and narcotics

The record of alcohol and drug consumption can be regarded as an important component of the general information content which may also affect later forensic assessment. The recorded and unrecorded cases are represented in Graph 4.

Graph 4. Registration of the consumption of alcohol and narcotics in Hungary, Germany and Austria



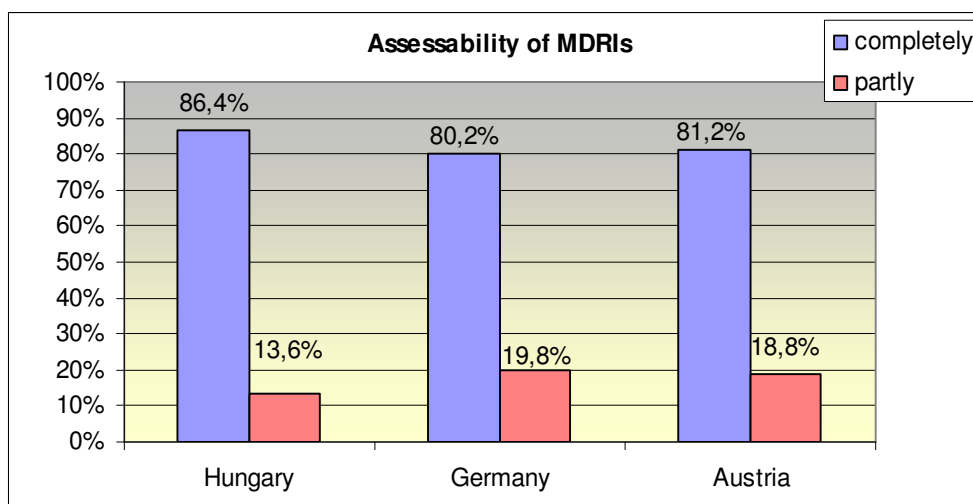
As shown in Graph 4, negation of alcohol consumption was solely recorded in Hungary, and drug abuse was only mentioned in the German files. However, in most cases there was no entry about whether the patient had consumed any drugs or not. A summary of the registered cases in the whole corpus is demonstrated in Chart 5 in the Appendix.

4.2. Assessability of MDRI by the expert opinions

As mentioned in Chapter 3, forensic assessability was examined by searching expert opinions for an explicit reference to injuries which could not be reconstructed by an expert. Consequently, it is a very subjective and limited way of investigating such cases. How experts assess injuries is partly based on their experience, in several cases it cannot be established why insufficient information was sometimes enough for them to reconstruct injuries, while for other experts the same missing information impaired assessability.

If a reference to an impossible assessment was found in an MDRI, the *whole MDRI* was regarded as *partially assessable* in the corpus, even if only one injury was not assessable in it. Thus, the distribution of assessable and only partially assessable MDRI in the three countries is shown in Graph 5. The assessability in all regions is summarised in Chart 6 in the Appendix.

Graph 5. Completely and only partially assessable MDRI in Hungary, Germany and Austria



To establish if there was a significant difference between the three countries concerning the assessability of MDRI in the expert opinions a chi-squared test was performed. According to the test no significant difference was found ($p= 0.197$).

4.3. Terms describing soft tissue injuries

In the statistical analysis, terms detected in the corpus using the software WordSmith 5.0 were assigned to lemmata and numeric codes, according to synonymous groups. This structure allowed statistical examination to follow injuries in the description (part A) and in the diagnosis (part B) written by the physician as well as an assessed or unassessed injury in the expert opinion (part C). In each case nouns were used as basic lemmata because most terms can be found in MDRI in noun forms.

Several terms were assigned to the same numeric code in the corpus, since they refer to injuries with the same underlying mechanism. The same underlying cause is normally apparent from the synonymous meaning of components of terms, e.g. *lacerated wound* and *bruised wound* (see Appendix Chart 1 showing all terms detected in the corpus with their word-for-word English translations).

During the corpus analysis, in numerous cases it was impossible to decide if certain descriptions referred to *soft tissue* injuries or *joint* injuries. Consequently, such terms were also processed in the corpus and were assigned to numeric codes. Later, in the contextual analysis, it was possible to ascertain that terms signifying joint injuries (e.g. *sprain*) were often used for muscular injuries by physicians. As muscles must be regarded as parts of the soft tissue, these terms were also dealt with as soft tissue injuries in the present study.

4.4. Terms for soft tissue injuries in the Hungarian sub-corpus

4.4.1. Terms depicting soft tissue injuries in parts A and B of the Hungarian MDRI

The examination of the MDRI in the Hungarian sub-corpus yielded the following results: Altogether 1119 soft tissue injuries were recorded by physicians in the *descriptions (part A)* of MDRI, from which 34.6 percent did not cause an epithelial lesion. Among these, 41.2 percent belonged to the synonymous group '*haematoma*', and 46.5 percent to the synonymous group '*swelling*'. The other synonymous groups did not even reach 10 percent, respectively.

41.3 percent of the terms were registered in part A on injuries resulting in an epithelial lesion, of which 24.5 percent belonged to the synonymous group '*lacerated wound*' and 27.1 percent to the synonymous group '*abrasion*'. The third most common group was '*wound*' without any specification, which amounted to 18.2 percent. The other recorded injuries were represented in less than 10 percent of cases. Furthermore, 24.1 percent of the injuries recorded were not identifiable as any specific kind of soft tissue or other injury. From these, the far most frequent ones belonged to the synonymous group '*tenderness on pressure*' and accounted for 64.1 percent. The second most common synonymous group representing the term '*injury*' without any specification amounted to 14.4 percent. The other types remained under 10 percent. All synonymous groups with their detailed contents detected in the descriptions are demonstrated in Chart 7 in the Appendix.

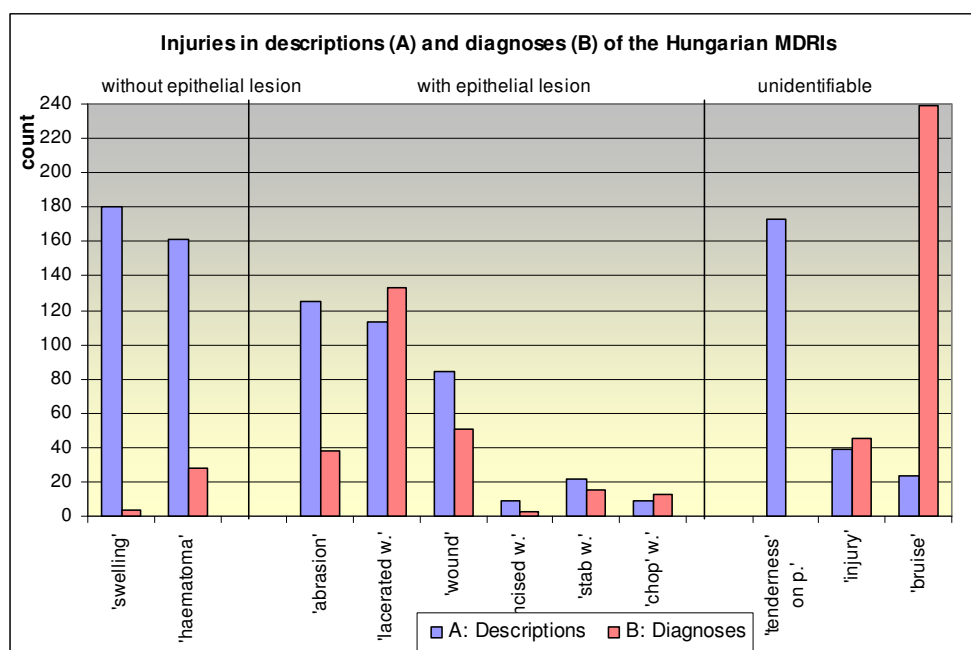
In the *diagnoses (part B)* documented by physicians 608 soft tissue injuries were detected. 7.7 percent of these belonged to the group injuries not causing an epithelial lesion, 44.2 percent of them to injuries resulting in an epithelial lesion and 48 percent to unidentifiable injuries. The most frequent synonymous groups were '*haematoma*' being the most common injury without an epithelial lesion (59.6 percent), '*lacerated wound*' (49.4 percent) as well as '*wound*' without specification (19 percent), the latter two belonging to injuries with an epithelial lesion. The most commonly used unidentified group was '*bruise*' (81.8 percent).

4.4.2. Comparison of terms in parts A and B of the Hungarian MDRI

When comparing the synonymous groups in the descriptions (part A) and the diagnoses (part B) it can be established that some specific types of injuries must have been confused by the same physicians. E.g. lacerated wounds, incised wounds, stab wounds and chop wounds have different counts in A and B, the suspicion arose that these wound types were diagnosed differently than they were described.

The concordance analysis showed that out of the 9 *incised wounds* 4 were diagnosed as *chop wounds* and 2 as *lacerated* ones. Therefore only 3 came up in the diagnoses as *incised wounds*. It was also possible to show that most terms depicting unidentifiable injuries like *'tenderness on pressure'* and *'injury'* in itself changed in the diagnoses into *'bruises'*. The most frequent synonymous groups in the descriptions (A) compared to the diagnoses (B) are represented in Graph 6.

Graph 6. Comparison of the most frequent terms in parts A and B of the Hungarian MDRI



All terms describing injuries assigned to synonymous groups are demonstrated in detail in Charts 7 and 8 in the Appendix.

4.4.3. Comparison of Hungarian and Latin diagnoses (B) in the Hungarian sub-corpus

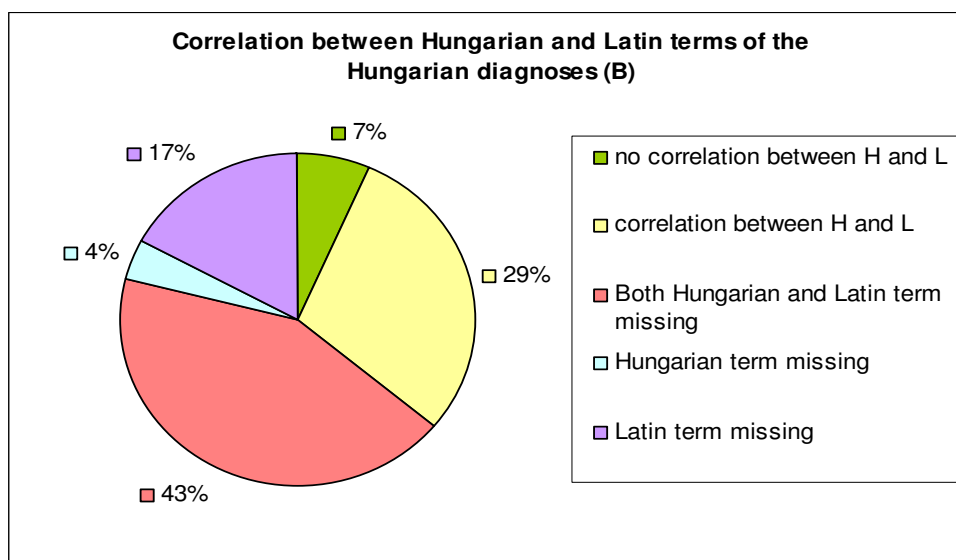
Since in Hungary diagnoses are formulated in both Hungarian and Latin, it was interesting to investigate how Hungarian terms were translated into Latin and whether the diagnoses had the same meaning in both languages. For the purpose of comparison, Latin diagnoses were also

assigned numeric codes, and the synonymous groups detected in the sub-corpus are shown in Chart 9 in the Appendix.

The corpus analysis revealed that in 4 percent of the cases the Hungarian term and in 17 percent the Latin term was missing, so a comparison between the two was not possible. Further 43 percent of MDRIIs did not record any diagnoses, neither in Hungarian nor in Latin, so could such cases not be taken into account. Consequently, the comparison was only possible to perform in 36 percent of MDRIIs. The analysis showed that only 29 percent of all MDRIIs contained diagnoses meaning the same in both Hungarian and Latin. When only considering the comparable cases, 80.6 percent of the diagnoses had the same meaning in both languages.

The concordance analysis showed that in these cases terms were translated into Latin word for word, and in both languages 21 synonymous groups were found. In those cases where the Latin and Hungarian diagnoses were different, not even the synonymous groups of terms were identical. Graph 7 shows the distribution of the cases taken and not taken into account as well as MDRIIs having or not having a correlation between their diagnoses in Hungarian and Latin.

Graph 7. Comparison between the Hungarian and Latin diagnoses in Hungarian MDRIIs



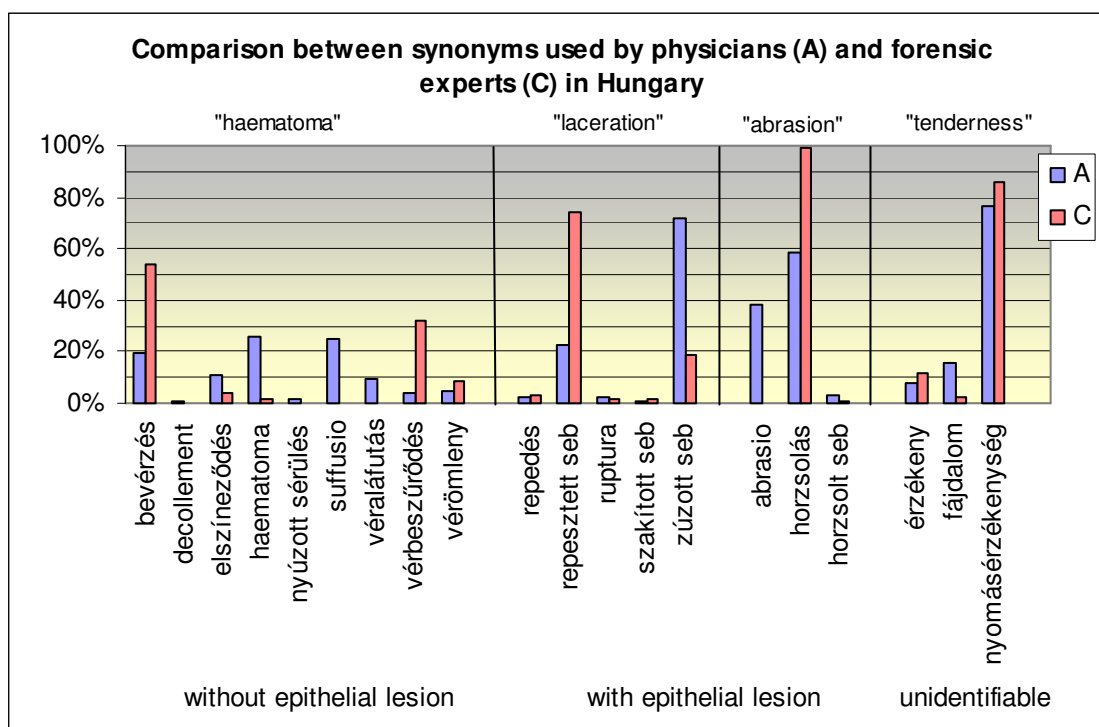
4.4.4. Terms used in Hungarian expert opinions (C)

In Hungary, 997 soft tissue injuries were mentioned in *expert opinions* (sub-corpus C within the Hungarian sub-corpus). 21.1 percent of the terms described injuries without an epithelial lesion, 43.1 percent of them injuries with an epithelial lesion and 35.8 percent unidentifiable

injuries. The most frequent synonymous group depicting injuries without an epithelial lesion was ‘*haematoma*’ (61.7 percent). The most common synonyms for injuries causing an epithelial lesion belonged to the superordinate term ‘*lacerated wound*’ (38 percent) and the most frequent ones on unidentifiable injuries were assigned to the group ‘*bruise*’ (68.3 percent). Terms revealed in synonymous groups are represented in Chart 10 in the Appendix. According to Chart 10, it became apparent that all the 26 synonymous groups detected in the descriptions (part A) were listed in the expert opinions (part C), too. Consequently, it was investigated whether only the same synonymous groups or even the same terms were applied by forensic experts and by physicians in Hungary.

For the purpose of the comparison between synonymous words used by physicians and experts, synonymous groups with the most synonyms were summarised in Graph 8.

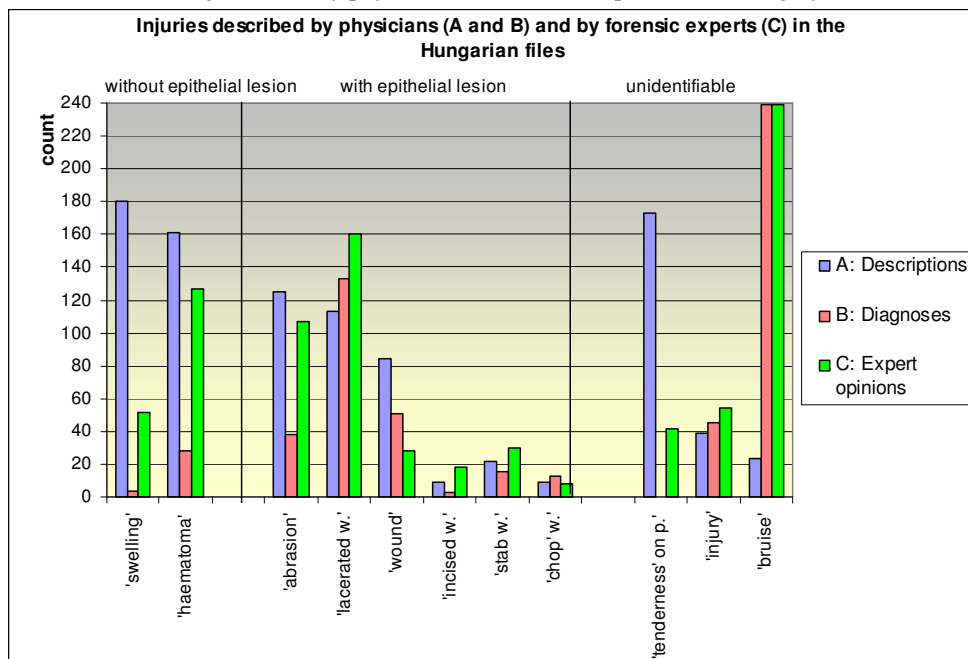
Graph 8. Comparison between synonyms used by physicians and forensic experts in Hungary



Graph 8 shows that from the numerous synonyms of ‘*haematoma*’ forensic experts only used three. In injuries caused by blunt force, forensic experts chose the term ‘*repszett seb*’ = literally ‘*ruptured wound*’, while the term ‘*zúzott seb*’ = literally ‘*bruised wound*’ was used much less frequently by experts than by physicians for the same phenomenon. The use of these words by physicians and experts seems to be inversely proportional showing an explicit preference for the term ‘*repszett seb*’ (‘*ruptured wound*’) in forensic professional language.

In this context the question may also arise how other types of wounds were referred to by experts. In Graph 6 terms were compared in descriptions (A) and diagnoses (B) written by physicians. It was possible to reveal which synonymous groups in diagnoses (B) differed from the descriptions (A) in the same injuries. Graph 9 below represents how these synonymous groups were later described by experts in the forensic expert opinions (C).

Graph 9. Comparison between the most frequent synonymous groups used in the Descriptions (A) and Diagnoses (B) by physicians and forensic experts (C) in Hungary



Graph 9 shows that the synonymous groups *'lacerated wound'* and *'stab wound'* were more often used by experts than by physicians. However, experts seem to apply synonyms for *'swelling'* and *'tenderness on pressure'* significantly less frequently in their opinions. It is interesting to observe that in diagnoses (B) there were more *'chop wounds'* mentioned than in descriptions (A), whereas experts diagnosed almost the same amount of chop wounds as registered in the descriptions (A).

On the other hand, it was the expert opinions in which the most *'incised'* and *'stab wounds'* were recorded, which suggests that these types of wounds were not described explicitly by physicians. Another apparent phenomenon was that experts characterised more injuries as *'lacerated wounds'* than physicians did, and vice versa, experts diagnosed less *'haematomas'* than primary treating doctors. However, the unidentifiable term *'bruise'* came up in the expert opinions with the same frequency as in the physicians' diagnoses.

4.4.5. Regional differences in the use of terms in Hungary

In the Hungarian sub-corpus no significant territorial differences were found concerning the use of terms depicting soft tissue injuries. The only remarkable difference was observed in connection with the term '*nyomásérzékenység*' ('tenderness on pressure'), which was described in Pécs about two times as frequently as in other Hungarian towns. Another characteristic detected in all Hungarian sub-corpora was that both Latin and Hungarian synonyms of the same phenomenon were applied in the descriptions (A) in each region.

4.5. Terms describing soft tissue injuries in the Austrian sub-corpus

4.5.1. Terms depicting soft tissue injuries in parts A and B of the Austrian MDRIs

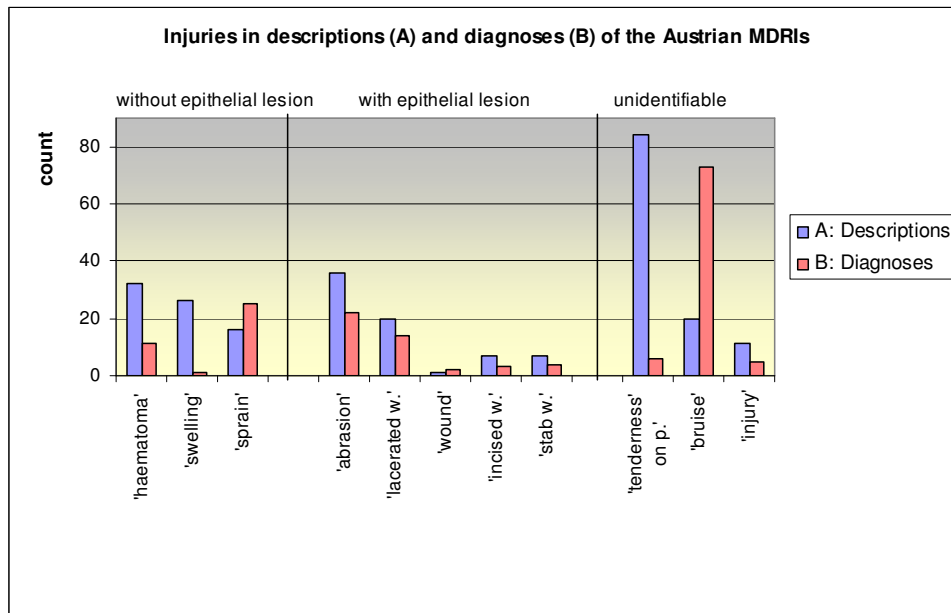
In the *descriptions* (sub-corpus A of the Austrian sub-corpus) there were 303 injuries described, of which 30.4 percent caused no epithelial lesion. Among these, the most frequent synonymous group was '*haematoma*' (35.2 percent). Further 26.7 percent of the descriptions depicted injuries leading to an epithelial lesion. Among these terms, the most frequent ones belonged to the synonymous group '*abrasion*' (40.7 percent). Most terms, 42.9 percent detected in the descriptions referred to unidentifiable injuries, from which the most frequent ones by far belonged to the synonymous group '*tenderness on pressure*' (64.6 percent).

In the *diagnoses* (sub-corpus B) of the Austrian MDRIs 179 injuries were detected, of which 22.9 percent were injuries without an epithelial lesion and 26.3 percent with an epithelial lesion. Most terms (50.8 percent) depicted unidentifiable injuries in the diagnoses, too. The most commonly used synonymous groups were '*sprain*' (61 percent), '*abrasion*' (46.8 percent) and '*bruise*' (80.2 percent). All synonymous groups with their related terms are summarised in Chart 11 in the Appendix.

4.5.2. Comparison of terms in parts A and B of the Austrian MDRIs

The corpus analysis facilitated the comparison of the sub-corpora A and B to investigate how many injuries described in part A were listed among the diagnoses. Graph 10 represents the distributions of injuries according to synonymous groups in the A and B sub-corpora of the Austrian MDRIs.

Graph 10. Comparison of the most frequent terms in parts A and B of the Austrian MDRI



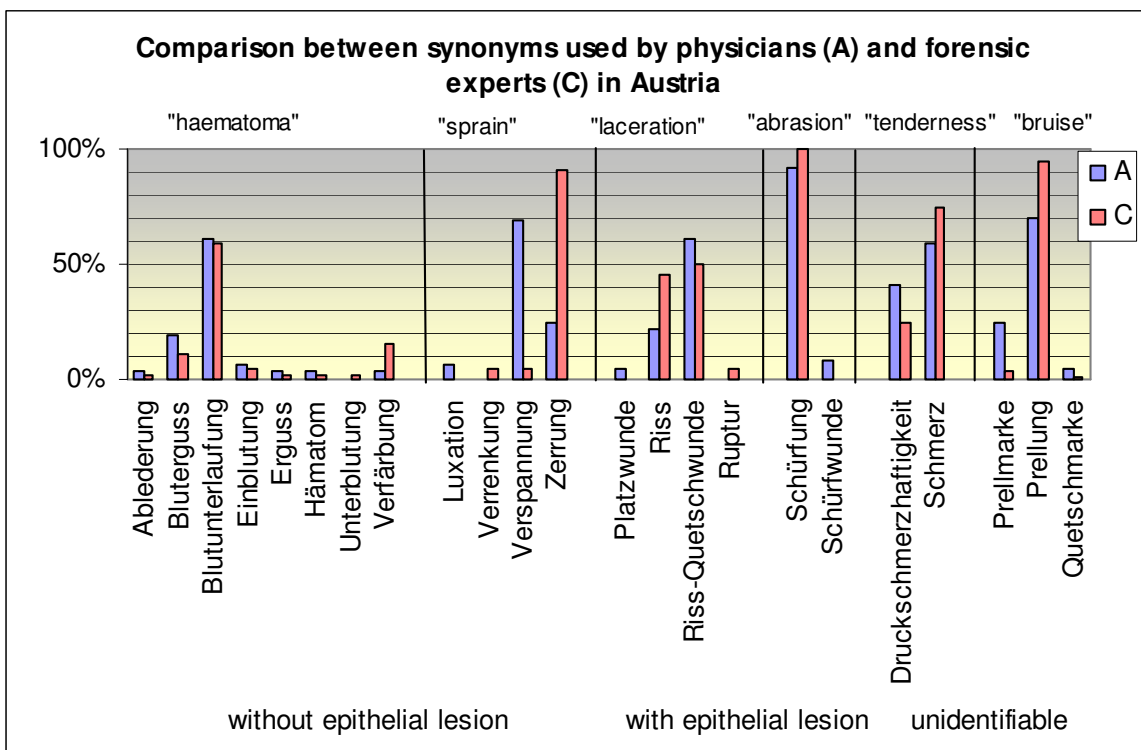
In Graph 10 it is apparent that more injuries were diagnosed as belonging to the synonymous groups 'sprain' and 'bruise' than described. However, the terms of the synonymous groups 'swelling' and 'tenderness on pressure' were rarely recorded as diagnoses. All synonymous groups with their related terms are summarised in Chart 12 in the Appendix.

4.5.3. Terms used in Austrian expert opinions (C)

In the sub-corpus *C* (expert opinions) of the Austrian files 299 soft tissue injuries were registered, of which 33.4 percent without and 29.4 percent with epithelial lesion. Much fewer than in parts A and B, altogether 37.1 percent of the recorded injuries belonged to the unidentifiable type. The most frequently detected synonymous groups belonged to the superordinate words 'haematoma' (44 percent), 'abrasion' (40.9 percent) and 'bruise' (66.7 percent). All synonymous groups with their terminological contents are represented in Chart 13 in the Appendix.

Since in Austria, similarly to Hungary, injuries are usually assessed on the basis of MDRI, it was interesting to compare the most frequent synonymous groups used by physicians and forensic experts. Graph 11 demonstrates the most frequently used synonymous groups in the descriptions compared with those in the forensic expert opinions.

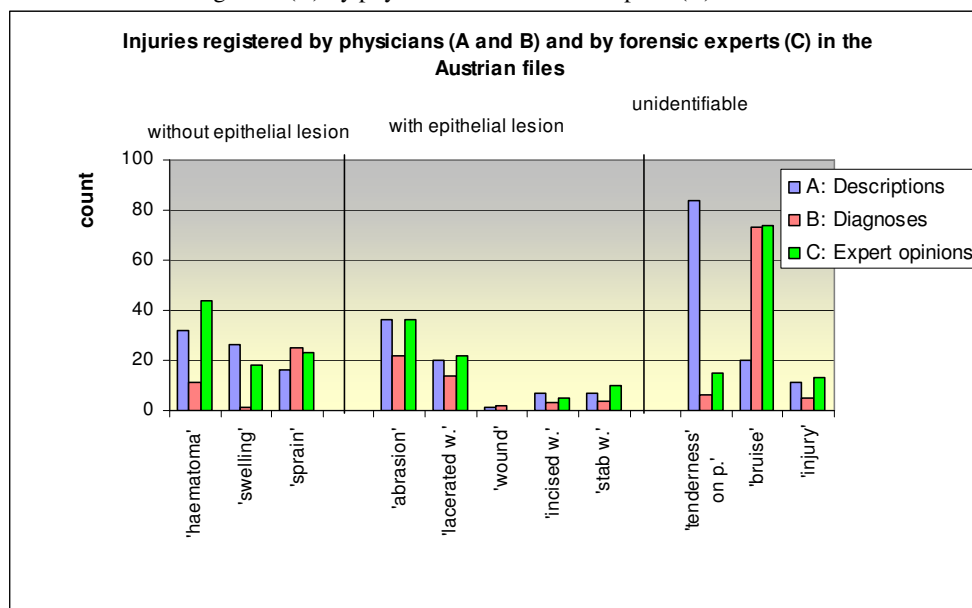
Graph 11. Comparison between synonyms used by physicians and forensic experts in Austria



According to the analysis demonstrated in Graph 11 the term most frequently used by both physicians and forensic experts in the synonymous group 'haematoma' was 'Blutunterlaufung'. In forensic expert opinions the vague term 'Verfärbung' (= 'discolouration') figured slightly more frequently. The only term used solely by forensic experts was 'Unterblutung'.

In both sub-corpora the highest number of injuries belonged to the synonymous group 'sprain'. While most Austrian physicians described this phenomenon as 'Verspannung' (= literally 'hardening'), forensic experts seem to prefer the term 'Zerrung' (= literally 'strain'). For lacerations, the term 'Platzwunde' (= literally 'burst wound') was only rarely used by physicians but never by forensic experts. The term 'Schürfwunde' (= literally 'grazed wound') could not be found in the opinions of forensic experts, either. The unidentifiable injury 'bruise' was mostly described by both physicians and forensic experts as 'Prellung' (= 'bruise'). However, according to the analysed sub-corpus, forensic experts seem to apply the term 'Prellmarke' (= literally 'bruise mark') less frequently than physicians do. A comparison pertaining to the most frequently used synonymous groups was facilitated by the concordance analysis, which yielded the results represented in Graph 12 below.

Graph 12. Comparison between the most frequent synonymous groups used in the Descriptions (A) and Diagnoses (B) by physicians and forensic experts (C) in Austria



Graph 12 shows that forensic experts more frequently used *'haematoma'* than physicians did. Another striking difference is that the synonymous group *'tenderness on pressure'* was not often used in expert opinions, despite its high incidence in the descriptions. The semantically not unambiguous diagnosis *'bruise'* was always repeated in expert opinions, although it was much less frequently mentioned in the descriptions than in the diagnoses.

4.5.4. Regional differences in the use of terms in Austria

As there was no possibility to collect forensic files from different regions in Austria, regional differences in the use of terms depicting soft tissue injuries cannot be analysed in the present study.

4.6. Terms describing soft tissue injuries in the German sub-corpus

4.6.1. Terms depicting soft tissue injuries in parts A and B of the German MDRI

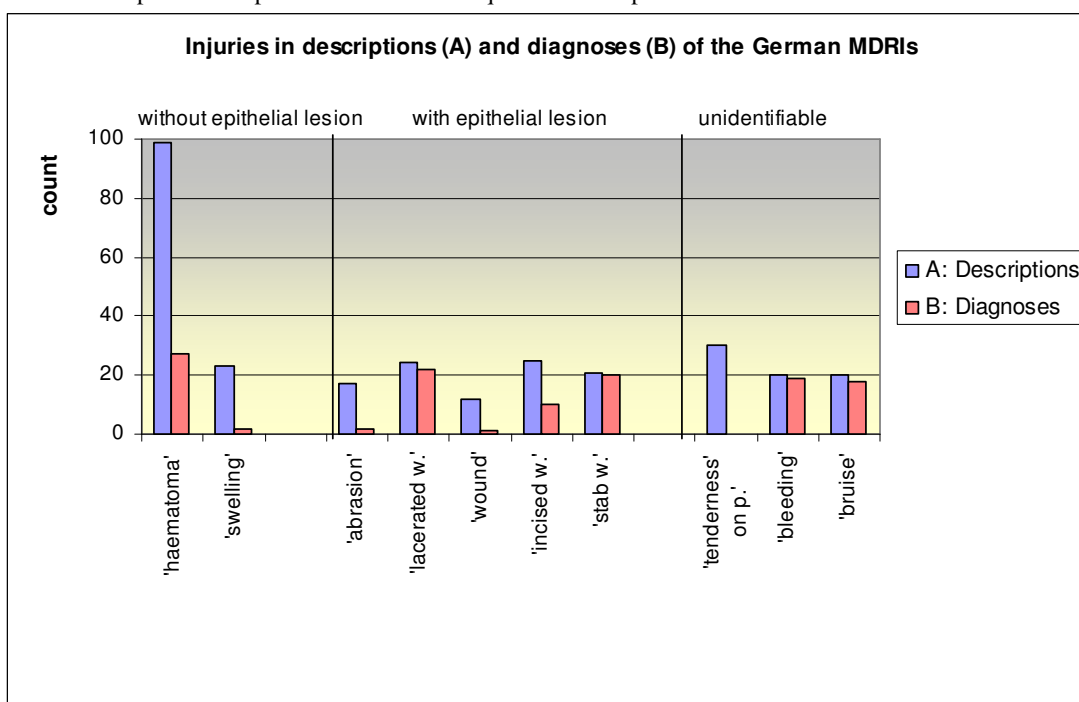
In Germany, 339 soft tissue injuries were recorded in the *descriptions (sub-corpus A)*, from which 34.6 percent without an epithelial lesion. The most frequent synonymous groups representing these kinds of injuries were *'haematoma'* accounting for 63.5 percent and *'swelling'* amounting to 14.7 percent. Furthermore, 41.3 percent of injuries leading to an epithelial lesion were registered, from which 17.3 percent belonged to the synonymous groups *'incised wound'* (18 percent) and *'lacerated wound'* (17.3 percent). 26.1 percent of the terms

described unidentifiable injuries, which were mostly represented by the synonymous groups *'tenderness on pressure'* (28.8 percent) and by both *'bruise'* and *'bleeding'* (19 percent each). In *sub-corpus B (Diagnoses)* 166 injuries were recorded, from which 19.3 percent without an epithelial lesion, 44 percent with an epithelial lesion and 36.7 percent unidentifiable injuries. The most frequent synonymous groups were *'haematoma'* (84.4 percent), *'lacerated wound'* (30.1 percent) and *'bleeding'* (31.1 percent). All synonymous groups with their contents are demonstrated in Chart 14 in the Appendix.

4.6.2. Comparison between terms in parts A and B of the German MDRI

Synonymous groups were compared between the descriptions (sub-corpus A) and diagnoses (sub-corpus B) of the German sub-corpus in order to investigate how injuries described in sub-corpus A were diagnosed (B).

Graph 13. Comparison of the most frequent terms in parts A and B of the German MDRI



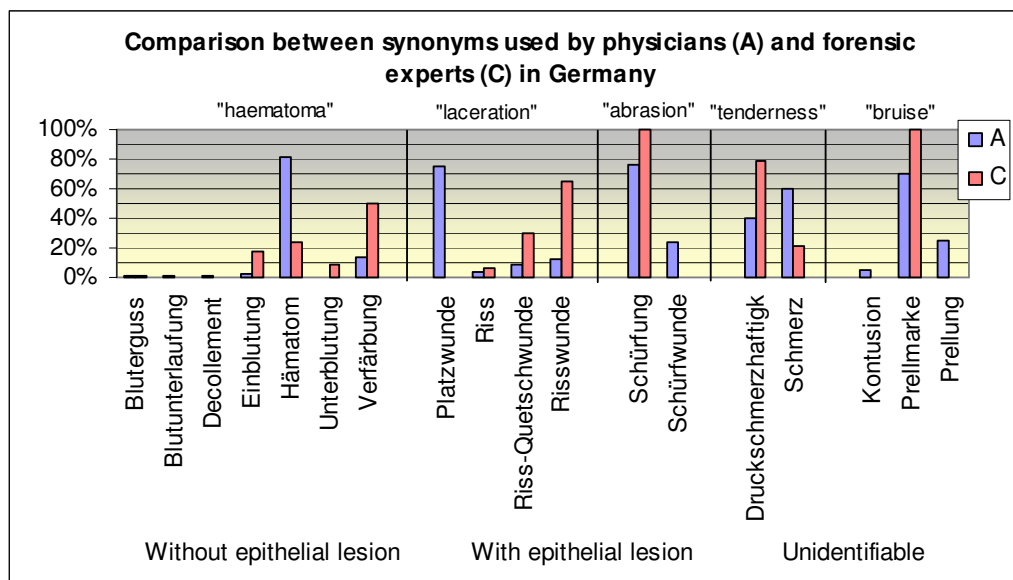
Graph 13 represents the distribution of the most frequent synonymous groups in the German descriptions (A) and diagnoses (B). It demonstrates that there were no *'chop wounds'* described in Germany. However, there seem to be fewer *'haematomas'* and *'lacerated wounds'* and *'incised wounds'* diagnosed than described. The statistical analysis showed that 15 *'incised wounds'* were diagnosed as *'stab wounds'*. Terms belonging to the superordinate word *'tenderness on pressure'* were not mentioned as diagnoses, similarly to Hungary. All synonymous groups with their related terms are summarised in Chart 15 in the Appendix.

4.6.3. Terms used in German expert opinions (C)

Since German forensic expert personally examine probands more often than their Austrian and Hungarian counterparts, it was not possible to compare the terminology of expert opinions with the terminology of MDRI on the same basis as in Hungary and Austria. In the German expert opinions injuries were described in much more detail than in the MDRI due to the forensic approach. Consequently, in the *expert opinions (sub-corpus C)* almost three times as many (1015) injuries were described as in the MDRI (399). 44.2 percent of the terms on injuries without an epithelial lesion and 42.3 percent with an epithelial lesion were found in the opinions. Only 13.5 percent of the terms depicted unidentifiable injuries. The concordance analysis revealed that the latter were mostly combined with other terms describing specific types of injuries, therefore, unidentifiable terms (e.g. 'sensitive to pressure') can be regarded as further kinds of injury 'attributes'. The most frequent synonymous groups in the three main groups listed above were 'haematoma' (65 percent), 'abrasion' (26.8 percent) and 'injury' (51.1 percent).

As there were much more detailed descriptions of significantly more injuries detected in the expert opinions (C) than in the descriptions (A), it was not worth comparing the synonymous groups used between the two. However, the single terms belonging to synonymous groups were compared in order to investigate whether there are differences between terms used by physicians and forensic experts. Graph 14 below demonstrates synonymous groups with the widest scale of terms compared between physicians' and experts' language use.

Graph 14. Comparison between synonyms used by physicians (A) and experts (C) in Germany



In Graph 14 it is apparent that forensic experts use the terms ‘*Verfärbung*’ = literally ‘*discoloration*’ describing haematomas, and ‘*Riss-Quetschwunde*’ = literally ‘*ruptured-bruised wound*’ as well as ‘*Risswunde*’ = literally ‘*ruptured wound*’ for lacerations or lacerated wounds more often than physicians do. Similarly to Austria, ‘*Unterblutung*’ with the same meaning was only used by forensic experts.

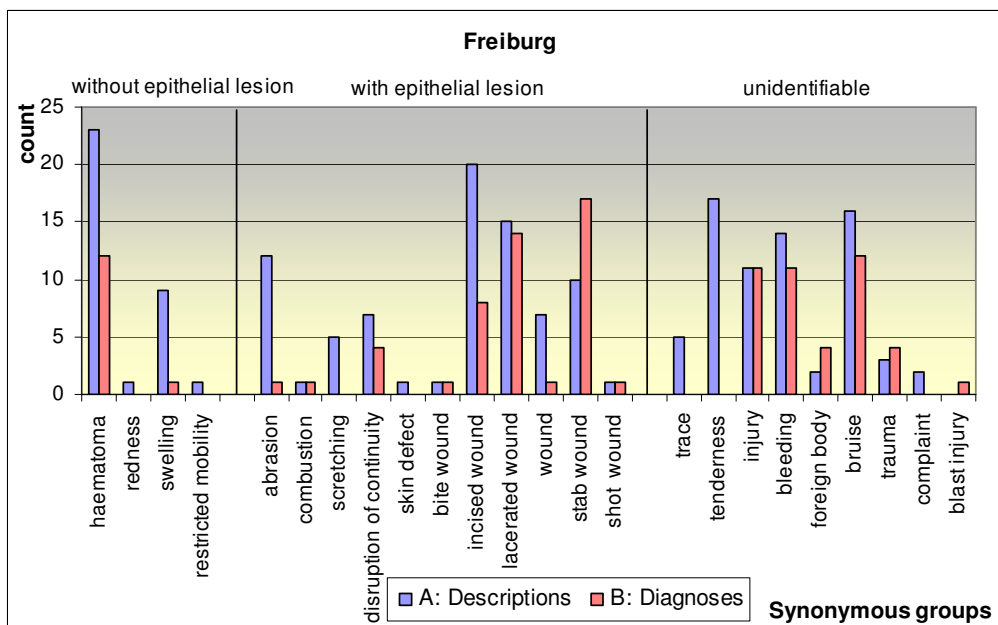
The terms ‘*Schürfwunde*’ = literally ‘*abraded wound*’ and ‘*Kontusion*’ or ‘*Prellung*’ (both meaning ‘*bruise*’) were not detected in forensic opinions. In the group ‘bruise’, however, ‘*Prellmarke*’ was the single term found only four times in descriptions written by forensic experts. These four terms accounted for the total 100 percent. All synonymous groups with their synonymous terms are represented in Chart 16 in the Appendix.

4.6.4. Regional differences in the use of terms in Germany

As data were collected from Mainz and Freiburg, it was possible to compare the use of terms depicting soft tissue injuries. However, the limitations of the present study did not allow for comparing these with forensic files from other regions of Germany, so the validity of the results cannot be generalised to the whole country.

Both sub-corpora contain almost the same number of files, so it was also possible to compare, in numbers instead of percentages, the synonymous groups used in each region. The following graphs (Graphs 15 and 16) show the distribution of synonymous groups described (part A) and diagnosed (part B) in Freiburg and Mainz in numbers.

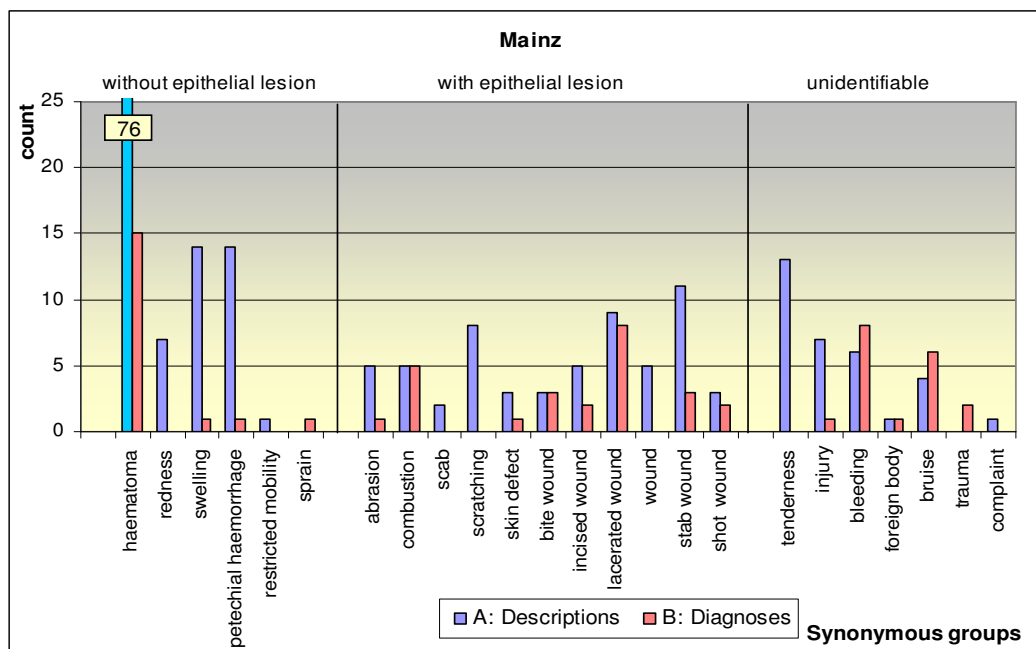
Graph 15. Synonymous groups of soft tissue injuries in descriptions (A) and diagnoses (B) in Freiburg, Germany



In Freiburg, several injuries described (in part A) were not listed among the diagnoses (part B). Furthermore, in Graph 15 it is apparent that there is a disproportionate distribution of ‘incised wound’ (= *Schnittwunde*) and ‘stab wound’ (= *Stichwunde*), which has already been mentioned in the general comparison of the A and B sub-corpora in Germany in 4.6.2. There were fewer ‘incised wounds’ diagnosed than described, and more ‘stab wounds’ were listed among the diagnoses than in the descriptions.

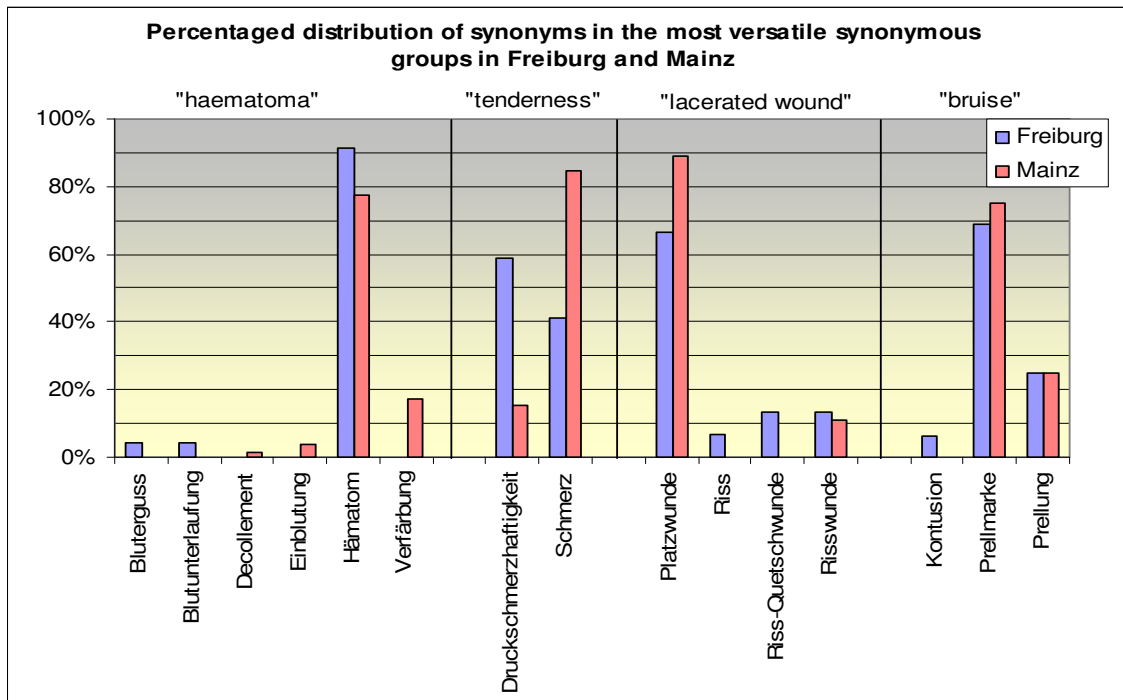
In Mainz (cf. Graph 16), similarly to Freiburg, most injuries do not seem to be listed among the diagnoses, although they were described in part A. However, terms belonging to the synonymous groups ‘sprain’ and ‘trauma’ seem to be only conclusions in the sense of the word ‘diagnosis’, while they were not mentioned in the descriptions as ‘sprain’ and ‘trauma’ but only with the symptoms of these alterations e.g. ‘tenderness’. The most frequently used synonymous group was ‘haematoma’, which had an almost three-time higher number in Mainz than in Freiburg. When comparing the proportions of ‘incised’ and ‘stab wounds’ in A and B, it can be established that there were a lot more stab wounds described here than incised ones, but much fewer of both were listed among the diagnoses.

Graph 16. Synonymous groups of soft tissue injuries in descriptions (A) and diagnoses (B) in Mainz, Germany



In both regions the same 25 synonymous groups were detected in the descriptions (sub-corpus A) but in several cases with different synonymous terms. The synonymous groups characterised by the widest scale of synonyms were compared between descriptions written by physicians in Mainz and Freiburg and are represented in Graph 17.

Graph 17. Comparison between synonyms used in descriptions (A) in Freiburg and Mainz, Germany



Graph 17 shows that the terms ‘*Bluterguss*’ and ‘*Blutunterlaufung*’ as synonyms of ‘*haematoma*’ were only used in the region of Freiburg by physicians in the analysed sub-corpus, whereas ‘*Einblutung*’ and ‘*Verfärbung*’ (= literally ‘discoloration’) were only found in the region of Mainz. Among descriptions of subjective symptoms belonging to the synonymous group ‘*tenderness on pressure*’ the same term (in German *Druckschmerzhaftigkeit*) was more frequently applied in the region of Freiburg, while the term ‘*pain*’ (*Schmerz*) was more often used in Mainz. The most frequent synonym of the group ‘*lacerated wound*’ was in both regions ‘*Platzwunde*’ (= literally ‘burst wound’), and the terms ‘*Riss*’ (=literally ‘rupture’) and ‘*Riss-Quetschwunde*’ (= literally ‘ruptured-bruised wound’) were only found in Freiburg. In the synonymous group ‘*bruise*’ most injuries were described as ‘*Prellmarke*’ (= ‘literally ‘bruise mark’) and ‘*Prellung*’ (=‘bruise’) in both regions. All synonymous groups with their contents are demonstrated in Charts 17 and 18 in the Appendix.

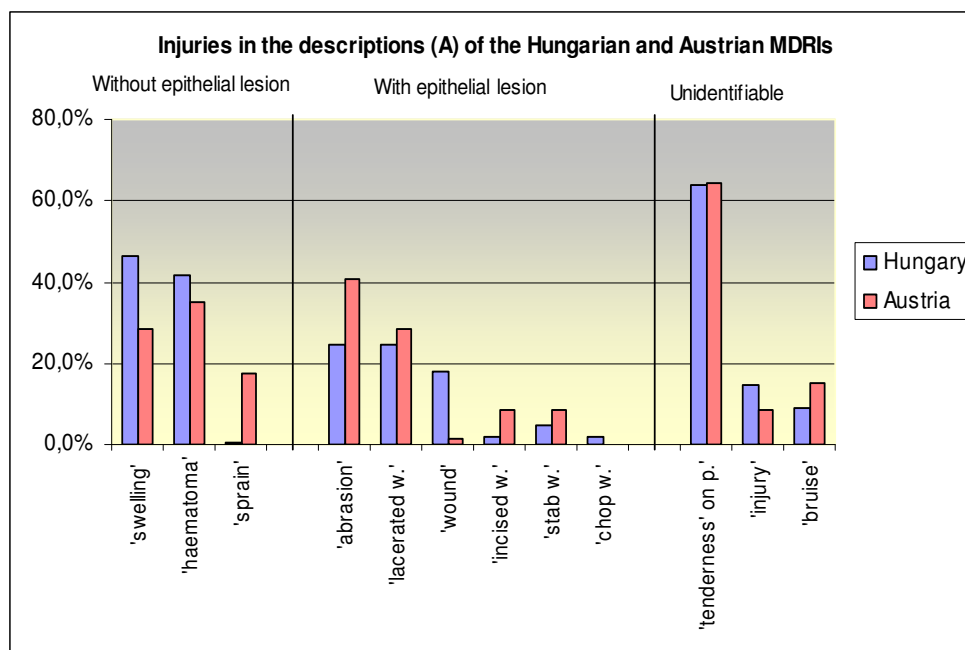
4.7. Comparison between the use of terms in Austrian and Hungarian MDRI

Since in both Hungary and Austria injuries, as a rule, are assessed by forensic experts on the basis of MDRI and no personal examination by experts is performed, it is justified to compare the terminology of soft tissue injuries between the sub-corpora of these countries. Another reason for comparison is the common origin of forensic medical terminology at the

time of the Austrian-Hungarian Monarchy. When comparing the most frequent synonymous groups of soft tissue injuries it can be established that the sub-corpora descriptions (A) had a wide range of similar nominations in both Hungary and Austria.

Graph 18 demonstrates the most frequent synonymous groups with their synonymous terms in Hungary and Austria. According to the comparative analysis, the most frequent synonymous groups detected in the Hungarian descriptions are similarly frequent in Austria. The only term not applied in Hungary as often as was 'sprain' in Austria. On the other hand, in the Austrian sub-corpus there was no 'chop wound' recorded. The term 'wound' without any specifications does not seem to be in use among Austrian physicians, either. But all the other synonymous groups had a similar distribution to those in Hungary. Even the registration of subjective symptoms of patients with the synonymous group 'tenderness on pressure' was found with almost the same frequency.

Graph 18. Comparison between synonymous groups in descriptions (A) in Hungary and Austria



In addition, the concordance analysis showed that there were similarities even between the synonyms used in these two countries. In Hungary there is an official template for describing injuries but in Austria there is no official form designed for this purpose, so physicians might have a different approach. Chart II represents the literal synonyms between Hungary and Austria, including forensic expert opinions, too.

Chart II. Literal synonyms found in the Hungarian and Austrian sub-corpora

‘haematoma’ ‘decollement’ Hungary/ Austria	‘lacerated wound’ Hungary/ Austria	‘tenderness on pressure’ Hungary/ Austria
bevérzés/ Einblutung	repedés/ Riss	érzékeny(ség)/ Empfindlich(keit)
decollement/ Decollement	repszett seb/ Platzwunde	fájdalom/ Schmerz
elszíneződés/ Verfärbung	ruptura/ Ruptur	nyomásérzékenység/ Druckempfindlichkeit
haematoma/ Hämatom	szakított seb/ Risswunde	
nyúzott sérülés/ Ablederung	zúzott seb/ (Riss-) Quetschwunde	
véraláfutás/ suffusio/ Blutunterlaufung		
vérbeszűrődés/ Unterblutung		
vérömleny/ Bluterguss		

In the synonymous group ‘*lacerated wound*’ the only term which cannot be literally translated from Hungarian is ‘*Platzwunde*’, because in the Hungarian collocation the collocater word (the word describing the base noun with general meaning) is ‘*repszett*’ meaning ‘*ruptured*’, while the Austrian term ‘*Platzwunde*’ refers to ‘*burst wound*’. The only synonymous group in Austria which does not have all its synonyms in Hungarian was ‘*bruise*’. While the Hungarian term ‘*zúzódás*’ refers literally to ‘*crushing*’, the term ‘*Prellung*’ in Austria depicts a meaning more similar to ‘*bouncing from or off something*’. However, almost the literal translation of the Hungarian ‘*zúzódás*’ ‘*Quetsch*’-‘*marke*’ (‘*contusion mark*’) was also applied in the Austrian sub-corpus as a hapax legomenon (meaning detected only once). On the other hand, in Austria further variations of bruises exist, which are described as ‘*Prellmarke*’ (=literally ‘*bruise mark*’ or ‘*bounce mark*’) or the abovementioned ‘*Quetschmarke*’. Such combinations of terms depicting bruises with base nouns like ‘*mark*’ could not be detected in the Hungarian sub-corpus.

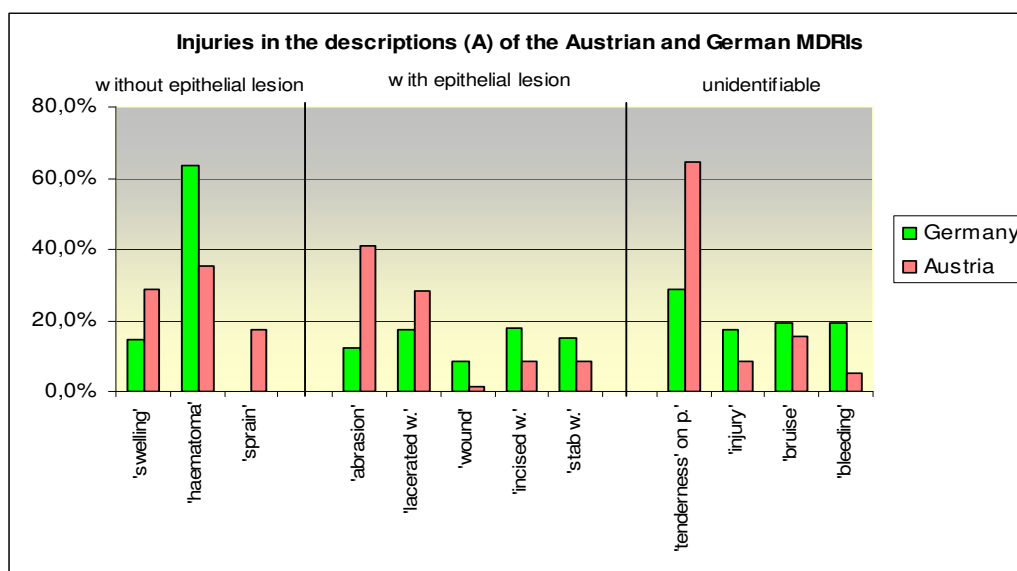
4.8. Comparison between terms in the Austrian and German MDRI

The system of assessing injuries in Austria usually differs from that in Germany, because Austrian experts mostly reconstruct injuries on the basis of MDRI, whereas German experts prevalently perform a personal examination of the proband as well and record the injuries themselves, based on a forensic approach. As Austrian experts typically form their opinions about the injuries described in the MDRI and German experts mostly on the basis of a personal examination, the expert opinions in Austria and Germany cannot be compared with each other from a terminological point of view, in spite of the common language. In addition,

there might be regional and conceptual differences, which could not be revealed in the frame of the present study.

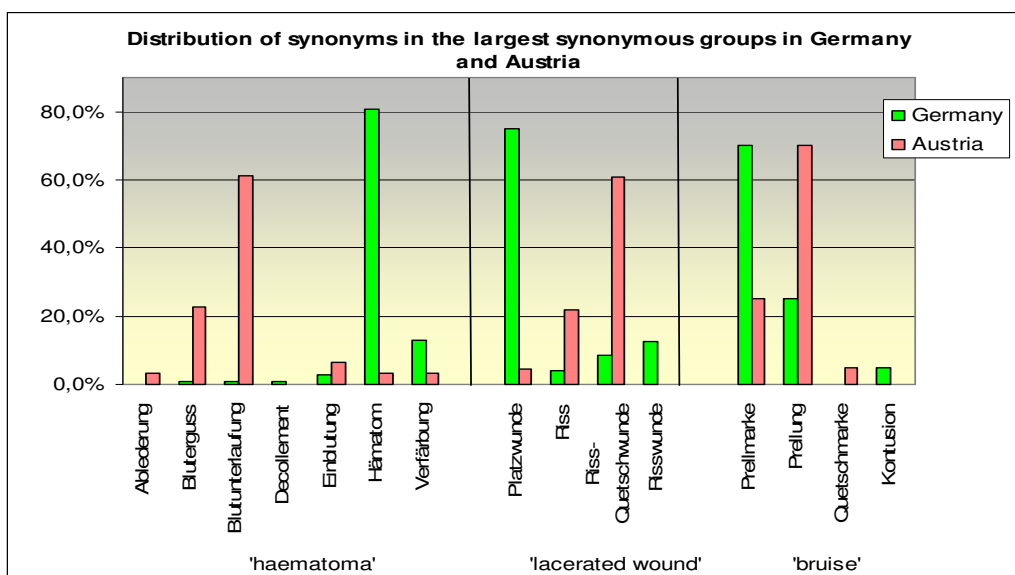
Nevertheless, it was possible to contrast the language used by primary treating physicians in MDRIs in the analysed corpus. In both countries, an official form or software for documentation of injuries is missing, so it was interesting to make a comparison based on the common language between the terms used by primary treating doctors. Graph 19 shows the most common synonymous groups with their synonymous terms in Austria and Germany. In Graph 19 it is apparent that there is a great difference in approach between primary treating doctors in Austria and Germany. While Austrian physicians, similarly to Hungarians, seem to apply more ‘general’ terms like ‘swelling’, ‘tenderness on pressure’ and ‘sprain’ with all their synonymous terms, German physicians tend to describe injuries with more exact terms like ‘haematoma’ and specific types of wounds. In contrast to Austria, in Germany no ‘sprain’ was described and only diagnosed in one case.

Graph 19. Comparison between synonymous groups in descriptions (A) in Austria and Germany



The synonymous group ‘sprain’ had correspondingly more synonyms in Austria (‘Luxation’, ‘Verspannung’ and the mostly used ‘Zerrung’), whereas the single German occurrence was described as ‘Distorsion’. Although ‘Luxation’ and ‘Distorsion’ have different meanings from a medical point of view, they were dealt with as synonyms in the present study because both are primarily connected to joint injuries. The single synonyms belonging to the most frequent synonymous groups were also analysed, but only in the MDRIs. Graph 20 summarises the contrasted synonyms between Austria and Germany.

Graph 20. Distribution of synonyms in the largest synonymous groups in the German and Austrian sub-corpora



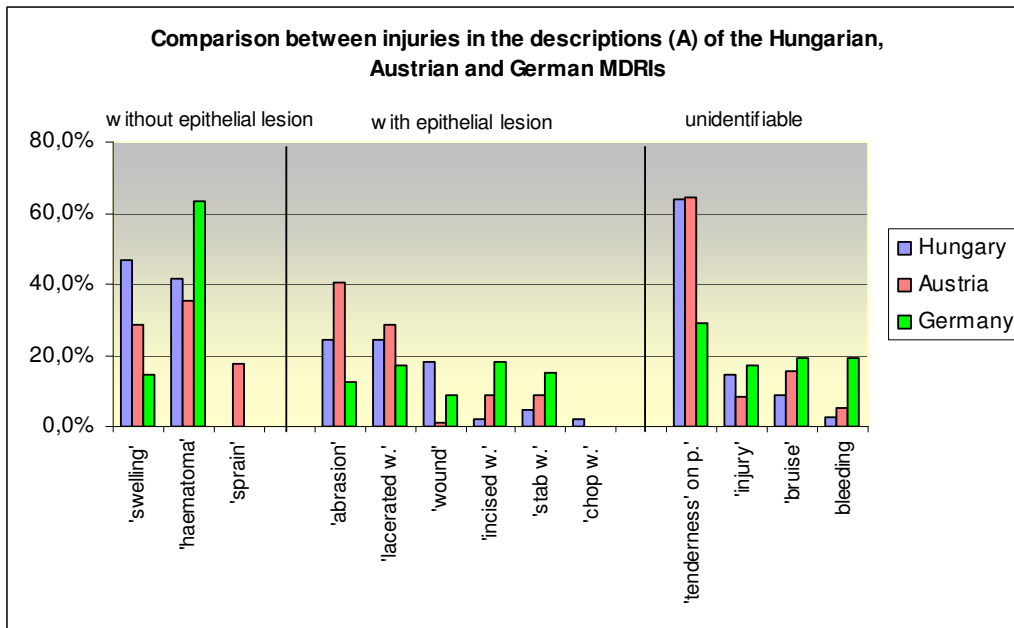
From the data in Graph 20 it is apparent that German terms of specific synonymous groups have different distributions in the German and Austrian sub-corpora. While German physicians mostly use the Latin-root word *‘Hämatom’* for ‘haematoma’, Austrians prefer the ‘germanised’ forms *‘Blutunterlaufung’* and *‘Bluterguss’*. In the nominations of ‘lacerated wounds’ there is also a significant difference to establish. German physicians predominantly use the term *‘Platzwunde’* (=literally *‘burst wound’*), whereas Austrians seem to prefer *‘Riss-Quetschwunde’* (literally *‘ruptured-bruised wound’*) instead.

In addition, the synonymous terms of ‘bruise’ also have different distributions in the two countries. *‘Prellmarke’* (=literally *‘bruise mark’*) seems to be the most frequent term in Germany, while Austrian physicians prefer *‘Prellung’* (= *‘bruise’*). It is a very surprising result that the percentages of *‘Prellmarke’* used mostly in Germany and those of *‘Prellung’* applied most frequently in Austria are inversely proportional in the two countries.

4.9. Comparison between terms in the Hungarian, Austrian and German MDRI

As already mentioned above (in 4.7 and 4.8) more similarity can be observed between the terms in Hungarian and Austrian MDRI than between the terms in Austrian and German ones. A comparison between the most frequently used terms in all the three countries is represented in Graph 21.

Graph 21. Comparison between synonymous groups in descriptions (A) in Hungary, Austria and Germany



4.10. Correlation between injuries in descriptions (A), diagnoses (B) and expert opinions (C)

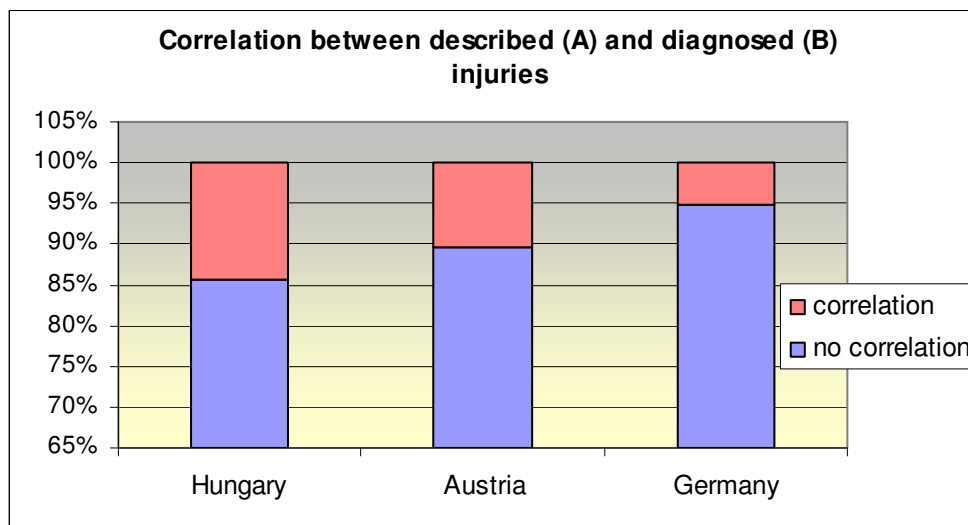
Since in numerous cases there were different synonymous groups and terms found in the descriptions (A) and in the diagnoses (B) in all three countries, the question arose which part of MDRIs the expert opinions were mostly based on.

Therefore, statistical analysis was performed to investigate whether experts took descriptions (A) rather than diagnoses (B) as the basis of their forensic opinions or the other way round. It also had to be analysed whether there was a connection between the correlation A-B and B-C, i.e. whether the expert opinion was based on the description (A) or the diagnosis (B) in case A and B were different.

4.10.1. Correlation between described (A) and diagnosed (B) injuries in Hungary, Austria and Germany

First of all, it was examined to what extent the injuries described were listed among the diagnoses at least in the same synonymous groups. Statistical analysis yielded the data demonstrated in Graph 22. (Percentages are shown only above 65 percent).

Graph 22. Correlation between described (A) and diagnosed (B) injuries

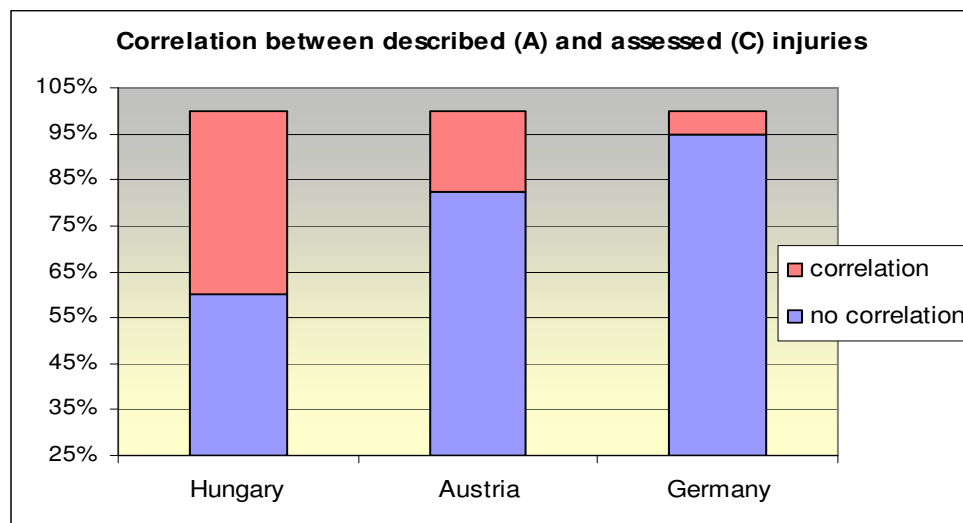


Graph 22 indicates that the highest correlation between the synonymous groups in A and B was found in Hungary, lower correlation was detected in Austria and the lowest in Germany. It means that the synonymous groups used in descriptions (A) were mostly changed into different ones in the diagnoses (B). On the one hand, these changes must be due to the use of more exact terms in diagnoses instead of general terms for symptoms, on the other hand, they presumably result from terminological problems.

4.10.2. Correlation between described (A) and assessed (C) injuries in Hungary, Austria and Germany

The next question analysed was how often expert opinions repeated terms (at least in synonymous groups) recorded in the descriptions (part A). The results of the analysis are represented in Graph 23.

Graph 23. Correlation between described (A) and assessed (C) injuries



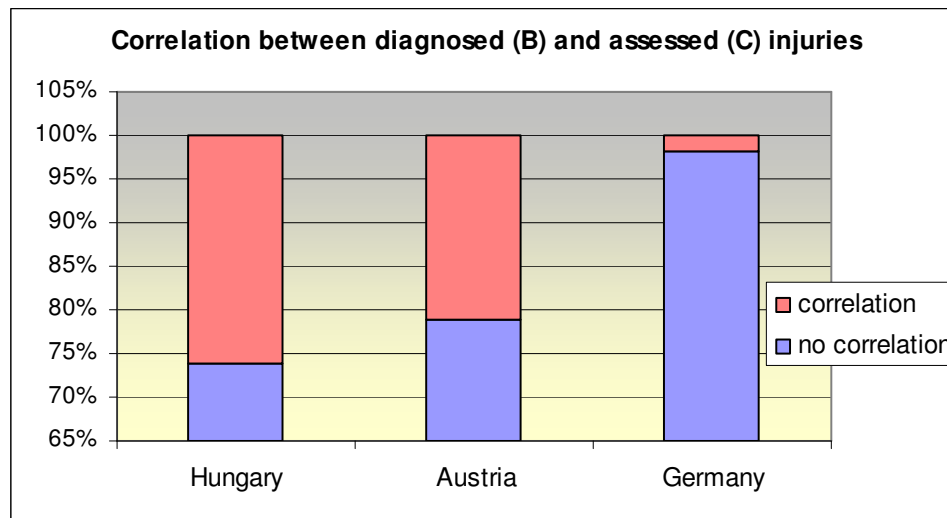
In Graph 23 it is apparent that the lowest correlation (5.2 percent) between descriptions (A) and expert opinions (C) can be found in Germany where expert opinions are based on a personal examination by forensic experts instead of MDRI. As already shown in 4.6.3, these expert opinions contain more specific terminology and much more detailed descriptions of injuries.

In Hungary, however, a 40 percent correlation was found meaning that forensic experts seem to base their opinions preferably on the descriptions (A). In Austria less than 20 percent of the expert opinions accord with the descriptions.

4.10.3. Statistical correlation between diagnosed (B) and assessed (C) injuries in Hungary, Austria and Germany

Because of the differences mentioned in 4.9.1 it was also possible to analyse the correlation between diagnoses (B) and expert opinions (C). Graph 24 demonstrates the cases of correlation between B and C in all three countries above 65 percent in order to facilitate the comparison.

Graph 24. Correlation between diagnosed (B) and assessed (C) injuries



Similarly to the results of 4.10.2, in Germany there was mostly no connection found between the diagnoses of physicians (B) and the expert opinions (C). In Austria slightly more correspondence was detected than between A and C. In Hungary, however, forensic experts seem to base their opinions in numerous cases not only on the descriptions (A) but also on the diagnoses (B).

4.10.4. Correlation between the synonymous group correspondence variables A-B and B-C

Statistical analysis was performed using a chi-squared test to reveal whether expert opinions (C) are based on descriptions (A) or diagnoses (B) in case the latter two were different. The chosen value of significance was $p < 0.05$. The chi-squared test showed a significant correlation ($p < 0.001$) between the synonymous group correspondence variables A-B and B-C.

In Hungary, it has the following significance: if the description (A) corresponds to the diagnosis (B), in 75.2 percent of the cases the same synonymous group appears in the expert opinion (C), too. However, if there is no correspondence between description (A) and diagnosis (B), the expert opinion (C) is in 34 percent of the cases based on the description (A), and only in 17.7 percent of the cases on the diagnoses (B). Consequently, Hungarian forensic experts base their opinions more on the descriptions (A) than on the diagnoses (B) of MDRI.

In Austria the analysis yielded similar results: if the description (A) corresponds to the diagnosis (B), in 73.6 percent of the cases the same synonymous group is also diagnosed in the expert opinion (C), too. On the other hand, if A does not correspond to B, forensic experts in 15 percent of the cases take the description (A) and in 11.5 percent of the cases the diagnosis (B) as basis of their opinions. So, Austrian forensic experts seem to make only a slight difference between descriptions (A) and diagnoses (B) while assessing injuries.

As opposed to the latter two countries, a forensic examination by experts in Germany usually takes place as well. In this case, in only 25.8 percent of the cases can the same synonymous group be detected in the expert opinions (C) as in both the descriptions (A) and the diagnoses (B). If A and B are different, in 4.1 percent of the cases the synonymous group of the description (A) and in only 0.6 percent of the cases the synonymous group of the diagnosis (B) was repeated in the expert opinion (C). These results suggest that in Germany only in very few expert opinions are MDRI applied for the assessment of injuries.

4.11. Synonymous groups of unidentifiable injuries in A, B and C

The object of this analysis was to reveal how the most frequently used terms for unidentifiable injuries in the descriptions (A) were diagnosed (B) and later assessed by experts (C). For the purpose of statistical analysis, the most frequent unidentifiable injuries described in part A, their related diagnoses (B) as well as the injuries assessed by experts (C)

were marked by separate codes, in case terms of unidentifiable injuries were combined with other terms.

While assigning terms to different codes it became obvious that the two most frequent unidentifiable terms '*tenderness on pressure*' and '*bruise*' used in all three countries were often combined either with other unidentifiable or with more specific terms. Although '*fractures*' and '*concussions*' do not belong to the objective of the present study, in several cases unidentifiable injuries described in part A were later diagnosed as '*fractures*' and '*concussions*'. Therefore, in this specific analysis bone and joint injuries with all their symptoms (deformation, missing part of bone or joint) were also taken into consideration.

4.11.1. The synonymous group 'tenderness on pressure' in parts A, B and C of the files

In Hungary, statistical analysis yielded the data shown in Chart 19 in the Appendix. The most frequent term was '*nyomásérzékenység*' (= '*tenderness on pressure*') in itself (detected 67/270 times), followed by its combination with '*duzzanat*' (= '*swelling*') 41 times. In 70 cases, which was the highest number, these descriptions were diagnosed as '*zúzódás*' (= '*bruise*'), but in numerous cases (59 times) there was no diagnosis found belonging to such descriptions.

21 times '*törés*' (= '*fracture*') was also diagnosed pertaining to injuries described by the synonymous group '*tenderness on pressure*'. Hungarian forensic experts seem to accept the diagnosis '*bruise*' quite often (in 40 cases). The descriptions were repeated 16 times in the expert opinions, and in the rest of the cases in combinations with other injuries. The 21 *fractures* diagnosed were also detected, often combined with various terms described by primary treating doctors in the MDRI's (part A).

As the forensic system and the distributions of synonymous groups are very similar in Austria and Hungary, it was interesting to examine how the unidentifiable group '*tenderness on pressure*' was diagnosed and assessed in Austria compared to Hungary. The results of the analysis of the Austrian files are demonstrated in Chart 20 in the Appendix.

As opposed to Hungary, the most frequent term (detected 44 times) in Austria was '*Schmerz*' (= '*pain*'). '*Druckschmerzhaftigkeit*' (= '*tenderness on pressure*') was only found in 31 cases. The related diagnoses were missing in most cases (58 times), and the most frequent diagnosis having only 11 occurrences was '*Prellung*' (= '*bruise*'). In the expert opinions (C) the related diagnoses were not mentioned 60 times. In the rest of the cases experts seemed to repeat identifiable and unidentifiable terms registered in the descriptions (A).

Germany cannot be compared to Austria and Hungary as far as terminological relations between MDRIs and expert opinions are concerned. However, the comparison between A and B is justified even in Germany. Data yielded by the statistical analysis of the German sub-corpus are summarised in Chart 21 in the Appendix. In the descriptions (A) ‘*Schmerz*’ (= ‘*pain*’) was the most commonly used term (14 times), followed by ‘*Druckschmerzhaftigkeit*’ (= ‘*tenderness on pressure*’) usually combined with terms referring to bone or joint injuries (8+4 times, respectively). The diagnoses and the expert opinions were missing in most cases. The result suggests that these kinds of unidentifiable injuries were rarely connected with objective injuries in Germany by physicians and forensic experts.

4.11.2. The synonymous group ‘bruise’ in parts A, B and C of the files

In the descriptions (A) of Hungarian MDRIs the most frequent term of the synonymous group ‘bruise’ was ‘*zúzódás*’ in itself, meaning ‘*bruise*’. This synonym was found most frequently in the diagnoses (B) and in the expert opinions (C). The results yielded by the analysis of the Hungarian files are demonstrated in Chart 22 in the Appendix.

In Austrian descriptions (A), similarly to Hungary, the most frequent term in the analysed synonymous group was ‘*Prellung*’ meaning ‘*bruise*’, but the term ‘*Prellmarke*’ (= ‘*bruise mark*’) was also frequently detected. In both the diagnoses (B) and the expert opinions (C) the term ‘*Prellung*’ (= ‘*bruise*’) was the most frequently used term; however, ‘*Prellmarke*’ (= ‘*bruise mark*’) was also used by forensic experts (C). The latter term was not detected in the diagnoses (B), similarly to ‘*Quetschmarke*’ (= ‘*contusion mark*’). ‘*Quetschmarke*’ was only used in the descriptions (A) and repeated in the expert opinions (C). The results the analysis performed on the Austrian files are demonstrated in Chart 23 in the Appendix.

In the German descriptions (A) the most frequently applied term was ‘*Prellmarke*’ (= ‘*bruise mark*’). In the diagnoses (B), however, only the term ‘*Prellung*’ (= ‘*bruise*’) was found, with a rather low occurrence. In most cases there was no related diagnosis to the description ‘*Prellmarke*’ or ‘*Prellung*’. As in Germany the expert opinions (C) were written based on a personal forensic examination and not only on MDRIs, it was not surprising that in most cases the related forensic diagnoses were formulated using specific terms describing injuries with or without an epithelial lesion. The term ‘*Prellmarke*’ was only used in two cases. Furthermore, in several cases there was no entry related to bruises. The results of the analysis on the German files are demonstrated in Chart 24 in the Appendix.

4.12. The largest synonymous group ‘lacerated wound’ in parts A, B and C of the files

Since the synonymous group ‘*lacerated wound*’ belonging to the type ‘injury with epithelial lesion’ yielded the widest range of synonyms, the use of this group was followed in A, B and C in all three countries. The group ‘lacerated wound’ was usually combined with specific terms on various types of injuries with or without an epithelial lesion. Consequently, for the purpose of statistical analysis, it was necessary to assign single combinations to numeric codes. The results yielded by the statistical analysis are demonstrated in the Charts 25, 26 and 27 in the Appendix.

In the Hungarian descriptions (A) the most frequently used term was ‘*repszett seb*’ (=‘*ruptured wound*’) which was diagnosed (B) as ‘*ruptured wound*’ or more often as ‘*zúzott seb*’ (=‘*bruised wound*’). However, in numerous cases there was no related entry in the diagnoses. In the expert opinions (C) the term ‘*repszett seb*’ (= ‘*ruptured wound*’) was the most frequent one. The term ‘*zúzott seb*’ (= ‘*bruised wound*’) was only detected in one third of the cases.

In Austrian descriptions (A) the term ‘*Riss-Quetschwunde*’ (= ‘*ruptured-bruised wound*’) was the most frequently used one. This was the only synonym detected in the diagnoses (B) and the expert opinions (C), but in most cases the related diagnosis was missing.

In the German descriptions (A) and diagnoses (B) the most prevalent term was ‘*Platzwunde*’ (=‘*burst wound*’), as opposed to Austria. In the expert opinions (C), however, only the terms ‘*Riss-Quetschwunde*’ (=‘*ruptured-bruised wound*’) and ‘*Risswunde*’ (=‘*ruptured wound*’) were found, both only twice.

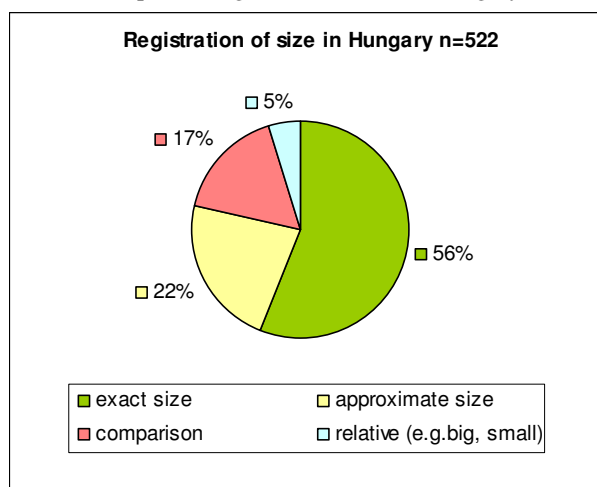
4.13. Registered characteristics of soft tissue injuries

For a complete reconstruction of soft tissue injuries, the most detailed description of their characteristics is needed. The concordance analysis aimed at revealing how many and what kind of characteristics were recorded in the sub-corpora. The terms detected were statistically correlated. The characteristics examined were the following: size, numbers of injuries, shape, depth, base, margins, side-walls, edges, tissue bridges, direction, surroundings and colour or age. The results of the statistical analysis are summarised in Charts 28 - 29 in the Appendix.

4.13.1. Registration of size

In all three countries four different ways of recording injury sizes were detected. Primary treating doctors most often registered the exact size in mm or cm. In several cases they also put the words ‘about’ or ‘ca’ before the numbers, relativising numeric data. The latter is called approximate size in the present study. Physicians sometimes indicated sizes through comparisons e.g. ‘the size of a thumbnail’ or used relative terms like ‘big’ or ‘small’. In Hungary, the distribution of registering size with the four methods listed above is demonstrated in Graph 25.

Graph 25. Registration of size in Hungary



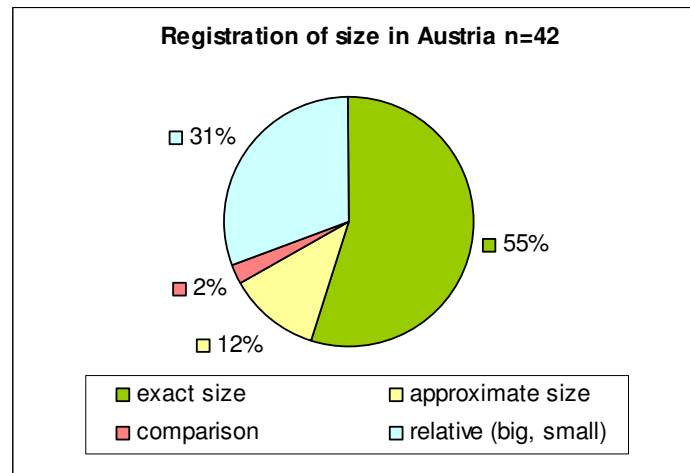
In Hungary the size was recorded in 522 cases, from which the most prevalent method of registration was the exact size, followed by the approximate size. Quite often comparisons, which used nouns with the suffix ‘-nyi’ (= ‘the size of’) e.g. ‘*tenyéryni*’ (= the size of a palm), were also applied. These belonged to four thematic groups and are summarised in Chart III.

Chart III. Indication of size through comparison in Hungary

Vegetables	Hungarian coins	Body parts	Needles
nut (also smaller nut and ½ nut)	5 Forint	male fist, fist	pinhead
pea	10 Forint	palm, female palm, child palm, baby palm	pinprick
small apple	20 Forint	finger, finger-breadth	
lentil	100 Forint, metal 100 Forint	fingertip, thumb tip, small finger tip	
	200 Forint	nail	
	fillér (out of use)		

In Austria, the distribution of the ways registering the size of injuries is demonstrated in Graph 26.

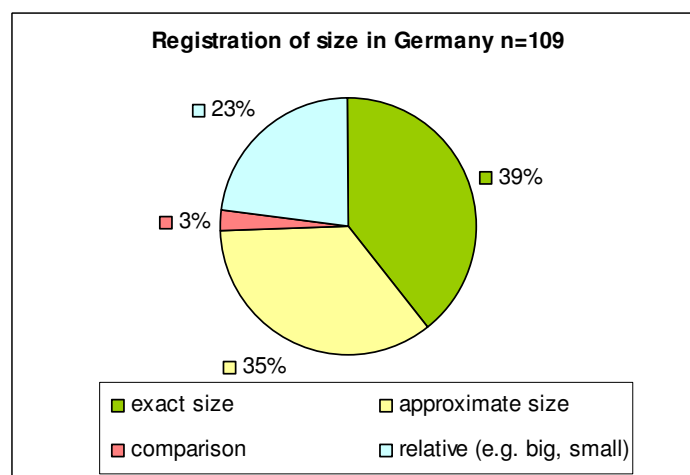
Graph 26. Registration of size in Austria



In Austria, most sizes were recorded exactly, and the second most preferred group was that of general terms (e.g. big or small). The only one comparison detected was *'münzgroß'* (= *'the size of a coin'*). General terms were *'ausgedehnt'* (= *'expanded'*), *'diskret'* (= *'discrete'*), *'geringgradig'* (= *'of a very small degree'*), *'großflächig'* (= *'large-area'*), *'klein'* (= *'small'*), *'mäßi*g' (= *'moderate'*) and *'minimal'*.

In Germany, similar percentages of the groups describing exact and approximate sizes were found. In numerous cases relative terms were detected, too. The only comparisons used in Germany were *'münzgroß'* (= *'the size of a coin'*) and *'stecknadelkopfgroß'* (= *'the size of a pinhead'*), both detected in the region of Freiburg. The distribution of the ways registering the sizes of injuries in Germany is demonstrated in Graph 27.

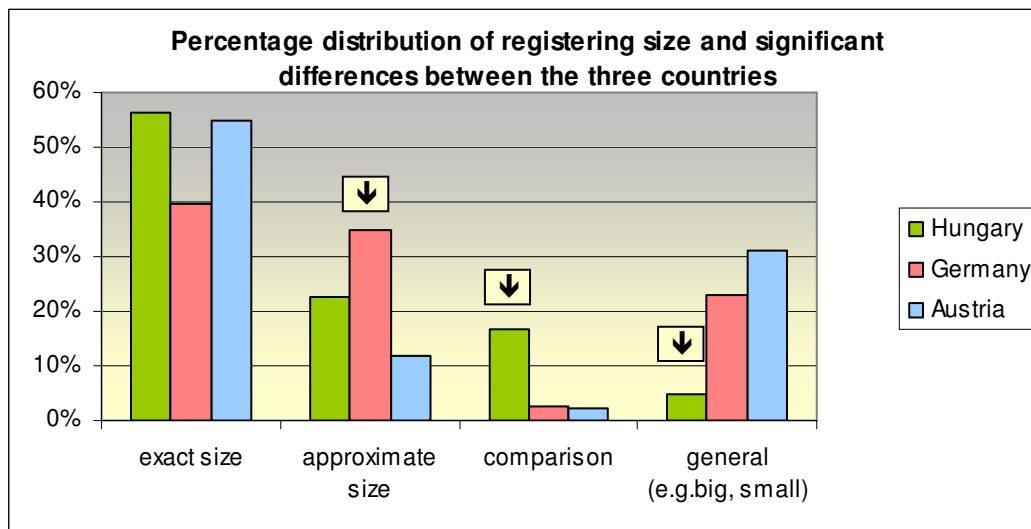
Graph 27. Registration of size in Germany



A chi-squared test was performed to examine if there is a significant difference between the three countries in the registration of size. The applied value of significance was $p < 0.05$.

Graph 28 demonstrates the percentage distribution of registering size and the significant differences between the three countries.

Graph 28. Percentage distribution of registering size and significant differences between the three countries



The test yielded the result that *there is a significant difference ($p < 0.001$) between Hungary, Austria and Germany regarding the record of injury sizes*. The columns with significant difference are marked with arrows in Graph 28.

4.13.2. Registration of numbers of injuries

While processing MDRIs in statistics, it was not possible to apply the numbers of injuries as a weighting factor, due to unusable data. In several MDRIs indefinite numerals (e.g. many, multiple) or the terms of injuries in plural were registered instead of definite numerals (numbers). Therefore, statistical analysis had to deal with numbers of injuries as 'optional' characteristics. In order to analyse the correlation between the three countries, data on numbers of injuries were divided into two groups: evaluable (definite numeral = number) and not evaluable (indefinite numeral). Using chi-squared test, *significant differences ($p = 0.039$) were found in the recording of the numbers of injuries between Hungary, Austria and Germany*. Chart IV summarises the percentages found in each country.

Chart IV. Evaluability of registered numbers of injuries in MDRIs

Identifiability	Hungary	Germany	Austria
evaluable	93.9 percent	96.1 percent	94.3 percent
not evaluable	6.1 percent	3.9 percent	5.7 percent

The highest cases of not evaluable numbers of injuries were found in Hungary, slightly fewer in Austria and the fewest in Germany. Unevaluable data of indefinite numerals detected in MDRI's besides the plural forms of nouns are demonstrated in Chart V.

Chart V. Indefinite numerals detected in Hungarian, German and Austrian MDRI's

Meaning	Hungary	Germany	Austria
several (serial)	egy-egy, néhány, több	mehrere, diverse, einzelne, etliche	mehrere, Serien-
numerous	számos	zahlreiche	zahlreiche
innumerable	számtalan	-	-
multiple	többszörös	multiple	mehrfach(e)

4.13.3. Registration of shape

For later assessment the shape of injuries can be very important, because it can provide information on the object causing the injury or on the underlying mechanism. The shape aspect can be described in each type of injury, but in spite of this fact, it was only registered in very few cases. In Hungary, it was recorded 62 times, in Germany 24 times and in Austria only 9 times, either as a noun or as an adjective. The terms used for describing the shapes of injuries are summarised in Chart VI.

Chart VI. Terms describing shape in Hungarian, German and Austrian MDRI's

Country	Arrangement of injuries	Shape of a specific injury	
		geometrical	comparison
Hungary	diffuse	circle, linear, spot	bay leaf, arch, C, irregular, L, mushroom, spot, star, stripe, T, Y, V, lane, wedge, zigzag
Germany	diffuse, extensive, grouped, small spots	circle, round, triangle	angle, arch, butterfly, hand, coin-shaped, olive, star, stripe, ribbon, V
Austria	diffuse, extensive		double knife edge, seat belt, spindle, star, V, Y

4.13.4. Registration of further characteristics of injuries

Only in very few injuries is it possible to probe the *depth*, because it is only relevant in deep and open injuries of the soft tissue, e.g. in stab wounds. The depth was registered in Hungarian MDRI's 163 times, in the Austrian ones 22 times and in the German ones 21 times. The wound *base* was registered in Hungary once, in Germany 7 times and in Austria 4 times. All descriptions used for wound base referred to the type of tissue which can be seen in the

wound base (bone, fatty tissue, cartilage, injured fascia). Consequently, these terms refer instead to the *depth* aspect of injuries and could be listed there.

Margins should always be recorded in cases of wounds; however, they were detected in Hungarian sub-corpus 63 times, in German 5 times and in the Austrian only once. The *side-walls* were only mentioned in Hungary, altogether 37 times. The concordance analysis revealed that in most cases margins were described with the same terms as side-walls, the description used only once and referring to both. The terms used for describing the wound margins and side-walls are represented in Chart VII.

Chart VII. Terms describing margins and side-walls in Hungarian, German and Austrian MDRI

	Hungary	Germany	Austria
margins	‘egyenetlen’ (= irregular), ‘éles’ (= sharp), ‘nem széthúzható’ (= inseparable), ‘roncsolt’ (= lacerated, smashed), ‘többszörösen repedt’ (= multi-ruptured), ‘összefekvő’ (= approximate)	‘glatt’ (= smooth) ‘gezackt’ (= serrated)	‘glatt’ (= smooth)
side-walls	‘éles’ (= sharp), ‘roncsolt’ (= lacerated)	-	-

In Hungary, the most frequently used term (34 times) depicting wound margins was ‘*roncsolt*’ (= ‘*lacerate or literally smashed*’), followed by ‘*éles*’ (= ‘*sharp*’, 20 times). The term ‘*egyenetlen*’ (= ‘*irregular*’) was detected in 5 cases. All the other ones appeared only once, respectively. The adjectives ‘*roncsolt*’ (= ‘*smashed*’) used 25 times and ‘*éles*’ (= ‘*sharp*’) applied 12 times were the sole adjectives describing side-walls. In each case when the side-walls were described, the margins were also referred to using the same adjectives. The concordance analysis combined with statistical analysis revealed that margins were mostly registered in the case of ‘*folytonosság-megszakítás*’ (‘*disruption of continuity*’) in Hungary, where about 90 percent of the descriptions contained the characteristics of margins. In the same injuries the highest amount of side-wall documentation was found. Further injuries in which margins were described more frequently were ‘*harapott seb*’ (‘*bite wound*’) and ‘*szúrt seb*’ (‘*stab wound*’), however, only in about 20 percent and 18 percent of the cases, respectively. In Germany, most margins were recorded where the term ‘*Wunde*’ (wound’) without specification was applied in the descriptions, though only in 25 percent of all wounds. In Austria, the only injury with which the margins were described was ‘*Schittwunde*’ (‘*metszett seb*’).

Wound *edges* were only described once in the German sub-corpus within the whole corpus with the phrase ‘mit Abschrägung nach unten’ (‘bevelled down edge’) referring to an incised wound. The existence of *tissue bridges* was only once registered in Hungary (in Szekszárd) connected with a lacerated wound.

The *direction* of the wound was detected most frequently (62 times) in Hungary, 10 times in Germany and only once in Austria. The terms used in Hungary were ‘egyenes’ (= ‘straight’), ‘elágazó’ (=‘branched’), ‘ferde’ (=‘bevelled’) ‘hosszanti’ (=‘longitudinal’), ‘haránt’ (=‘transversal’) ‘vmivel párhuzamos’ (=‘parallel to something’), ‘függőleges’ (=‘vertical’), ‘nyílrányú’ or ‘sagittalis’ (=‘sagittal’) and ‘vízszintes’ (=‘horizontal’).

The *surroundings* of soft tissue injuries were only described 5 times in the Hungarian sub-corpus within the corpus. The concordance analysis of the word ‘surroundings’ revealed that the terms referring to surroundings were ‘szennyeződés’ (= ‘contamination’), ‘duzzanat’ (= ‘swelling’), ‘alvadt vér’ (= ‘congealed blood’) and ‘haematoma’.

Reference to the *colour* or *age* of haematomas also has to be made in MDRIs in order to help assessment. The concordance analysis showed that this characteristic was registered in Hungary 56 times, although 161 injuries belonging to the synonymous group ‘haematoma’ were described altogether. The age was recorded 14 times using the terms ‘inveterált’ (‘inveterate’), ‘gyógyult’ (‘healed’), ‘gyógyulóban lévő’ (‘healing’), ‘felszívódóban lévő’ (‘dissolving’), ‘kezdődő’ (‘beginning’), ‘korábbi’ (‘former’), ‘friss’ (‘fresh’) and ‘nem friss’ (‘not fresh’). The colours of haematomas were registered 42 times depicting different bright and dark hues like blue, livid, red, green and yellow.

In Germany the age was registered 16 times with the terms ‘alt’ (= ‘old’), ‘älter’ (‘older’), ‘frisch’ (‘fresh’) or ‘3-5 Tage alt’ (‘3-5 days old’). In several cases these terms were combined with reference to the colour, too e.g. ‘grünliches, älteres Hämatom’ (‘greenish, older haematoma’). The colour was registered in a further 28 cases, so, this aspect was referred to in only 44 cases altogether, although in the German sub-corpus 99 haematomas were documented.

The fewest were found in Austria, with only 7 references to the age or colour aspect. This number consisted of 6 terms describing the age ‘alt’ (‘old’), ‘älter’ (‘older’), ‘nicht mehr frisch’ (‘not fresh anymore’) and ‘reizlos’ (‘bland’). The ultimate one was mentioned twice

characterising a lacerated wound and a bruise. In one case a haematoma was described with a colour: 'blau' ('blue').

4.13. 5. Distribution of the characteristics in descriptions

The distribution of wound characteristics in all sub-corpora according to regions is shown in Chart 29 in the Appendix. In Chart 29 it is apparent that the highest number of characteristics in the whole corpus was registered in the Hungarian town Debrecen. Consequently, the highest average number of characteristics pertaining to one injury (1.28) was also found there. In all the other regions in Hungary, Austria and Germany the average number of characteristics belonging to one injury did not even reach one.

4.13.6. Influence of recorded characteristics of injuries on the assessability of MDRI

It was very difficult to establish the correlation between registered characteristics of injuries and the assessability of MDRI. As the assessability was established on the basis of general reference about assessability or impaired assessability in the expert opinions, it was only possible to evaluate whole MDRI and not every single injury. Consequently, the numbers of characteristics had to be assigned to files not to single injuries in order to analyse the correlation between information content and assessment. MDRI containing very little information recorded on features also had to be regarded as completely assessable if their related expert opinions did not make reference to impaired assessability. The analysis suggests that experts tend to assess MDRI in a very subjective way. According to this observation, some experts do not need exact information for a complete assessment, while others seem to remain unsure even if MDRI provide more information on the appearance of injuries.

For the purpose of analysing the correlation between information content and assessability a Mann–Whitney U test was performed. The accepted value of significance was 0.05. (A T- test was not possible to perform because the distribution of the registered characteristics was not equal in the different sub-corpora.) The test yielded the result that *the number of characteristics recorded did not influence assessability in the analysed sub-corpora*. Only in Hungary can a tendency of correlation be observed because the value of significance in this sub-corpora was 0.071 thus the closest to 0.05.

4.14. Registration of the exact location of soft tissue injuries

For later assessment a very detailed and exact record of the anatomical location of injuries is also needed. However, if the reference to the affected side is missing or if the registered sides are not in accord in the different parts of MDRI (A and B), the assessment is hindered.

The registered side in every injury was examined in the Hungarian sub-corpus according to single injuries and body regions. It was examined how often the side-aspect was not recorded and how often it was different in the descriptions (A) and the diagnoses (B). When the recorded side in the latter two was different, it was analysed which part of MDRI the expert opinion (C) was based on. The results of the analysis of the Hungarian sub-corpus are represented in Chart 30 in the Appendix.

For instance, in 14.7 percent of the *head injuries* the side aspect was missing, and in only about 20 percent was the same side mentioned in A, B and C. In most cases (51.7 percent) the expert opinion repeated the side mentioned in the description (A). In 2.6 percent there was absolutely no correlation detected between A, B and C. The statistics summarising all body regions are represented in Chart VIII.

Chart VIII. Statistics of registered side aspects in the Hungarian sub-corpus

Side correlation Hungary	Count	Percentage
no correlation	3	0.5 %
A = B	18	3.1 %
B = C	39	6.8 %
A = C	363	63.2 %
A = B = C	151	26.3 %
Total	574	100.0 %

Chart VIII represents the results yielded from 50.4 percent of the injuries. In the rest of the cases the side aspect was not recorded at least in two parts of the files. Only in one-fourth of the examined cases was correlation found between the side aspects in A, B and the expert opinion.

In Austrian and German files the side aspect was not tested according to body parts, only according to single injuries. Only 18.2 percent of the Austrian files were possible to examine using a statistical test to investigate how often the side aspect was the same in A, B and C. In the rest of the cases the side aspect was not recorded at least in one of the three parts. This fact

was due to the absence of references to injuries and/or their locations either in the diagnoses (B) or in the descriptions (A) of Austrian MDRIs. The results of the tests are summarised in chart IX.

Chart IX. Statistics of registered side aspects in the Austrian sub-corpus

Side correlation Austria	Count	Percentage
no correlation	0	0.0 %
A = B	4	4.3 %
B = C	15	16.3 %
A = C	57	62.0 %
A = B = C	16	17.4 %
Total	92	100,0 %

In the German files, even fewer files, only 8.5 percent, were possible to investigate from the point of view of the side aspect. As forensic expert opinions were formulated on the basis of a personal forensic examination in Germany, it became apparent that most injuries described by experts were not mentioned by primary treating doctors in the MDRIs. The very few files on which the test was performed yielded the data summarised in Chart X.

Chart X. Statistics of registered side aspects in the German sub-corpus

Side correlation Germany	Count	Percentage
no correlation	1	0.9 %
A = B	29	26.9 %
B = C	15	13.9 %
A = C	49	45.4 %
A = B = C	14	13 %
Total	108	100 %

Chart X shows that solely about one-tenth of the injuries in the examinable files contained the same reference to the side aspects of injuries.

4.15. Registration of location

As a very exact record of the anatomical location of injuries is essential for the forensic assessment, it was examined using the WordSmith 5.0 concordancing software to show how detailed locations were described by physicians in MDRIs and by experts in forensic expert opinions.

4.15.1. Registration of location in the Hungarian sub-corpus

The concordance analysis revealed that a usual record of locations in the *descriptions (A)* of Hungarian MDRI consisted of 2, 3 or 4 elements, which were arranged around the terms describing the side-aspect as left, right, middle or on both sides. The most frequent localisations consisting of two elements only contained the affected side and organ or the localisation behind or above an organ. Three elements were less frequently used which indicate besides the latter two aspects either the exact distance related to anatomical points or the anatomical region of body parts and, in the case of extremities, their surface. Even more rarely localisations were found containing four elements about the affected organ, the side, the distance from anatomical points and the exact anatomical region of the affected body part or the injured surface of extremities.

Examples of descriptions consisting of 2 elements are: ‘*az arc bal oldalán*’ (‘*on the left side of the face*’), ‘*a bal fül mögött*’ (‘*behind the left ear*’), ‘*a jobb lapocka*’ (‘*the right shoulder blade*’), ‘*a háton mindkét oldalon*’ (‘*on both sides of the back*’), ‘*a homlokon középen*’ (‘*in the middle of the forehead*’).

Examples of descriptions consisting of 3 elements can be: ‘*a homlok bal oldalán, a szemöldök felett*’ (‘*on the left side of the forehead, above the eyebrow*’), ‘*a jobb térden a lateralis oldalon*’ (‘*on the lateral side of the right knee*’), ‘*a jobb fülkagylón, cranialisan*’ (‘*on the right auricle, cranially*’).

Examples of descriptions consisting of four elements are: ‘*a bal lábszár proximalis harmadában a hátsó felszínén*’ (‘*in the back surface of the proximal third of the left lower leg*’), ‘*a jobb járomcsont felső szélén a szem alatt*’ (‘*on the upper edge of the right zygomatic bone below the eye*’).

Sometimes there were also localisations containing more than 4 components detected, mostly describing parts of organs or extremities as the following: ‘*a jobb kéz II. ujj alapperc feszítő felszínén*’ (‘*on the extensor surface of the proximal phalanx of the second finger of the right hand*’). Localisations were mostly recorded using the Hungarian grammatical forms of local suffixes (e.g. ‘*a vállon*’ (‘*on the shoulder*’)) or postpositions ‘*a fül mögött*’ (‘*behind the ear*’), which in other languages correspond to prepositions. It was interesting to observe that elaborate constructions like ‘the left-side ear’ frequently appeared instead of ‘the left ear’. The side was registered in an adjective form. An extract from the concordances of the word ‘*left*’ in the Hungarian sub-corpus is represented in Chart 31 in the Appendix.

In the *diagnoses (B)* parts of Hungarian MDRI usually only two elements were mentioned in both Hungarian and Latin: the side aspect and the affected organ or in the case of large-area injuries the region of the affected organ. The side aspect ‘*in the middle*’ was in no case

recorded. The diagnoses in Latin registered the affected organ or region in the genitive as it is usual according to the Latin grammar (a possessive or rather explicative genitive). However, the side was registered mostly in an abbreviated form, being the attribute of the Latin noun meaning ‘side’.

The abbreviations were the same as in other fields of medicine i.e. the following: l.s. (*lateris sinistri* = of the left side), l.d. (*lateris dextri* = of the right side) and l.u. (*lateris utriusque* = on both sides). The types of injuries or anatomical names of organs in genitive were also very often abbreviated, e.g. ‘*vuln. mors. reg. fem. l.d.*’ (= *vulnus morsum regionis femoralis lateris dextri* = ‘bite wound of the right femoral region’). Possible reasons for using abbreviations might be sparing time and avoiding grammatically incorrect endings.

A very interesting finding was that the diagnoses in Hungarian (B) almost solely used the genitive for describing the location e.g. ‘*a jobb váll szúrt sebe*’ (‘stab wound of the right shoulder’) instead of local suffixes or postpositions, as opposed to the descriptions (A). Only in very few cases were suffixes used, and almost every diagnosis was formulated in the genitive. The noun in the possessive case has normally no specific suffix in Hungarian but accords with the nominative. However, the object of possession is marked by a suffix indicating the possessive relation, e.g. ‘*a váll sebe*’ (*the wound of the shoulder*). This phenomenon might be interpreted as a simple translation of the Latin form existing in Hungarian too, although usually the Hungarian diagnosis was written first. Another possibility can be that this construction is a genre-specific lexico-grammatical pattern. Extracts from the concordances of ‘*left*’ in the Hungarian and Latin diagnoses (B) of the Hungarian sub-corpus are demonstrated in Charts 32a and 32b in the Appendix.

Hungarian *expert opinions* (C) mostly repeat injuries described in the MDRI (A and B). Although the statistical analysis outlined in 4.10.2 showed that Hungarian forensic experts base their opinions more on the descriptions (A) than on the diagnoses (B) of MDRI, the concordance analysis yielded slightly controversial results. In Hungarian expert opinions, localisations were described using shorter genitive forms similarly to the diagnoses (B) parts of MDRI, although localisations normally belonged to injuries depicted in the descriptions (A) by physicians. This phenomenon might also explain that the genitive is used just as a shorter form in conclusions like in the diagnoses (B) of MDRI, which are not intended to be very detailed. An extract from the concordances of the term ‘*left*’ used in Hungarian expert opinions (C) is represented in Chart 33 in the Appendix.

4.15.2. Registration of location in the Austrian sub-corpus

In the *descriptions (A)* of Austrian MDRIIs mostly 2 components were detected depicting locations, e.g. *‘die Waden beidseits’* (*‘both calves’*), *‘unter dem linken Auge’* (*‘below the left eye’*) or *‘rechts über dem Kniegelenk’* (*‘on the right side above the knee joint’*). Sometimes 3 components were recorded, indicating the location related to the anatomical directions, e.g. *‘unterhalb der Drosselgrube links der Mittellinie’* (*‘below the jugular fossa left of the midline’*). The location *‘mittig’* (*‘in the middle’*) was detected in one case. Only very rarely were fixed anatomical points mentioned. An extract from the concordances of ‘left’ in the descriptions (A) of the Austrian MDRIIs is demonstrated in Chart 34 in the Appendix.

Grammatically, all locations were described using prepositions and sometimes in possessive constructions by means of the genitive, e.g. *‘des rechten Mittelfingers’* (*‘of the right middle finger’*). This use of the genitive might also be related to a specific lexico-grammatical pattern existing in German, too.

As already mentioned in chapter 3, the *diagnoses (B)* of Austrian MDRIIs were also written in Latin, but the Latin diagnoses were not included in the citations of MDRIIs in the expert opinions. Consequently, there was no possibility to analyse them in the present study. According to the concordance analysis, the German diagnoses (B) of the Austrian MDRIIs used normally 2 components: the affected organ and side.

Different grammatical forms were detected depicting both the side and the organ. In some cases the whole construction describing the affected body part was left in the nominative, e.g. *‘Bluterguss linker Daumenballen’* (*‘haematoma left thenar’*). However, usually prepositions were used, e.g. *‘am linken Ohr’* (*‘on the left ear’*), in several cases describing the side with adverbs *‘links/rechts’*, *‘linksseitig/rechtsseitig’* (*‘on the left/right’*, *‘on the left/right side’*), e.g. *‘im Bereich der Schienbeinrauhigkeit rechts’* (*‘in the area of the tibial tuberosity, on the right’*). Genitive forms were used about as often as prepositions, e.g. *‘im Bereich des linken Oberarms’* (*‘in the area of the left arm’*). The adverbs *‘beidseits’* (*‘on both sides’*) and *‘mittig’* (*‘in the middle’*) were only detected in one case. An extract from the concordances of the term ‘left’ in the diagnoses (B) of the Austrian sub-corpus is represented in Chart 35 in the Appendix.

As presented in 4.10.3 Austrian *expert opinions (C)* were usually based more on the diagnoses (B) parts of MDRIIs than on the descriptions (A). It was also confirmed by the concordance

analysis of the locations, which mostly repeated the diagnoses of MDRI word for word. Consequently, the grammatical constructions and the information content were also the same. An extract from the concordances of the term 'left' revealed in the Austrian expert opinions is represented in Chart 36 in the Appendix.

4.15.3. Registration of location in the German sub-corpus

The concordance analysis of locations in the *description (A)* parts of German MDRI showed that similar structures were used by the German physicians as by the Austrians. Most records of locations consisted of 2 or 3 elements. However, in rare cases, there were also more detailed ones detected, registering at least 4 elements e.g. '*über rechtem Thorax ventral oberhalb der Mamma rechts*' ('*above the right side of the thorax, ventrally, above the mamma on the right*'). The grammatical constructions were the same as in the Austrian descriptions. However, in the German MDRI the terms '*beidseitig*', '*beidseits*' ('on both sides') or their abbreviated form '*bds*' were also used, 17 times altogether. The location '*mittig*' or '*in der Mitte*' ('*in the middle*') was also detected more often than in the Austrian descriptions. As shown in the examples cited, the locations 'left' and 'right' are sometimes not only used with paired organs, e.g. eyes or legs, but also with unpaired body parts e.g. 'left back' in an incorrect way instead of 'the left side of the back'. An extract from the concordances of the term '*left*' detected in the descriptions (A) of the German sub-corpus is represented in Chart 37 in the Appendix.

The *diagnoses (B)* parts of German MDRI usually consisted of 2 components, describing the affected organ and side. Only rarely was a more detailed description found. Sometimes Latin diagnoses were also mentioned sometimes, however, usually not together with a German synonym but instead of it. The most often used grammatical structures were nominatives e.g. '*rechte Schulter*' ('*right shoulder*'), and even more frequently genitives '*an Jochbogen rechts*' ('*on the zygomatic arch on the right*').

A very characteristic phenomenon of the German language is creating compound words and so allowing shorter formulations. These types of terms also appeared in the Austrian diagnoses, and consisted of the term '*Fraktur*' ('*fracture*') combined with the name of the affected organ, e.g. '*Augenhöhlenfraktur links*' ('*fracture of the left orbit*'). Out of the injuries of soft tissues, '*Prellung*' ('bruise'), '*Verletzung*' ('injury') and '*Blutung*' ('bleeding') were the only terms with which the name of the affected organ was combined e.g.

‘*Unterkieferprellung links*’ (‘bruise of the lower jaw on the left’) in Austria and ‘*Konjunktivalblutung links*’ (‘conjunctival bleeding on the left’), ‘*Fremdkörperverletzung bukkal links*’ (‘injury by foreign body buccally on the left’) and ‘*Schädelprellung*’ (‘bruise of the skull’) in Germany. In the Hungarian sub-corpus a similar phenomenon was only seldom found with the terms ‘*sérülés*’ (‘injury’) or ‘*seb*’ (‘wound’) e.g. ‘*skalpsérülés*’ (‘injury of the scalp’) or ‘*fejseb*’ (‘wound of the head’), but it was revealed in the descriptions (A) as well.

Fixed anatomical points were mentioned extremely rarely, as could be expected in diagnoses which are only the conclusions related to more detailed descriptions. An extract from the concordances of the term ‘*left*’ detected in the diagnoses (B) of the German sub-corpus is represented in Chart 38 in the Appendix.

As already stated in 4.10.2 and 4.10.3 German *expert opinions* (C) were formulated more on the basis of a detailed forensic examination of the injured person. Consequently, only low correlation was found between the injuries described by physicians in MDRIs and by experts in forensic expert opinions (C). As a result, it was possible only in Germany to examine how detailed locations of injuries were recorded from a forensic expert’s point of view.

The concordance analysis showed that most descriptions of the local aspect contained at least 4 but usually about 6 elements. These are the side, the affected organ, the exact distance from at least one but more frequently from two fixed anatomical points in cms or mms, the direction related to the anatomical body axes and the anatomical surface of body parts or extremities e.g. ‘*an der Halsvorderseite, knapp unterhalb des Kinns beginnend und bis zur Drosselgrube reichend, zirkulär den Hals umgreifend*’ (‘on the front side of the neck, beginning just under the chin and reaching to the jugular fossa, circularly encompassing the neck’) and ‘*nahe der Scheitelhöhe, etwa 2 cm von der Mittellinie entfernt, auf der rechten Seite ist ein etwa 4 cm großes Areal*’ (‘near the height of the parietal region, in a distance of about 2 cm from the midline, on the right side there is an area of about 4 cm size’).

As demonstrated by the examples above, a particular part of speech connecting the various components of descriptions seems to be applied by forensic experts: the present participle. This word class allows the use of only one finite verb (mostly the verb: is) in a longer sentence without linking several shorter clauses, but still connecting the different statements both grammatically and logically. The present participle in general language is mostly used in

an attributive function in a declined form e.g. the construction above would sound as ‘*die bis zur Drosselgrube reichende Verletzung*’ (= literally ‘*to the jugular fossa reaching injury*’).

However, in this genre the present participle most frequently seems to be applied together with the verbs ‘*sein*’ (‘to be’) or ‘*sich befinden*’ (there is, can be found) after the noun e.g. ‘*ein Hämatom am Hals bis zur Drosselgrube reichend*’ (‘*there is a haematoma on the neck reaching to the jugular fossa*’). This phenomenon that the present participle is situated behind the noun is very typical of English but not of German. Consequently, it seems to be a characteristic genre-specific lexico-grammatical pattern in forensic expert opinions, which allows a shorter formulation identifying the injury first and only later the specific characteristics of it in more detail. An extract from the concordances of ‘*left*’ detected in the expert opinions (C) of the German sub-corpus is represented in Chart 39 in the Appendix.

The concordance analysis showed that German forensic expert opinions contain much longer and more detailed descriptions using less terms belonging to the unidentifiable type, as already shown in 4.6.3.

4.16. Lexico-grammatical analysis

After having shown terms consisting of single words or nominal phrases used in MDRI and expert opinions, more extended concordance relations were examined in the text corpora. The textual analysis of each sub-corpus was also performed using the concordancing software WordSmith 5.0 to reveal which words built the closest connection with the terms depicting injuries and how these were arranged in sentences. As shown in 4.14.1 and 4.14.2, the diagnoses (B) parts of all the three sub-corpora consisted of diagnoses listed as conclusions and not as sentences. Therefore in this section only the descriptions (A) and expert opinions (C) were analysed as texts.

4.16.1. Lexico-grammatical analysis of the Hungarian sub-corpus

The analysis of the *description* (A) parts of the Hungarian MDRI showed that physicians usually formulate their descriptions in sentences. The analysis was performed looking for the concordances of the terms ‘*sérülés*’ (‘injury’) and ‘*seb*’ (‘wound’).

The term ‘*injury*’ yielded very surprising concordances. In most cases the verb ‘*van*’ (‘is or there is’) was left out, in other descriptions the verbs ‘*látható*’ or ‘*látszik*’ (‘can be seen’) were used. In Hungarian sentences the verb ‘*van*’ (‘is’) can be left out if it belongs to an adjective or participle qualifying the subject e.g. ‘*az arc duzzadt*’ (‘the face [*is*] swollen’) and it is

obligatory if it is used in the sense of ‘there is’ indicating the existence of something combined with the location e.g. ‘a fejen *van* egy seb’ (*there is* a wound on the head’).

However, in the MDRI the verb ‘van’ was almost always left out in the sense of ‘there is’ e.g. ‘a homlokon kb. 3 cm-es hámsérülés’ ‘on the forehead [*there is*] an epithelial injury of about 3 cm’. This phenomenon seems to be very characteristic of MDRI in the whole country. It might be due to the fact that a lot of injuries were listed here, and leaving out the verb ‘is’ seems to shorten the text and to help avoiding monotonicity. An extract from the concordances of the term ‘injury’ revealed in the descriptions (part A) of the Hungarian sub-corpus is represented in Chart 40 in the Appendix.

In Hungarian forensic *expert opinions* (part C) it was explicitly demonstrated that the diagnoses were quoted from the MDRI by using specific verbs e.g. ‘*írták le*’ ‘it was documented’. Most frequently, however, the diagnoses of the MDRI were listed using the phrase ‘*a beteg [...] szenvedett el*’ ‘the patient suffered [...]’, which indicates definitely that the diagnoses were accepted by the expert. The verb ‘*szenvedett el*’ (‘suffered’) was usually situated after the term of the injury, so these two words seem to be a specific lexico-grammatical pattern in forensic expert opinions. An extract from the concordances of the terms ‘injury’ revealed in the forensic expert opinions (part C) of the Hungarian sub-corpus is shown in Chart 41 in the Appendix.

4.16.2. Lexico-grammatical analysis of the Austrian sub-corpus

Similarly to the Hungarian descriptions, in the Austrian ones (*part A*) also the concordances of the terms ‘Verletzung’ (‘injury’) and ‘Wunde’ (‘wound’) were examined. Unfortunately, there was no possibility to analyse original MDRI written by physicians or their copies because Austrian experts only quote them in their expert opinions and do not enclose copies of them, as opposed to the Hungarian and German system.

According to the concordance analysis, it was apparent that Austrian descriptions were always quotes from MDRI in the expert opinions because the verbs were almost everywhere used in the past tense e.g. ‘*war vorhanden*’ and ‘*es bestand*’ (‘there was’) , ‘*ist gewesen*’ (‘was’), ‘*wurde festgestellt*’ (‘was found’) etc. The style of the verbs used an elevated register, indicating that diagnoses were rephrased for official documents applied as references in a law suit.

Medical interventions were also cited using the past tense e.g. *‘die Wunde wurde gespült’* (‘the wound was washed out’). The non-existence of injuries was very often highlighted using the construction *‘es ergaben sich keine Anhaltspunkte für [...]’* (‘there were no signs indicating [...]'). This kind of information was detected more often than in Hungarian or German descriptions.

As there was no possibility to compare these with the original MDRI, it could not be established whether these statements were included in the MDRI by physicians or the non-existence of further alterations was added later by forensic experts. Another characteristic phenomenon indicating quotations was the use of the conjunctive as in indirect speech, which shows experts not identifying themselves with the diagnoses of the original MDRI. An extract from the concordances of the term *‘injury’* revealed in the descriptions (part A) of the Austrian sub-corpus is represented in Charts 42 in the Appendix.

In Austrian *expert opinions* (part C) there were quotations of the MDRI again, so there was no lexico-grammatical difference between these and the quotations of the MDRI in the descriptions (A). It is very interesting that Austrian forensic experts seem to quote the findings of MDRI first, then summarise them again before establishing the severity of injuries and their underlying mechanisms.

The only linguistic difference between the descriptions (A) and the expert opinions (C) was the frequent use of the expression *‘den ärztlichen Unterlagen zufolge’* (‘according to the medical documentation’) instead of the conjunctive in expert opinions, which showed the expert distancing himself. An extract from the concordances of the term *‘injury’* revealed in the forensic expert opinions (part C) of the Austrian sub-corpus is represented in Chart 43 in the Appendix.

4.16.3. Lexico-grammatical analysis of the German sub-corpus

In German *descriptions* (A) the concordances of the same two terms were examined as in the Hungarian and Austrian sub-corpora. The lexico-grammatical analysis showed that the verb ‘to be’ was missing in most descriptions, similarly to those in Hungary, although in German it is always obligatory. This phenomenon also suggests that shortened listing is very characteristic of this genre.

The predicates detected were mostly used in present tense e.g. ‘*zeigt sich*’ (‘can be seen’) or ‘*findet sich*’ (‘can be found’). In some cases, however, the MDRI s seemed to be formulated about a week after the examination or treatment, mostly in the case of hospitalised probands. In these MDRI s, verbs were used in past tense. The extract from the concordances of the term ‘injury’ revealed in the descriptions (part A) of the German sub-corpus is represented in Chart 44 in the Appendix.

In German *expert opinions* (C) the concordances of the terms ‘*Verletzung*’ (‘injury’) and ‘*Hautdurchtrennung*’ (‘disruption of continuity’) were analysed, because the latter term was more frequently used in German expert opinions than the term ‘*Wunde*’ (‘wound’). Using the concordancing software, the same verbs were detected as in the descriptions (A) indicating the existence of injuries. The predicate ‘*sein*’ (‘to be’) was also missing in most cases, similarly to the descriptions. The use of the present participle as a shortening grammatical structure also seems to be very characteristic of German forensic expert opinions.

A very remarkable difference was that the findings registered by German forensic experts consisted of at least 8 components and often of more than one sentence e.g.:

‘In der behaarten Kopfhaut am Übergang vom Scheitel- zum Hinterhauptsbereich, von der Körpermitte ausgehend und nach rechtsseitig ziehend, eine krustig belegte, in Abheilung befindliche, mit zwei Klammern versorgte, 1,4 cm messende Hautverletzung. Die Wundwinkel nicht mehr sichtbar, der rechte stumpfer erscheinend als der linksseitig gelegene. Am inneren oberen Quadranten der linken Brust eine unregelmäßig konfigurierte, bis 3,5 cm messende, reizlose, etwas erhabene, alte Narbe. In der Brusthaut, beginnend 2 cm fußwärts des inneren Knochenendes des linken Schlüsselbeins zwei nach fußwärts ziehende, oberflächliche, krustig belegte, mehrfach unterbrochene Hautverletzungen: die weiter innenseitig gelegene mit Abstand von 2 cm zur Körpermittelinie, mit lichtem Abstand von 2 cm außenseitig davon eine 5,5 cm messende, gleichartige, angedeutet bandförmige Hautverletzung.’

‘In the skin of scalp in the passage between the parietal and occipital regions, beginning from the midline of the body and stretching towards the right side [there is] a skin injury of 1.4 cm being in healing process, coated by a scab, treated with two clips. The wound edges [are] not visible any more, the right one seems to be blunter than the one on the left side. On the inner upper quadrant of the left breast [there is] an irregularly configured, bland, slightly elevated, old scar being the maximum size of 3.5 cm. [There are] two superficial, multiply interrupted injuries coated by scab in the breast skin beginning at the inner bone end of the left collarbone 2 cm towards the foot and stretching towards the foot end: the one [being] further inside [is] in a distance of 2 cm towards the midline of the body, and in a clear distance of 2 cm from it [there is] laterally another skin injury of the same type of 5.5 cm implying the shape of a ribbon.’

(Word-for-word quotation from a forensic expert opinion included in the sub-corpus of Mainz)

It is demonstrated by the cited section of a characteristic German forensic expert opinion that the usual information content specified by forensic experts was the following:

exact anatomical location (affected side and body part or organ, direction related to anatomical axes), *distance from at least one but rather two fixed anatomical points*, *size*, *surroundings*, *number of injuries*, *age* or *colour*, *margins of wounds* (sometimes *edges* as well), *depth* (not always measured but using general terms like ‘*oberflächlich*’= ‘superficial’), *shape* and *treatment*.

These pieces of information are comparable with the points to be filled in on the official form of the MDRI applied in Hungary. This phenomenon suggests that the German forensic approach seems to be the same as in Hungary. An extract from the concordances of the term ‘*Verletzung*’ (‘injury’) in the German expert opinions is listed in Chart 45 in the Appendix.

To sum up the results of the lexico-grammatical analyses it can be stated that each structural unit of the analysed genre analysed contains typical lexico-grammatical features of the professional language use. However, besides the typical overuse of possessive attributes, ellipses and participles, which are present in all three countries to a similar extent, a special listing character can be observed, with lists consisting of lexico-grammatical patterns which are more specific of MDRI than other kinds of medical reports.

5. DISCUSSION

5.1. The genre of MDRI

Besides the fact that the system of registering injuries is different in Hungary, Austria and Germany, very similar phenomena were found in the tradition of formulating MDRI. First of all, the structure of reports appears to be the same: on the one hand the general description of the alterations, on the other hand the list of diagnoses in the particular language and/or in Latin. Secondly, the lexico-grammatical analysis of MDRI showed that the grammatical structures detected in the corpus could not be regarded as characteristic of the general use of Hungarian or German, e.g. leaving out the predicate in the case of the verb 'to be', applying the genitive instead of pre- or postpositions for describing the affected organ or body part and the overuse of participles in order to substitute verbs (cf. 4.16). All three grammatical structures suggest that this genre tends to nominalise and shorten in order to keep attention focused on the injuries instead of events. Nevertheless, it cannot be said that the descriptions (part A) of MDRI only consist of lists and lack the linking devices which a text needs.

As opposed to the descriptions, diagnoses (part B) are only lists, although they are also rich in specific lexico-grammatical patterns. However, these structures expressing diagnoses can be used in any kind of medical diagnostic report, and are not solely distinguishing in the case of injuries. Consequently, in the detailed descriptions (A) a very genre-specific kind of text formation can be observed, which results from numerous lexico-grammatical patterns in all three countries. As the diagnoses part also contributes to the genre-specific structure, the patterns of this must be equally considered as characteristics of MDRI.

5.2. Interdiscursivity

Since the discourse community of MDRI is constituted by both clinicians of any kind (in Hungary also GPs) and forensic experts, it is to be anticipated that different approaches are represented in the genre. Forensic experts are interested in reconstructing injuries and finding underlying mechanisms, while physicians are more engaged in acute treatment. Attention is called to this problem in the forensic technical literature as well (Fazekas 1972: 195). When physicians create MDRI they do not appear to be aware of the fact that their findings might be cited as evidence in a legal procedure whether or not a forensic expert examines the victim later. Consequently, they do not expect a medical expert to interpret their diagnoses from a

forensic point of view. As mentioned in 1.3, medical reports always have to be formulated on each patient's findings and treatment for the purposes of administration (e.g. health insurance) and in case another colleague might be involved. Therefore, most physicians tend to expect a recipient of the MDRI having the same approach as they have themselves. At this point two different discourses appear to overlap resulting in a genre which does not always appear to meet its goal if a lawsuit is initiated, according to the statistical analysis of forensic assessability in 4.2. There can be several factors mentioned leading to interdiscursivity which are listed in 2.4. These factors are e.g. the inconsistent use of nominal collocations, the presence of synonymy, various levels of terminologisation and, consequently, different levels of professionalism. A genre-specific problem might also be information missing for a complete reconstruction of soft tissue injuries. In the following sections the role of each factor in the sub-corpora is analysed.

5.3. Subjective symptoms of patients as unidentifiable injuries

As shown in 4.4.1, 4.5.1 and 4.6.1. one-third of the descriptions (A) in all three countries contained unidentifiable injuries, which could not be found in the technical literature defined as terms depicting specific injuries in themselves e.g. '*nyomásérzékenység*' or '*Druckschmerzempfindlichkeit*' ('tenderness on pressure'), '*fájdalom*' or '*Schmerz*' ('pain') and '*Beschwerde*' ('complaint'). These terms only describe subjective symptoms of patients which cannot be proved as injuries without any objectively visible alterations recorded. However, in Hungary and Austria forensic expert opinions mostly quoted these kinds of findings, while associating them with 'bruise'. In Germany, however, there were usually no diagnoses registered belonging to the group of subjective symptoms and forensic experts also tended to ignore them in their expert opinions (s. 4.10.1).

5.4. Terms lacking specification as unidentifiable injuries

The terms '*sérülés*' or '*Verletzung*' ('injury') and '*seb*' or '*Wunde*' ('wound') can be found in the Hungarian and German-language technical literature analysed, always in combination with terms implying specific underlying mechanisms (e.g. 'stab injury'), and do not have a denotative meaning in themselves. The phenomenon that general terms do not have an independent meaning in a specific discourse appears to be frequent as far a professional language is concerned. In a flower shop 'a flower' is not asked for without specifying its type. Similarly, in the forensic context the terms 'injury' and 'wound' in themselves are rather meaningless, since forensic experts only deal with injuries and wounds. This might be

comprehended as a discourse-specific nominal valency, in compliance with the genre-specific verbal valency which was observed in different LSPs (Simmler 2006). In MDRI, collocators not only semantically but also grammatically belong to their bases e.g. indicating the origin of injuries or wounds. The results of the present study suggest that the use of noun phrases (in German rather compound nouns) found in the genre of MDRI can be regarded as a type of nominal valency, which becomes obligatory in the discourse community (Fogarasi 2010c). In MDRI, consequently, general terms describing injuries or wounds are only to be used with an adjective or participle specifying the main category.

Furthermore, the Hungarian term '*seb*' ('wound') or '*Wunde*' in German has no explicit definition in any of the university textbooks analysed in this study. Only the general term of injury is defined as the disruption of continuity or missing material (Fazekas 1972: 195, Sótonyi 1996: 88, Buris 1991: 64, Maresch-Spann 1987: 25 and Brinkmann-Madea 2004: 571, 589, 1185) among particular types of injuries. The administrative regulation of the official form of MDRI in Hungary makes the following difference between injury and wound: 'disruption of continuity is an injury in which the margins of the *wound* can be rejoined and there is no lack of material between them, while material missing means that smaller or bigger parts of tissue are missing when rejoining the *wound* margins'. The same explanation can be found in Fazekas 1972: 195.

Attention should be paid to the fact that the term 'tissue' is never specified in general definitions of injuries. Only the textbook used in Austria differentiates in case of disruption of continuity between injuries of the skin or mucosa (= wounds) and injuries of bones, inner organs or nerves (Maresch-Spann 1987: 26). All the Hungarian technical literature and that in Austrian textbooks on forensic medicine apply the term 'injury' as the main category, and later explain the characteristics of 'wounds' in detail, e.g. as a title 'stab injury' and as a subtitle the features of 'stab wound'.

5.5. Synonymy

Synonymy (different nominations with the same meaning) is an important factor impairing the straightforwardness of the terminology of a professional field. In the Hungarian corpus several synonymous terms were found, mostly belonging to the synonymous groups 'haematoma', 'lacerated wound', 'abrasion' and 'tenderness on pressure'.

'Haematoma' was described by the following terms in the Hungarian sub-corpus: '*haematoma*' which was almost only used in the diagnoses (B), '*bevérzés*', '*véraláfutás*' (in Latin: '*suffusio*'), '*vérbeszűrődés*' and '*vérömleny*'. Two other synonyms were also classified as belonging to this group, although their underlying mechanism is slightly different: '*decollement*' or in Hungarian '*nyúzott sérülés*'. In the Hungarian technical literature the following terms were found as synonyms of haematoma: '*haematoma*' (Buris 1991: 93, Fazekas 1972: 211, Sótonyi 1996: 122) '*vérömleny*' (Buris 1991: 93), '*vérbeszűrődés*' (Fazekas 1972: 198, 207), '*kékesvörhenyes elszíneződés*' (Buris 1991: 82), '*bevérzés*' (Sótonyi 1996: 114), '*vérgyülem*' (Sótonyi 1996: 122). All these synonymous terms were used as symptoms of injuries caused by blunt force, without definitions. Consequently, they were dealt with as general medical terms not specific to forensic medicine. Even terms not detected in the technical literature (e.g. '*véraláfutás*' and '*vérömleny*') can be regarded as synonyms used with the same meaning in general medical terminology. The two terms most frequently used by forensic experts describing the same phenomenon were '*bevérzés*' and '*vérbeszűrődés*'. Only the term '*vérömleny*' was found in the commonly cited general Hungarian medical dictionary (Brencsán 2006: 689) as the equivalent of 'haematoma'.

In the Austrian sub-corpus the synonymous group 'haematoma' contained the terms '*Bluterguss*', '*Blutunterlaufung*', '*Einblutung*', '*Hämatom*', '*Unterblutung*' and '*Verfärbung*', the latter with an adjective describing the colour. Discolouration, however, seems to be a rather vague expression, as haematomas must be distinguished from pigment disorders of the skin. In the German sub-corpus the same terms and the term '*Unterblutung*' were detected. German university textbooks contained the synonym 'Hämatom' meaning 'Einblutung (haemorrhage) in the skin or in other soft tissues' (Penning 2006: 77, translated by the author). Penning also differentiates between suffusions which are 'superficial haemorrhages in the fat tissue under the skin' and 'sugillations' described as 'superficial haemorrhages in the skin' (Penning 2006: 77, translated by the author). Haematomas are also defined as '*Unterblutungen*' ('haemorrhages') of deeper tissue layers with varying severity in the soft tissues which are underlaid by bones'. (Brinkmann-Madea 2004: 362, translated by the author) '*Einblutung*' and '*Bluterguss*' are further synonyms used in the handbook of forensic medicine (Brinkmann-Madea 2004: 1275-76). In the technical literature used mostly in Austria, however, only '*Blutunterlaufung*' is applied as a kind of synonym of haematoma, defined as a 'blood discharge into the connective tissue' (Maresch-Spann 1987: 27). Haematomas are characterised as blood discharges of larger quantities as opposed to

ecchymosis or petechiae, which are described as smaller bleeding being the size of a pinpoint (Maresch-Spann 1987: 27). Consequently, in the technical literature in German language haematoma appears to be dealt with as a specific forensic term which has similar definitions in the analysed books. In the mostly cited German clinical dictionary, however, it is only defined as 'Bluterguss', and the other synonymous terms are not listed (Pschyrembel 2007: 741).

The synonyms for the Hungarian terms '*decollement*' and '*nyúzódás*' were '*decollement zúzódás*' (Buris 1991: 113), '*vértasak/ decollement*' (Sótonyi 1996: 113), '*nyúzatásos sérülés*' (Sótonyi 1996: 116) in the technical literature. The definition of '*decollement*' is the following: 'if the [blunt] force affects the body surface diagonally, the loose connection between the upper layers of the skin and the connective tissue under the skin or muscles become separated. The cavity of the resulting pocket is filled with blood and lymph streaming out of injured blood vessels' (Sótonyi 1996: 113 and 116, translated by the author). In the Austrian sub-corpus '*Ablederung*' was the only term depicting decollement, while in Germany the foreign term '*Décollement*' was applied. In the technical literature both terms can be found with definitions e.g. 'caused by massive extensive tangential impact on the skin leading to shearing off of the skin due to destruction of the fat tissue under the skin' (Penning 2006: 76, translated by the author). From the etymological point of view, it is interesting that the Hungarian term '*nyúzódás*' means 'being flayed' which describes the action and is very similar in meaning to the German equivalent '*Ablederung*' ('removal of the skin/ hide'). The term '*decollement*' is explained in the Hungarian medical dictionary as '*leválasztás*' ('detachment') (Brencsán 2006: 149) and in the German one as '*Abscherung*' ('shearing off') and '*Ablederung*' (Pschyrembel 2007: 397).

The synonymous group of 'lacerated wound' or 'laceration' also has a wide range of terms used by Hungarian physicians. These were '*repszett seb*' ('ruptured wound'), '*zúzott seb*' ('contused wound') and in very few cases '*szakított seb*' (in the sense of 'torn wound'), all containing the base element 'wound', which was in some cases substituted by the term 'injury'. Only in few cases were '*repedés*' or its Latin version '*ruptura*' ('rupture') found. After the contexts of the latter two were analysed, the term 'rupture' only appears to be used in connection with injuries of inner organs due to blunt force, identically to its use in the technical literature. Consequently, the difference between the terms containing 'wound' had to be established, from which '*repszett seb*' ('ruptured wound') was the most frequently

used one by forensic experts. However, physicians apparently preferred ‘*zúzott seb*’ (‘contused wound’). The third term ‘*szakított seb*’ (‘torn wound’) figured in only very few cases in the sub-corpus. ‘*Szakított seb*’ is defined in technical literature as ‘the disruption of the continuity of tissues not at the point where the blunt force affects the body but in a certain distance from it, mostly due to a pulling force’ (Fazekas, 1972: 210, translated by the author).

Out of ‘*repszett seb*’ and ‘*zúzott seb*’ the first one is the only term which can be found in technical literature (Sótonyi 1996: 115, Buris 1991: 85, Fazekas 1972: 208), describing a kind of injury due to a blunt force. The general definition is ‘disruption of continuity caused by an object with a blunt surface’ (Buris 1991: 85, translated by the author). However, in Sótonyi’s textbook also another term can be detected in the general list of injuries: ‘*zúzott-repszett sérülés*’ (‘contused-ruptured wound’) = ‘*vulnus contusum et lacerum*’ in Latin (Sótonyi 1996: 88).

The term ‘*zúzott seb*’ (‘contused wound’) is not mentioned in any of the other textbooks, only ‘*zúzódás*’ (‘*contusion*’ or ‘*bruise*’) having a different definition and being distinctly isolated from lacerated wounds. E.g. ‘bruises are [caused by] greater blunt force, when the injury involves the quick compression of tissues resulting in the injury and rupture of smaller blood vessels in the loose connective tissue under the skin, in the muscle tissue, perhaps in organs [...]. Above the bleeding the skin is *intact*, and the injured part of tissue shows through the skin in a brownish-reddish colour’ (Buris 1996: 81, translated by the author). Since ‘*repszett seb*’ (‘ruptured wound’) was defined as disruption of continuity of the skin, *contusion* or *bruise* can not be considered as synonymous terms for ‘lacerated wound’.

The term ‘*zúzott seb*’ (‘contused wound’) appears, instead, to be a loan word from the terminology of surgery (Gaál 2007, Boros 2006, Flautner-Sárváry 2003, Kiss 1994 and Rubányi 1972), rather than originating from forensic medicine. In the frame of a previous study (Fogarasi 2010a), it was found in the technical literature of surgery listed too, described with its Latin translation ‘*vulnus contusum*’, defined as a bruise associated with disruption of the continuity of the skin. The latter research confirmed that in Hungary the classification of terms depicting types of wounds in surgery differs from that in forensic medicine, as it is performed on a different basis. As physicians are more involved in the treating aspect of injuries, it is comprehensible that their way of registering injuries is predominantly affected by the relation to the surgical discourse, resulting in interdiscursivity.

In the Austrian and German MDRI the synonymous group ‘lacerated wound’ also featured various terms, which were ‘*Riss-Quetschwunde*’, ‘*Platzwunde*’, ‘*Riss*’ and ‘*Ruptur*’ (s. Graphs 11 and 14). Similarly to Hungarian, the term ‘*Riss*’ (‘rupture’) and its Latin-root alternative ‘*Ruptur*’ were mostly used for ruptures of inner organs and in rare cases for a rupture in a lip. In the technical literature, the word ‘*Riss*’ is also defined as ‘*Überdehnungsriß*’ (‘over-extension-rupture’) (Brinkmann-Madea 2004: 635). It is a striking difference between the German and Hungarian languages that the term ‘*Riss*’ and its compound forms with verbal prefixes e.g. ‘*Einriß*’ or ‘*Abriss*’ are also used in injuries of cartilage and bone tissue, while in Hungarian there is only a separate term possible in case of the latter two being ‘*repedés*’. The term ‘*repedés*’ is associated in Hungarian with a thicker object ruptured three-dimensionally in deeper layers, e.g. bone tissue or hollow organs such as the spleen. However, ‘*szakadás*’ describes the two-dimensional ‘*tear*’ or ‘*rupture*’ of thin objects e.g. paper or the superficial layers of the skin (cf. related entries in Magyar Értelmező Kéziszótár 1992). It is a peculiar phenomenon that the German translation of both is ‘*Riss*’. Only in specific cases can ‘*szakadás*’ mean a complete destruction of huge objects, implying a change in height and/or position e.g. ‘*gátszakadás*’ (‘breach in a dam’, in German ‘*Dammbruch*’). (As opposed to the latter, the rupture of the perineum is called ‘*gátrepedés*’, in German ‘*Dammriß*’).

‘*Risswunde*’ is defined in the German technical literature as an ‘over-extension of the skin beyond its elastic limit due to centrifugal force vectors’ (Brinkmann-Madea 2004: 364, translated by the author) or as caused by ‘shearing strain or tensile loading’ (Penning 2006: 78, translated by the author) and in the Austrian as ‘ruptures due to tangential impact blunt force leading to displacement of the skin’ (Maresch-Spann 198: 24, translated by the author). These definitions correspond to the Hungarian definition of ‘*szakított seb*’, which is the Hungarian equivalent of ‘*Risswunde*’.

Furthermore, a remarkable discrepancy was found between the Austrian and German examples. In Austria the most prevalent term was ‘*Riss-Quetschwunde*’ (‘ruptured-contused wound’) while in Germany it was ‘*Platzwunde*’ (‘burst wound’). ‘*Quetschwunde*’ (‘contused wound’) in itself is characterised in the German technical literature as ‘contusion of the skin between the object and the osseous base’ (Brinkmann-Madea 2004: 364, translated by the author) caused by ‘blunt force in form of compressive load’ (Penning 2006: 78, translated by the author) and in the Austrian one as an injury brought on by the ‘pressure of the operating

object' leading to the 'bruise of the wound margins or possibly of larger areas around the wound' (Maresch-Spann 1987: 28, translated by the author). '*Riss-Quetschwunden*' ('ruptured-contused wounds') are defined as combinations of the latter two underlying mechanisms (Brinkmann-Madea 2004: 364, Penning 2006: 78 and Maresch-Spann 1987: 28). Penning equates '*Riss-Quetschwunde*' with the other term '*Platzwunde*' ('burst wound') marking the latter with quotation marks.

In the German technical literature of surgery mostly '*Platzwunde*' is mentioned (e.g. Siewert 2006: 74) or both terms are offered but '*Platzwunde*' is preferred (Bruch-Trentz 2005: 46). However, the German reference book of forensic medicine (Brinkmann-Madea 2004) and the university textbook used in Austria make a clear difference between the two and recommend avoiding the term '*Platzwunde*' as a synonym. 'The term '*Platzwunde*' ('burst wound') is established in the German language area. However, it does not correspond to the factual physical processes causing this injury. Bursting, in the real sense of the word, is only possible in case of a receptacle due to increased inner pressure, e.g. a balloon' (Brinkmann-Madea 2004: 364). According to another definition, '*Platzwunden*' ('burst wounds') are actually only wounds which are caused by the increase of inner pressure e.g. of the abdominal wall and are extremely rare' (Maresch-Spann 1987: 29).

Another problem arises in all countries in connection with the terms '*horzsolás*' or '*(Ab)schürfung*' ('abrasion' or 'grazing') and '*horzsolt seb*' or '*Schürfwunde*' ('abraded wound' or 'grazed wound'). In the Hungarian technical literature of forensic medicine analysed in the present study the terms '*horzsolás*' ('abrasion') or '*hámhorzsolás*' ('epithelial abrasion') were detected, corresponding to the fact that forensic expert opinions included in the analysed sub-corpus almost solely applied these. The combinations with 'wound' were only found in MDRIs. The definition of this injury due to blunt force is that 'an object with a rough surface moves on the surface of the body or the body moves on the object with a blunt surface' (Buris 1991: 78-79, translated by the author) and 'it is caused by tangential impact' (Sótonyi 1996: 114, translated by the author). In the definition it becomes apparent that in this injury there is no disruption in continuity of the skin. Another definition also makes a clear difference between abrasion and wound: 'Abrasion is [...] nothing else than an alteration caused by blunt force which means the friction or grinding of superficial epithelial layers [...]. When the blunt force is greater than the solidity of tissues, particles of tissues split resulting in a disruption of continuity of the skin. Depending on whether the force struck the body

horizontally or vertically, different characteristics of a *lacerated wound* may develop' (Fazekas 1972: 208, translated by the author).

Consequently, in forensic medicine the term '*horzsolás*' ('abrasion') is not a wound type although in one case it was used in the expert opinions of the analysed sub-corpus. However, the term '*horzsolt seb*' ('abraded wound') is used in the Hungarian terminology of surgery with its Latin translation '*vulnus abrasum*' defined as the scraping off of the most superficial epithelial layer of the skin (Fogarasi 2010a). Therefore it is understandable that Hungarian clinicians use both as synonymous terms because in their everyday work the forensic approach appears to be less prevalent. In Germany and Austria, the same phenomenon can be observed. While technical literature of forensic medicine only uses the terms '*Hautabschürfung*' or '*(Ab)schürfung*' ('abrasion' or 'grazing') with the same definition as in Hungary (Maresch-Spann 1987: 26, Brinkmann-Madea 2004: 529, Penning 2006: 76). The terminology of surgery classifies this type of injury as '*Schürfwunde*' ('abraded wound' or 'grazed wound') (Siewert 2006: 74, Bruch-Trentz 2005: 46).

The same ambiguity can be observed in connection with the terms '*karcolás*' or '*karmolás*' ('scratching'), their German equivalents '*Kratzer*' and the collocations '*karcolt seb*' or '*karmolt seb*' and '*Kratzwunde*' (scratch wound). In Hungary, there is an etymological difference between '*karcolás*' meaning scratching by an object and '*karmolás*' characterising scratching by the nails of a human or claws of an animal (because it originates from the noun '*karom*' = 'claw'). In German, however, the difference has to be made explicitly by saying '*Kratzspuren der Hundekrallen*' ('traces of scratching by dog's claws') (Brinkmann-Madea 2004: 957). Another example of the Hungarian language implying more details than German or English is the word '*harapás*' ('bite'). Hungarian terms differentiate between the degrees of bites describing '*ráharapás*' ('biting on something') and '*kiharapás*' (to tear out through biting).

Scratchings are defined as injuries 'consisting of single abrasions caused by an impact tangential to the skin surface. They can suggest linear or rough objects' (Brinkmann-Madea 2004: 359, translated by the author). These are most frequently called '*kratzerartige Schürfungen*' (scratching-like abrasions'). They are also identified with '*excoriations*' which 'can also be brought on by the approximately rectangular impinging of the injuring object. Such excoriations are called „impact (pressure) abrasions“' (Brinkmann-Madea 2004: 1274, translated by the author). However, another university textbook in forensic medicine calls

these ‘*Kratzwunden*’ (‘scratch wounds’/ ‘excoriated wounds’) (Penning 2006: 76). In the Hungarian technical literature of forensic medicine no reference could be found to scratching or excoriation. There was no reference detected in any of the Hungarian or German textbooks of surgery included in the analysis. For the precision of a technical language it would be beneficial to avoid synonymy in order to meet the requirements of effective communication (s. 1.5.1) and a high quality terminology (s. 1.6.2).

5.6. Inconsistent use of nominal collocations

According to Graph 10 the terms ‘*metszett seb*’ (‘incised wound’) and ‘*vágott seb*’ (‘chop wound’) had different proportions in the descriptions (A) and in the diagnoses (B) of Hungarian MDRI. Previous studies conducted on other corpora of MDRI showed that these types of wounds often seem to be mixed up (Fogarasi 2010a) as demonstrated in Chart XI.

Chart XI. Example of the Hungarian MDRI

Example of the Hungarian MDRI
Description (A): ‘A bal hüvelykujj alapperc med. oldalán 2 cm-es éles szélű, falú <i>metszett seb</i> .’ (‘On the medial side of the proximal phalanx of left thumb [there is] an <i>incised wound</i> of 2 cm with sharp margins and side-walls’)
Diagnosis (B): ‘ <i>Vuln. caes. pollicis. l.s.</i> – A bal kéz I. ujj <i>vágott sebe</i> .’ (‘ <i>Chop wound</i> of the I. finger of the left hand’)

The technical literature of forensic medicine analysed in the present study classifies these types of injuries caused by sharp force according to the motion of the object while it penetrated the body. Sótonyi differentiates between the two types as following, incised wound is ‘caused by a sharp instrument penetrating the tissues moving *tangentially* to the direction of its blade’ (Sótonyi 1996: 100, translated by the author) while a chop wound is brought on ‘by an object (in general heavy) with a blade which penetrates the tissues vertically to its blade by the force of its own kinetic energy and by the impact force’ (Sótonyi 1996: 108, translated by the author). In the other textbooks there are similar definitions showing only slight differences in the shades of meanings. Fazekas defines incised wounds as injuries caused by ‘a bladed instrument penetrating the tissues moving *parallel to its blade*’ (Fazekas 1972: 196, translated by the author) and Buris describes it as a wound ‘caused by a bladed object moving *into the direction of its blade*’ (Buris 1991: 64, translated by the author).

As opposed to incised wound, a chop wound was characterised as ‘caused by a bladed instrument impacting the tissues vertically to its blade’ (Fazekas 1972: 198, translated by the

author) or ‘caused by a bladed object moving vertically to its blade’ (Buris 1991: 75, translated by the author). Consequently, the definitions are based on the underlying mechanism in each case. However, in the terminology of surgery these two types of injuries are combined in one category called ‘*metszett és vágott seb*’ (‘incised and chop wound’). It has the definition of an injury which is caused by an object having a blade which is *wedge-shaped* in cross section (Fogarasi 2010a). Comparing the definitions it can be established that the main category (genus proximum) is the same but the specific features (differentiae specificae) are different. Therefore the classification is not performed on the same basis.

Another problem might be caused by the Latin diagnosis differing in meaning from the Hungarian one. As shown in Graph 7 in Chapter 4, in 7 percent of the cases, Latin translations depict injuries with underlying mechanisms other than those registered in Hungarian. This translation problem was typically detected in connection with incised and chop wounds, the separation of which appears to cause difficulties even in Hungarian. This phenomenon also suggests that Hungarian physicians involved in the management of wounds are more influenced by the surgical terminology and describe injuries from a surgeon’s point of view, which leads to a high degree of interdiscursivity.

In the Austrian and German MDRI, no ‘*Hiebwunden*’ (‘chop wounds’) were diagnosed. The German definitions of chop wound, however, make a clear difference between this type of injury and incised wounds by classifying chop wounds as injuries caused by a semi-sharp force. They highlight the fact that a chop wound is due to the combination of blunt and sharp force (Brinkmann-Madea 2004: 815) meaning a forceful impact which results in a huge amount of kinetic energy because of the heavy object used e.g. a hatchet (Penning 2006: 93 and Maresch-Spann 1987: 47). Consequently, in the German technical literature the classification is based on the force and the object, while in Hungarian definitions the direction of the movement is important. This contrast appears in the nominations as well: the Hungarian terms ‘*metszett*’ and ‘*vágott*’ mean ‘incised’ and ‘cut’. However, the word-for-word translations of the German terms ‘*Schnittwunde*’ and ‘*Hiebwunde*’ are ‘cut’ and ‘strike’ wounds.

In German MDRI the terms ‘*Schnittwunde*’ (‘incised wound’) and ‘*Stichwunde*’ (‘stab wound’) had different proportions in the descriptions (A) compared to the diagnoses (B) parts, as shown in Graph 13, but in Austrian MDRI, the proportions were not as diverse as in the German sub-corpus. Chart XII represents an example of the inconsistent terminology.

Chart XII. Example of the German MDRIs

Example of the German MDRIs
Description (A): ‚Schnittwunde am Kinn ca. 4 cm Länge‘ (‚Incised wound on the chin of about 4 cm length‘) Diagnosis (B): ‚Messerstichverletzung Kinn‘ (‚Knife stab wound chin‘)

The classifications of these types of wounds in the German technical literature are different from those in the Hungarian and Austrian textbooks. In Hungary, ‘szúrt seb’ (‘stab wound’) is defined as an injury ‘caused by a pointed object penetrating the body moving into the direction of its longitudinal axis’ (Fazekas 1972: 200, translated by the author). In the technical literature used in Austria a similar definition can be found for ‘Stichwunde’ (‘stab wound’): ‘an injury caused by the bumping of mostly narrow, thin and pointed objects posed in their longitudinal axis’ (Maresch-Spann 1987: 44, translated by the author). In Austria, ‘Schnittwunden’ (incised wounds) are also classified identically with the Hungarian definition: ‘incised wounds’ are brought on by cutting objects if the cutting edge of the object posed longitudinally to the blade is pulled mostly tangentially to the affected surface of the body under certain pressure’ (Maresch-Spann 1987: 41, translated by the author).

As opposed to these, the definitions used in the technical literature of Germany also highlight the result of the impact and the object, besides the movement of the object: ‘stab wounds are caused by the impact of pointed objects’ and ‘their length is shorter than their depth’ (Penning 2006: 88, translated by the author), while ‘incised wounds’ are caused by the tangential impact of a sharp-edged object and look usually longer than they are deep (Penning 2006: 91, Brinkmann-Madea 2004: 571, translated by the author). The latter kind of characterisation might influence German clinicians concentrating on the treatment and not differentiating between these two types of injuries from a forensic point of view. In addition to these, in the Hungarian, Austrian and German forensic practice the term ‘szúrva metszett sérülés’, ‘Stich-Schnittwunde’ (‘stab-incised wound’) is applied as a combination of the underlying mechanisms in case the stab wound is caused by a knife.

5.7. The role of genre-specific nominal collocations

The presence of specific nominal collocations was only observed in the Hungarian MDRIs. In Hungarian, most injuries are specified by using adjectives or past participles e.g. ‘metszett seb’ (literally ‘incised wound’). In German, however, all these collocations are replaced by compound terms consisting of two nouns: a first determining element e.g. ‘Schnitt’ (‘cut’,

‘incision’) and the base ‘Wunde’ (‘wound’). The two different means by which the languages create terms for injuries are only similar in that both the past participle in Hungarian and the noun in German highlight, as the first element, the result of the injury: the tissue is incised or cut, and the result of the injury is an ‘incision’ or ‘cut’. This synthesising feature of the German language that it uses compound words as terms, which in other languages are nominal collocations, was observed in connection with other European languages (Worbs 1998: 103, Caro Cedillo 2004: 186). The languages with which German was compared predominantly use analytic structures, similarly to the Hungarian language.

5.8. Various levels of terminologisation

In LSP, terms should have exact definitions in order to facilitate understanding on the same basis and consistent translations into other languages. The same reason is why synonymy should also be avoided (at least on the highest level of professionalism). In every discourse, however, there are usually several terms lacking exact definitions. So, it is possible to examine the level of terminologisation analysing whether terms have exact definitions and ‘rules’ of use in a given terminology. Simply put the higher the level of terminologisation, the more professional the technical language.

In the examined sub-corpora there were lots of terms found lacking exact definitions. According to Graph 6 the most unidentifiable alterations (including swellings as well) were diagnosed in all three countries as ‘bruises’. The term ‘*zúzódás*’ as well as the Austrian and German terms ‘*Prellung*’, ‘*Quetschung*’ or ‘*Prellmarke*’ (‘bruise mark’) and, in one case, ‘*Quetschmarke*’ (‘contusion mark’) can be regarded as types of injuries without exact definitions in the technical literature of forensic medicine. There are definitions in the Hungarian technical literature describing the kind of mechanisms blunt injuries can be caused by. Consequently, blunt injuries can have various manifestations.

However, the term ‘*zúzódás*’ is used for both the mechanism and the alteration itself in the technical literature (Buris 1991: 81, Sótonyi 1996: 113). As opposed to these, the Fazekas’ book does not mention ‘*zúzódás*’, only the specific manifestations of blunt force injuries (Fazekas 1972: 207). In the German technical literature the term ‘*Quetschung*’ is only referred to as a mechanism, which blunt injuries can be caused by (Maresch-Spann 1987: 27, Brinkmann-Madea 2004: 1282, Penning 2006: 75). ‘*Prellung*’ (meaning literally bouncing from or off something) is described in connection with ‘*Hirnrindenprellung*’ (‘contusion of

the cerebral cortex') as the rupture of the smallest blood vessels in the cortical area (Penning 2006: 87). In another context it is referred to as 'Schädelprellung' ('contusion of the skull') and translated into Latin as *Contusio capitis* ('contusion of the head') meaning blunt injury of the head without unconsciousness (Brinkmann-Madea 2004: 399). Both terms '*Prellung*' and '*Prellmarke*' are used in technical literature without definitions but are understandable in their contexts, meaning the traces of blunt injuries of the body (e.g. Brinkmann-Madea 2004: 622, 549).

Consequently, the technical expressions '*zúzódás*', '*Quetschung*' and '*Prellung*' only appear to refer to the mechanism causing blunt injuries but not to specific types of injuries. Therefore, from a forensic point of view, it should be recorded whether a haemorrhage, a haematoma, an abrasion, a swelling or their combination can be diagnosed. '*Prellmarke*' is completely bereft of meaning both from a linguistic and a forensic point of view. It is also noteworthy that terms referring to bruises are very frequently applied in combination with bones e.g. bruise of the skull. In such cases, it is not obvious whether or not the bone tissue was injured or the term 'skull' was only used instead of 'head'.

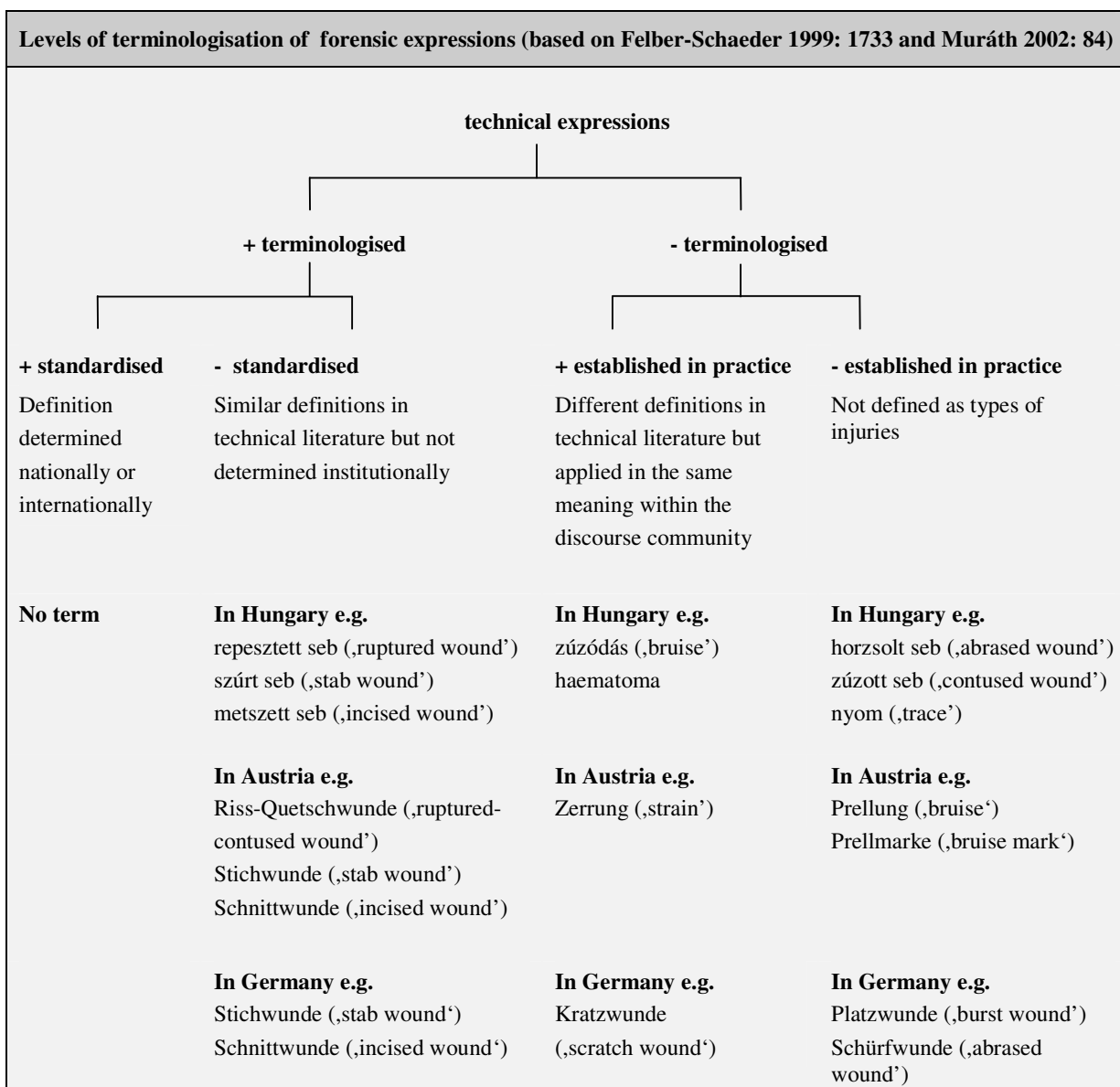
Another example of ambiguous terms is '*nyom*' ('trace' or 'evidence') of something, e.g. 'evidence of violence' or 'trace of blood', because these cannot be associated with particular types of injuries. Further terms not specified e.g. '*trauma*', '*foreign body*', '*lesion*', '*blast injury*', '*alteration*' and '*bleeding*' without mentioning the source of the blood do not imply a particular type of injury which can be reconstructed later by a forensic expert.

As explained in 4.8 '*Zerrung*' was dealt with in the present study as a kind of synonym of the joint injuries '*Verstauchung*' and '*Verrenkung*' ('strain', 'sprain' and 'dislocation') although the latter two have very different meanings pertaining to the severity of joint injuries. Mostly in Austria, however, the term '*Zerrung*' very frequently described alterations of the soft tissue. The meaning of '*Zerrung*' or (in Germany rather '*Verstauchung*') is very complicated because it is due to strain on muscles without any visible sign on the surface of the skin. The diagnosis therefore is only based on subjective symptoms of the patient and does not allow objective evidence. Consequently, these terms are used from the treating physician's point of view and are not on the level of terminologisation which is essential for forensic assessment.

In Chart XIII, the most frequently used expressions of MDRIs are represented on the basis of the model of Felber and Schaefer, which is 'the closest to the real lexical inventory of LSP'

(in Muráth 2002: 83). In this model, “terminologised” means that a concept is defined and strongly connected to its nomination. Standardised means that a particular LSP expression is determined nationally or internationally by an institution entitled to do so. ‘Established in practice’ (the English translation proposed by Prof. Dr. Klaus-Dirk Schmitz, FH Köln) means that a particular concept is adequately defined and its nomination is widely accepted’ (Felber-Schaeder 1999: 1733 f, in Muráth 2002: 83, translated by the author). Muráth extended the model with a new category: ‘As a fourth category there are also technical expressions illustrated in the figure which are neither defined nor established in practice but still should be regarded as technical expressions’ (Muráth 2002: 84).

Chart XIII. Levels of terminologisation of forensic expressions, based on Muráth (2002: 84)



5.9. Different levels of professionalism

As presented in 1.5.3 in each LSP different layers of the use of professional language can be distinguished. The more terms with exact meanings are applied, the higher the level of communication is. The layers represented in the corpus analysed are demonstrated in Chart XIV, borrowed from Hoffmann (1984: 65), Ischreyt (1965 in Roelke 1999: 38), Möhn and Pelka (1984, in Kurtán 2003: 48). In the corpus analysed there were several professional words which could not be found defined as terms of injuries in the technical literature used in the present study. Most of them depict alterations which have an understandable meaning but cannot be characterised as specific types of injuries from the forensic point of view. These are mostly used on the professional colloquial level between clinicians of different fields.

Besides those, the most terminologised technical expressions can be found in the corpus. However, the classification of the injuries is performed from the particular field's point of view. Finally, below the professional colloquial level, the workshop level can be seen which is characteristic of the communication between clinicians or forensic experts and patients. On the lowest level, technical terms with very general meanings are predominantly applied. These are understandable to laypeople as well.

Chart XIV. The layers of communication represented in the analysed corpus, based on Hoffmann (1984: 65), Ischreyt (1965, in Roelke 1999: 38), Möhn and Pelka (1984, in Kurtán 2003: 48)

Vertical layers	Horizontal layers	
	Traumatology	Forensic medicine
Scientific level Communication among professionals	e.g. 'blutende Schürfwunde' (‘bleeding abraded wound’)	e.g. 3 glattrandige, bis 2 cm lange, schnittförmige Hautdurchtrennungen (‘3 incision-like disruptions of continuity of maximum 2 cm length with smooth margins’)
Professional colloquial level Communication between professionals of different fields	e.g. 'radiologisch zeigt sich eine Basisfraktur des Endgliedes' (‘a fracture at the base of the distal phalanx can be proved radiologically’) 'eine münzgroße Platzwunde' (‘a lacerated / burst wound being the size of a coin’)	'die Behandlung erfolgte mit einem Wundverband' (‘the treatment was performed using a wound dressing’) 'die beschriebenen Verletzungen des stellen eine leichte Körperverletzung dar' (‘the described injuries represent a light bodily injury’)
Workshop level Communication between professionals and laypeople	'fojtogatás nyoma látható' (‘traces of strangulation can be seen’)	'es kann nicht ausgeschlossen werden, dass der Bruch durch Sturz entstanden ist' (‘it cannot be excluded that the fracture was caused by fall’)

5.10. Important circumstances and characteristics of injuries not registered precisely

As required in the technical literature (Penning 2006: 74 and Pollak 2006: 292) as well as in the administrative regulation belonging to the official form of MDRI in Hungary, the exact circumstances, localisation and all the features analysed in 4.13 should be registered in the case of injuries. Statistical analysis represented in 4.1 showed, however, that in the present corpus the exact time of the treatment was not documented in about one-third of the cases, nor was it frequently recorded whether the patient had consumed alcohol or drugs. As for the characteristics of soft tissue injuries, according to the results of the concordance analysis, the exact size was only recorded in about half of the cases. Mostly in Hungary, various comparisons were applied (e.g. 'the size of a small apple') instead. Comparisons used (e.g. to vegetables) to describe sizes usually represent no prototypes facilitating that everyone understands the same thing by the same expression. Prototypes mean 'natural conceptual categories which are structured around the "best" examples' (Cruse 2004: 129). Therefore, these kinds of sizes can not be regarded as exact enough for forensic assessment. Furthermore, in ca. 6 percent of the cases the number of the injuries recorded was not evaluable. Consequently, indefinite numerals should be avoided in order to prevent ambiguity.

The shape, the depth (in case it is possible to probe), the margins, side-walls and edges of wounds, the direction related to the body axes and the surroundings of injuries were extremely rarely documented, too. In case of soft tissue injuries these characteristics disappear with the healing process, therefore it is especially important to describe these kinds of injuries in more detail. Even if photo documentation is available, exactly registered wound features might compensate low picture quality or missing scale.

The documentation of colour or age is preferable for the assessment of haematomas. However, these features were referred to only in about one-third of the cases (s. 4.13.4) in the analysed corpus. The registration of the location mostly consisted of the affected body part and side. The localisation of injuries usually lacked fixed anatomical points and the affected surfaces of organs or injured extremities. However, the exact documentation of these would be essential for later assessment of soft tissue injuries either in a crime investigation or in a lawsuit. (In several injuries even insurance companies might be involved, and a detailed documentation of wounds can be indispensable, e.g. for the assessment of whether the injury leaves behind a scar.)

5.11. Forensic assessability

In case the use of ambiguous terminology is combined with missing characteristics of soft tissue injuries, forensic assessment of the severity of injuries or the underlying mechanism might become difficult or in several cases even impossible. Although according to the statistical analysis presented in 4.13.6 a correlation between the number of registered injury characteristics and the forensic assessability could not be confirmed, there are several explicit references to it included in the corpus. The following examples (Charts XV, XVI and XVII) of the German, Austrian and Hungarian sub-corpora prove that in single cases the reconstruction of injuries is impossible.

Chart XV. Example of the German expert opinions

Example of the German expert opinions
<p>„Die Wundränder wirken mit Blutschorf bedeckt und leicht unregelmäßig, eine genauere Beurteilung der Ränder und Winkel ist aufgrund der chirurgischen Versorgung nicht möglich.“</p> <p>(‘The wound margins appear to be covered by scabs and are slightly irregular, but a more exact assessment of the margins and edges is not possible because of the surgical treatment.’)</p>

Chart XVI. Example of the Austrian expert opinions

Example of the Austrian expert opinions
<p>‘[...] es waren keine entsprechenden Befunde zu dieser Diagnose vorhanden, sodass die „Prellung der Halswirbelsäule“ aus gutachterlicher Sicht nicht nachvollzogen werden kann’</p> <p>(‘[...] there were no findings associated with this diagnosis, consequently, “bruise of the cervical spine” is not comprehensible from a forensic expert’s point of view’)</p>

Chart XVII. Example of the Hungarian expert opinions

Example of the Hungarian expert opinions
<p>‘Megjegyzendő, hogy a láttelelet nem leletszerű, pontatlan, mivel a diagnózisok között a vulnus contusum capitis szerepel, amely zúzott sérülést jelent. A vizsgálati lelet alapján (repszett, bőségesen vérző) és a sérülés varrása (sutura) elvégzése miatt feltételezhető, hogy az valójában repszett sérülés volt. A sérülés leírása továbbá nem részletes (a sebfalak, sebalap, sebzugok, sebszélek leírása teljesen hiányzik).’</p> <p>(‘It must be noted that the MDRI is inaccurate and not finding-like as among the diagnoses vulnus contusum capitis is registered meaning contused injury. However, according to the findings (ruptured, bleeding profusely) and because it was sutured it is presumable that it was actually a lacerated wound. Furthermore, the description of the injury is not detailed (the descriptions of the wound-walls, wound base, edges and margins are completely missing.’)</p>

As the assessment of injuries by forensic experts is in numerous cases rather subjective, it is very difficult to establish to what extent the daily routine or the registered information helped them with the reconstruction of particular injuries. Therefore, further research should be carried out on the professional satisfaction of forensic experts with the quality of MDRIs, and also on their personal opinion about the way of improvement. It would be important to discuss

the possible causes with primary treating doctors of different fields who register injuries in everyday practice.

5.12. Comparison of the Hungarian, Austrian and German ways of recording injuries

On the basis of the statistical and concordance analysis it can be stated that the ambiguous use of terminology, mixed levels of professionalism, the lack of detailed information registered are characteristic of the genre of MDRI to a similar extent in all three countries. Specific lexico-grammatical patterns are also to be observed in the MDRI registered in all three countries. The terminology is unique as well. It is based on a specific manifestation of nominal valency and combines terms with various levels of terminologisation.

Therefore, the genre mixes and embeds terms from different layers of professional communication. In spite of these similarities, linguistic and cultural differences were still observed. As the Hungarian language is inclined to highlight details, several terms imply more features of injuries than in other languages (s. 5.5), and it prefers graphic descriptions (s. 4.13.1). Conversely, German is more accurate concerning the exact size (s. 4.13.1) and short formulations. Finally, more similarities were found between Hungary and Austria (s. 4.7) pertaining to terminology, probably due to the common history of the two countries. According to Arntz and Picht, (1991: 156) the degree of conceptual equivalence, which can be observed in the use of terms in different countries, is closely linked to the historical development of their scientific fields (in Caro Cedillo 2004: 187).

Although the use of English as a lingua franca is observable in numerous clinical and theoretical fields of medicine due to internationalisation (Keresztes 2009: 62), MDRI are always written in the native languages, because they must be integrated into the national health care systems. Recording injuries in an international language can only be a supplement because patients are entitled to receive copies of their reports, so reports must be formulated in the native language in order to be understandable for patients. In Hungarian discharge reports, English language contact-induced features were detected (Keresztes 2010), which are only characteristic of MDRI listing medical examination methods as parts of treatment in the analysed sub-corpora. Consequently, it can be stated that MDRI rely on the native language use and terms are completely adapted to the native language structures. An overuse of ellipses i.e. omissions of verbs might be due to the listing and abbreviating character of MDRI instead of the influence of other languages.

5.13. Need for standardisation

In accordance with the main hypothesis, a high level of interdiscursivity was established in the analysed corpus. The factors by which the interdiscursivity manifests itself were listed among the minor hypothesis 1-6.

Hypothesis 1 was proved in all three sub-corpora, as in the MDRIs of each one there were terms with various levels of terminologisation not having an explicitly defined meaning (cf. 5.8.).

Hypothesis 2 postulated that inconsistent use of nominal collocations can be detected in MDRIs due to different classifications of injuries in other fields of medicine. This hypothesis was only proved in Hungary, based on concordance analysis and a comparative study with the terms used in surgery. In Austria and Germany, however, compound words were found instead of collocations, which also slightly differed from those in surgical use. Consequently, the second part of the hypothesis, namely the confusion of terms in different fields was verified by contrasting the terminology applied in forensic medicine and surgery in both Hungarian and German language.

Hypothesis 3, a frequent occurrence of synonymy was also confirmed by the concordance and statistical analyses in all sub-corpora included in this study. As shown in 5.5, synonymy is also due to the lack of exact definitions pertaining to manifestations, underlying mechanisms and types of injuries.

Hypothesis 4 suggested diverse implementation of the same concepts and different ways of registering injuries in the analysed countries. This hypothesis was confirmed because the way of registering injuries in Hungary differs from that in the other two countries, while in Germany the forensic assessment is more frequently performed on the basis of a personal examination. Different implementation of the same phenomena was proved in 5.5. and 5.6 comparing the word-for-word translations of types of injuries, as well as definitions describing muscle strain and lacerated, stab and incised wounds in the three countries. There was also a significant difference found in the registration of wound features between the three countries. However, the validity of results yielded by the corpus analysis must be restricted to the use of LSP in the regions discussed in the present study. Establishing generalisable results pertaining to the terminology in the documentation of injuries in all three countries requires further research.

Hypothesis 5 postulated that numerous words of MDRI were borrowed from various levels of professionalism within medical communication. This hypothesis was also confirmed in 5.8 and 5.9 as a large number of - from a forensic point of view – unidentifiable injuries were found. These were described by physicians either at a professional colloquial level or at a workshop level, using terms which lack exact definitions in forensic medicine.

Hypothesis 6 suggested that missing essential information e.g. exact localisation and wound characteristics leads to interdiscursivity. This hypothesis was not confirmed in the present corpus. Although a high number of missing or inconsistent data were detected in MDRI of all three sub-corpora, according to the statistical analysis these did not cause significantly impaired forensic assessment. However, in about one-fifth of the cases impaired assessment was proved. The missing significance of this phenomenon might be due to a kind of subjectivity in forensic reconstruction.

Consequently, as a high degree of interdiscursivity was shown in the present analysis. Standardisation is indicated in the genre of MDRI in all three countries. ICD (International Classification of Diseases) does not contain specific types of injuries according to underlying mechanisms which are relevant from a forensic point of view. Thus it seems to reflect statistical aspects. Because ICD has not been proved as a reliable method of standardisation, the current users of the genre should initiate the creation of exact definitions and the introduction of terms at a national level.

Another problematic aspect resulting from the lack of standardisation is complicated communication at the international level. As shown in 1.6.2 and 1.6.3 exact definitions of terms and the elimination of synonyms are essential to enhance the effectiveness of terminology, even within one language. However, since the time of globalisation people have had the possibility to travel across Europe and to work abroad, exact translations of findings have been needed not only in business issues but also in the fields of health care and law.

Communication barriers become even more apparent due to cultural and linguistic differences (Mayer-Sandri 2008: 19) as well as discrepancies in administration or in the legal system. Because of these facts, globalisation rather appears to increase confusion if terminology is not standardised at least at a national level. Consequently, considerable problems might arise if documentations of injuries have to be translated into the language of a country having a different forensic or legal tradition within the European legal system.

The cultivation of medical terminology in different fields is the responsibility of its present users (Mitsányi 2009: 308). Therefore, unambiguous terminology in the future can only be achieved by the present users of the terminology of MDRI who maintain adequate terms and eliminate expressions which impair medical communication.

The present study intended to draw attention to this essential communication problem and to reveal its possible linguistic causes. Data yielded by a large corpus of forensic files might serve as the basis for standardisation promoted by professional language users.

6. CONCLUSION

In the present study 339 Hungarian, 106 German and 101 Austrian forensic files were examined using the methods of corpus and statistical analysis to reveal the occurrence and the linguistic causes of limited forensic assessability in the case of soft tissue injuries. The anonymised files were provided in digital format by forensic institutions of different regions of Hungary, two university departments of forensic medicine in Germany and one forensic university department of Austria. Each file contained both the clinical medical documentation of soft tissue injuries and the related forensic expert opinion.

For the purpose of corpus analysis, files were grouped in sub-corpora according to the countries and in further sub-corpora according to the regions of countries they were collected from. For statistical analysis, numeric codes were assigned to all the 2437 injuries included in the corpus on the basis of a main and a sub-category designating the types of injuries. Statistical analysis was performed using Microsoft Excel and SPSS 19 to list all terms applied for types and characteristics of soft tissue injuries in the whole corpus. The linguistic analysis consisted of the examination and comparison of collocations, lexico-grammatical patterns and terminology specific to the genre of MDRI in all three countries, using the concordancing software WordSmith 5.0.

The results yielded by both statistical and linguistic analysis suggested that limited forensic assessability results from a high degree of interdiscursivity. The genre of MDRI is characterised by similar lexico-grammatical and terminological practice in all three countries. However, the mixing of technical expressions from various vertical and horizontal layers of LSP and from different levels of terminologisation as well as the omission of important characteristics of injuries frequently lead to interdiscursivity.

The results of the present study confirm the hypothesis that MDRI can be characterised by interdiscursivity, predominantly due to the inconsistent use of terms and the absence of important features of soft tissue injuries in the three analysed countries. These factors can be attributed to the supposition that clinicians do not always seem to be aware of the fact that their medical findings might be used as legal evidence when a crime or forbearance is investigated. Another reason might be that they only concentrate on the acute treatment, which they often have to perform at night or under aggravated circumstances. There are neither standardised forms to fill in nor terms made available for physicians formulating

findings on injuries. Consequently, it can hardly be expected that primary treating doctors should provide MDRI which are perfectly applicable to forensic reconstruction.

Therefore, in order to simplify and facilitate clinical documentation of injuries in everyday life, the application of a terminology in an effectively developed structure would be advisable. It could be standardised with the help of forensic experts and offered to clinicians in the form of a computer software in the three countries included in the present study. This software could help primary treating physicians throughout the process of registering findings by asking relevant questions and digitalising data. In case the software was integrated in the usual databases of hospitals, it would allow the attachment of imaging findings and photo documentation as well. As a by-product of a more practical and effective documentation, an increased forensic assessability might even be achieved due to the use of terms, which are standardised and defined also from the forensic point of view. The software would support the maintenance of lexico-grammatical patterns specific to the genre of 'MDRI' in each national language. These patterns could be taken into consideration, while creating the basis for international or at least European standardisation. The Hungarian version of such a computer software is being developed in cooperation with the Department of Forensic Medicine at the University of Pécs.

REFERENCES

- Administrative Regulation No. 16 of the Hungarian Institute of Forensic Medicine. 1997. Health Care Act of 1997. http://igor.diogenes.hu/download/modszlev/16_mszlev.pdf. Available: 29.08.2012
- Ágel V. 2000. Valenztheorie. Tübingen: Gunter Narr
- Arntz R, Picht H. 1991. Einführung in die Terminologearbeit. Hildesheim: Georg Olms
- Bajnóczky I. 2011. Die Geschichte der Rechtsmedizin. The History of Forensic Medicine. Lectures for the German Programme' Students at the Medical Faculty of the University of Pécs. Autumn term, public oral presentation. University of Pécs: Medical School
- Beaugrande R.d, Dressler W. 1981. Introduction to Text Linguistics. London: Longman
- Bérces E. 2011. A zene terminológiája. Lexikográfiai, terminológiai és szemiotikai megközelítés. PHD értekezés. Pécsi Tudományegyetem
- Bhatia VK. 1993. Analysing Genre - Language Use in Professional Settings. London: Longman
- Bhatia VK. 2002. Applied genre analysis: a multi-perspective model. *Ibérica*, 4: 3-19
- Bhatia VK. 2010. Interdiscursivity in Critical Genre Analysis. *Discourse and communication*, 21 (4/1): 32-50
- Bodnár I. 2010. Szaknyelv és stilsztika. In: Dobos Csilla (ed.) Szaknyelvi kommunikáció. Segédkönyvek a nyelvészet tanulmányozásához 110. Budapest: Miskolci Egyetem, Miskolc, Tinta Könyvkiadó. 161-179
- Boros M. 2006. Sebészeti Műtétan. Szeged: SZTE
- Bószé P (ed.). 2009. A magyar orvosi nyelv tankönyve. Budapest: Medicina
- Bowles H. 2012. Analyzing Languages Purposes Discourse. *The Modern Language Journal*, 96, Focus Issue: 43-58
- Brencsán J. 2006. Orvosi Szótár. Budapest: Medicina
- Brinkmann B, Madea B. 2004. Handbuch gerichtliche Medizin. Volume I. Berlin, Heidelberg: Springer
- Bronstein, DA. 2012. Law for the Expert Witness. New York: CRC Press Taylor and Frances Group
- Bruch HP, Trentz O. 2005. Chirurgie. München: Elsevier GmbH
- Buris L. 1991. Az igazságügyi orvostan kézikönyve. Budapest: Medicina
- Busch-Lauer IA. 1995. Discourse Organization in English, German and Russian Medical Texts. In: Budin, Gerhard (ed.): Multilingualism in Specialist Communication. Multilingualisme dans la communication spécialisée. Mehrsprachigkeit in der Fachkommunikation. Proceedings of the 10th European LSP Symposium Vienna, 29.8.- 1.9.1995, Vol. 1. Wien: TermNet. 113-148
- Cabré Castellví MT. 2003. Theories of Terminology. Their description, prescription and explanation. *Terminology*. 9:2 (2003), 163–199

- Cameron S. et al. 2002. Learning to Write Case Notes Using the SOAP Format. *Journal of Counseling & Development*, Vol. 80: 286-292
- Caro Cedillo A. 2004. Fachsprachliche Kollokationen. Ein übersetzungsorientiertes Datenbankmodell Deutsch-Spanisch. Tübingen: Gunter Narr
- Cruse A. 2004. Meaning in language: An introduction to semantics and pragmatics 2. ed. Oxford: Oxford University Press.
- Csongor A. 2011. Characteristics and Web Genres of Health-Related Websites. *Acta Medica Marisiensis*. (Official Publication of the University of Medicine and Pharmacy of Targu Mures.) Volume 57: 180-182
- Demeter É. 2010. Az orvosi szaknyelv. In: Dobos Csilla (ed.) Szaknyelvi kommunikáció. Segédkönyvek a nyelvészet tanulmányozásához 110. Budapest: Miskolci Egyetem, Miskolc, Tinta Könyvkiadó. 219-241
- Fazekas, I. Gy. 1972. Igazságügyi orvostan. Egy. jegyzet. Szeged: SZTE
- Felber H, Schaefer B. 1999. Typologie der Fachwörterbücher. In: Hoffmann L, Kalvenkämper H, Wiegand HE. (ed): Fachsprachen: ein internationales Handbuch zur Fachsprachenforschung und Terminologiewissenschaft = Languages for special purposes. Bd. 14. Berlin/ New York: de Gruyter. 1725-1743
- Fischer M. 2010a. Terminológia a szakmai kommunikáció szolgálatában. In: Dobos Csilla (ed.) Szaknyelvi kommunikáció. Segédkönyvek a nyelvészet tanulmányozásához 110 Budapest: Miskolci Egyetem. Miskolc, Tinta Könyvkiadó. 51-72
- Fischer M. 2010b. A fordító mint terminológus, különös tekintettel az európai uniós kontextusra. PHD Dissertation. Budapest: Eötvös Loránd Tudományegyetem
- Flautner L, Sárváry A. 2003. A sebészet és traumatológia tankönyve. Budapest: Semmelweis
- Fluck HR. 1996. Fachsprache. Einführung und Bibliographie. (jew. neueste Auflage). Tübingen und Basel: A. Francke Verlag
- Fogarasi K. 2010a. Sebtípusok, sebleírások terminológiai problémái traumatológiai látteleteken. In: *Porta Lingua. Tudományterületek és nyelvhasználat*. Debrecen: Szaknyelvoktatók – és Kutatók Országos Egyesülete. 121-138
- Fogarasi K. 2010b. Terminology of wounds. A contrastive survey on terms in the technical literature of Forensic Medicine in Hungary. *Acta Medica Marisiensis* (Official Publication of the University of Medicine and Pharmacy of Targu Mures), Volume 56/6: 587 – 597
- Fogarasi K. 2010c. A nominális valencia szerepe traumatológiai sérülésleírások értelmezésében. Online publikáció: *A Magyar Tudományos Akadémia Alkalmazott Nyelvészeti Doktorandusz Konferenciájának online kötete*. Budapest: MTA Nyelvtudományi Intézet. 31-45
- Fogarasi K. 2011. Terminological Problems and Information Missing in Descriptions of Injuries in the Hungarian Forensic Medical Discourse. *Acta Medica Marisiensis* (Official Publication of the University of Medicine and Pharmacy of Targu Mures), Volume 57: 183-185
- Fogarasi-Nuber K. 2012. Rechtsmedizinische Terminologie in der Befunderhebung von Weichgewebeverletzungen. Eine korpusgestützte Analyse des Terminusgebrauchs in Ungarn und in

Deutschland. Peter Lang Discourse and dialogue = Diskurs und Dialog / Vladimir Karabalić, Melita Aleksa Varga, Leonard Pon (eds.) Frankfurt a.M. Bern [etc.]: P. Lang, XIX (in print)

Fóris Á. 2005. Hat terminológia lecke. Pécs: Lexikográfiai Kiadó

Gaál Cs. 2007. Sebészeti. 6. kiadás. Budapest: Medicina

Gledhill Chr. 2011. The 'lexicogrammar' approach to analysing phraseology and collocation in ESP texts. In: *Groupe d' Étude et de Recherche en Anglais de Spécialité ASp*. 59: 5-23

Grice PH. 1975. Logic and Conversation. In: *Syntax and Semantics*. Vol 3. ed. by Cole/Morgan. New York: Academic Press.

Gumperz JJ. 1982. Discourse strategies. Cambridge: Cambridge University Press

Gurcharan K. 1998. A genre analysis of medical reports. Masters thesis, University Malaysia.

Hall JA, Roter DL. 2002. Do patients talk differently to male and female physicians? *Patient Education and Counseling*. Volume 48/3: 217-224

Halliday MAK, Hasan R. 1976. Cohesion in English. London: Longman.

Hegedűs A. 2009. Modality in Drug Information Leaflets: A Corpus-Based Analysis. PHD Thesis. University of Pécs

Hoffmann L. 1984. Kommunikationsmittel Fachsprache. Berlin: Akademie-Verlag

Hölnzer M. 2007. Substantivvalenz. Korpusgestützte Untersuchungen zu Argumentrealisierungen deutscher Substantive. Tübingen: Niemeyer

Ischreyt H. 1965. Studien zum Verhältnis von Sprache und Technik. Institutionelle Sprachlenkung in der Terminologie der Technik. Düsseldorf: Schwann-Verlag

Juhász I, Szőke I [etc.] (ed.). 1992. Magyar Értelmező Kéziszótár. Budapest: Akadémiai Kiadó

Kapronczay K. 2009. A magyar nyelvű orvosi szakirodalom Magyarországon. In: Bősze P (ed.) A magyar orvosi nyelv tankönyve. Budapest: Medicina. 157-168

Károly K. 2010. Szaknyelv és szövegnyelvészet. Az orvosi szaknyelv. In: Dobos Csilla (ed.) Szaknyelvi kommunikáció. Segédkönyvek a nyelvészet tanulmányozásához 110. Budapest: Miskolci Egyetem, Miskolc, Tinta Könyvkiadó. 73-105

Keresztes Cs. 2010. Investigation of English language contact-induced features in Hungarian cardiology discharge reports and language attitudes of physicians and patients. PHD Thesis. University of Szeged

Keresztes Cs. 2009. English as the Lingua Franca of Medicine. In: Silye Magdolna (ed.) Szaktudás idegen nyelven. Debrecen: Szaknyelvtanárok –és Kutatók Országos Egyesülete. 53-64

Kereszty É. 2008. The Health Care Law in a Nutshell. In: Sótónyi P, Keller É. (ed.) Lecture Notes of Forensic Medicine. Budapest: Semmelweis

Keszler B. 2009. A magyar orvosi nyelv története. In: Bősze P (ed.) A magyar orvosi nyelv tankönyve. Budapest: Medicina. 87-118

- Kiss L. 1994. Sebészet és traumatológia. Budapest: Medicina
- Klár J, Kovalovszky M. 1955. Műszaki tudományos terminológiánk alakulása és fejlesztésének főbb kérdései. Budapest: Műszaki és Természettudományi Egyesületek Szövetsége
- Kurtán Zs. 2003. Szakmai nyelvhasználat. Budapest: Nemzeti Tankönyvkiadó
- Kurtán Zs. 2006. Szaknyelv. In: Kiefer Ferenc (ed.) Magyar Nyelv. Budapest: Akadémia Kiadó. 932–957
- Kurtán Zs. 2010. Szaknyelv és szakmai kommunikáció. In: Dobos Csilla (ed.) Szaknyelvi kommunikáció. Segédkönyvek a nyelvészet tanulmányozásához. 110. Budapest: Miskolci Egyetem, Miskolc, Tinta Könyvkiadó. 11-22.
- Lippert H. 1999. Die Fachlexikographie der Medizin: eine Übersicht. In: Hoffmann L, Kalvenkämper H, Wiegand HE. (ed) Fachsprachen: ein internationales Handbuch zur Fachsprachenforschung und Terminologiewissenschaft = Languages for Special Purposes. Bd. 2. Berlin - New York: de Gruyter. 1966-1975
- Löke Zs. 2006. Az orvosszakértői vélemények jelentősége a biztosítók ellen folyó peres és peren kívüli eljárásokban a biztosítási jogász szempontjából. *Biztosítási Szemle*, 8: 20-23
- Madea B (ed). 2007. Praxis Rechtsmedizin. Befunderhebung, Rekonstruktion, Begutachtung. Berlin-Heidelberg: Springer
- Maresch W, Spann W. 1987. Angewandte Gerichtsmedizin. Wien-München-Baltimore: Urban & Schwarzenberg
- Mayer F, Sandrini P. 2008. Neue Formen der Fachkommunikation oder alter Wein in neuen Schläuchen? In: Mayer F, Schmitz KD. (ed.) Terminologie und Fachkommunikation. (Akten des Symposions, Mannheim 18.-19. April 2008.) Deutscher Terminologietag e.V. 17-28
- Maynard DW. 1991. Interaction and Asymmetry in Clinical Discourse. *American Journal of Sociology*, 97.2: 448-95
- Maynard DW, Heritage John. 2005. Conversation analysis, doctor-patient interaction and medical communication. *Medical education*, 39: 428-435
- Mitsányi A. 2009. Fonákások a klinikai és a kísérletes orvostudomány szaknyelvében. In: Bősze P (ed.) A magyar orvosi nyelv tankönyve. Budapest: Medicina. 305-308
- Möhn D, Pelka R. 1984. Fachsprachen. Eine Einführung. Germanistische Arbeitshefte Bd 30. Tübingen
- Muráth J. 2002. Zweisprachige Lexikographie. Budapest: Nemzeti Tankönyvkiadó.
- Muráth J. 2010. Szaknyelv és lexikográfia. In: Dobos Csilla (szerk.) Szaknyelvi kommunikáció. Segédkönyvek a nyelvészet tanulmányozásához. 110. Miskolci Egyetem, Miskolc, Budapest: Tinta Könyvkiadó. 23-46
- Nuopponen A. 2003. Terminology. The International Encyclopedia of Linguistics. Second Edition. Four volumes. Oxford University Press
- Penning R. 2006. Rechtsmedizin systematisch. Bremen-London-Boston: UNI-MED Verlag

- Pschyrembel W. (ed). 2007. Klinisches Wörterbuch. 261. Edition. Berlin, New York: de Gruyter
- Ptashnyk S, Hallsteinsdóttir E, Bubenhofer N. (eds). 2010. Phraseologie und Parömiologie. Band 25. Korpora, Web und Datenbanken. Korpusgestützte Methoden in der modernen Phraseologie und Lexikographie, Corpora, Web and Databases. Computer-Based Methods in Modern Phraseology and Lexikography. Hohengehren: Schneider Verlag GmbH
- Rébék-Nagy G. 2000. Modulation of Authors' Claims in Medical Research Articles. PHD Thesis. University of Pécs
- Rébék-Nagy G. 2010. Szaktudás, nyelvtudás, szaknyelv. In: Dobos Cs. (ed) Szaknyelvi kommunikáció. Segédkönyvek a nyelvészet tanulmányozásához. 110. Miskolci Egyetem, Miskolc. Budapest: Tinta Könyvkiadó. 195-204
- Reder A. 2006. Kollokationen in der Wortschatzarbeit. Wien: Praesens Verlag
- Roelcke T. 1999. Fachsprachen. Berlin: Erich Schmidt Verlag
- Rubányi P. 1972. Sebészet I. Budapest: Medicina
- Salager-Meyer F. 1991. Medical English abstracts: how well structured are they? *JASIS (Journal of the American Society for Information Science)*, 42 (7): 528-531
- Salager-Meyer F. 1994. Reading medical English abstracts: a genre study of the interaction between structural variables and the reader's linguistico-conceptual competence (L2). *Journal of Research in Reading*, 17 (2): 120-146
- Salager-Meyer F, Defives G, Hamelinsck M. 1996. Epistemic modality in 19th and 20th century medical English written discourse: a principal component analysis. *Interface. Journal of Applied Linguistics*. 10 (2): 163-199
- Schwerd W. (ed). 1986. Rechtsmedizin. Lehrbuch für Mediziner und Juristen. 4. Auflage. Köln: Deutscher Ärzte-Verlag
- Siewert JR. 2006. Chirurgie mit integriertem Fallquiz – 40 Fälle nach neuer AO. Heidelberg: Springer
- Simmler F. 2006. Varietätenlinguistik: Fachsprachen. In: Vilmos Á, Eichinger LM, Hellwig P, Heringer HJ, Lobin H. (ed.). *Dependenz und Valenz. Ein internationales Handbuch der zeitgenössischen Forschung.* (= Handbücher zur Sprach- und Kommunikationswissenschaft 25.2) Band 2. Berlin/ New York: de Gruyter. 1523-1538
- Sinclair JMH. 1980. Some Implications of Discourse Analysis for ESP Methodology. *Applied Linguistics*, 1 (3): 253-261
- Smith B, Ceusters W, Temmerman R. 2005. Wüsteria. Proceedings of Medical Informatics Europe, Geneva. *Stud Health Technol Inform*. 116: 647-652.
- Sótonyi P. (ed.) 1996. Igazságügyi Orvostan. Budapest: Semmelweis
- Sótonyi P. (ed.) 2009. A magyar törvényszéki-igazságügyi orvostan története. Budapest: Medicina
- Sótonyi P, Keller É. (ed). 2008. Lecture Notes of Forensic Medicine. Budapest: Semmelweis
- Swales JM. 1990. Genre Analysis. English in Academic and Research Settings. Cambridge: University Press

- Szabó Á. 2008. Látélet a látteletről. *Házi jogorvos*, 1/4:13-18
- Temmerman R. 2000. Towards New Ways of Terminology Description. The sociocognitive approach. Amsterdam/ Philadelphia: John Benjamins
- Tesnière L. 1980. Grundzüge der strukturalen Syntax. Herausgegeben und übersetzt von Ulrich Engel. Stuttgart: Klett-Cotta
- Thomas P. 1992. Treatment of compound terminology entries. *Euralex Proceedings*. 185-195
- Toporowska G, Maria-Sköldberg E. 2010. Swedish Medical Collocations: A Lexicographic Approach. In: Ptashnyk S, Hallsteinsdóttir E, Bubenhofer N. (ed.) *Phraseologie und Parömiologie*. Band 25. Korpora, Web und Datenbanken. Korpusgestützte Methoden in der modernen Phraseologie und Lexikographie. / *Korpora, Web and Databases. Computer-Based Methods in Modern Phraseology and Lexikography*. Hohengehren: Schneider Verlag
- Trappes-Lomax H. 2004. Discourse Analysis. In: Alan D, Elder C. (ed.): *The Handbook of Applied Linguistics* by Blackwell Publishing Ltd. 133-156
- Ulsenheimer K. 2008. *Arztstrafrecht in der Praxis*. Tübingen: C.F. Müller
- Wagner ST. 2010. Analyse unfallchirurgischer Protokolle von Opfern häuslicher Gewalt bezüglich medizinischer Dokumentation und juristischer Aussagekraft. Inauguraldisseration. Johannes Gutenberg-Universität Mainz
- Wallner F. 2010. Kollokationen in Wissenschaftssprachen: Zur lernerlexikographischen Relevanz der Textarten – und Diskurspezifika von Kollokationen. In: Ptashnyk S, Hallsteinsdóttir E, Bubenhofer N. (ed.) *Phraseologie und Parömiologie*. Band 25. Korpora, Web und Datenbanken. Korpusgestützte Methoden in der modernen Phraseologie und Lexikographie. / *Korpora, Web and Databases. Computer-Based Methods in Modern Phraseology and Lexikography*. Hohengehren: Schneider Verlag
- Warta V. 2006. Szerzői hang. Angol nyelvű orvosi esetismertetések műfajelemzése korpusznyelvészeti módszerekkel. (Author's voice: Analysing English medical case reports by corpus linguistic methods.) Pécsi Tudományegyetem. PHD Dissertation
- Warta V. 2008. Politeness Strategies in Oral Medical Case Histories. In: Silye Magdolna (ed.) *Szakember, szaktudás, szaknyelv*. Porta Lingua. Debrecen: Debreceni Egyetem – SZOKOE. 139-147
- Weed LL. 1968. Medical records that guide and teach. *New England Journal of Medicine*, 278: 593-600, 652-657
- Wiese I. 1999. Die neuere Fachsprache der Medizin seit der Mitte des 19. Jahrhunderts unter besonderer Berücksichtigung der Inneren Medizin. In: Hoffmann L, Kalvenkämper H, Wiegand HE (ed) *Fachsprachen: ein internationales Handbuch zur Fachsprachenforschung und Terminologiewissenschaft = Languages for Special Purposes*. Bd. 2, Berlin - New York: de Gruyter. 1278-1285
- Worbs E. 1998. Was ist fachsprachliche Phraseologie? Überlegungen am Beispiel der deutschen und polnischen Börsensprache. In: Rothe H, Thiergen P (ed.): *Polen unter Nachbarn. Polonistische und komparatistische Beiträge zur Literatur und Sprache*. Köln, Weimar, Wien: Böhlau. 99-127
- Wüster E. 1974. Die allgemeine Terminologielehre – Ein Grenzgebiet zwischen Sprachwissenschaft, Logik, Ontologie, Informatik und Sachwissenschaften. *Linguistics*, 119: 61-106

Ylönen S. 1999. 2001. Entwicklung von Textsortenkonventionen am Beispiel von 'Originalarbeiten' der Deutschen Medizinischen Wochenschrift (DMW). (Überarbeitete) Doktorarbeit, Frankfurt am Main: Lang

Ylönen S. 1993. Stilwandel in wissenschaftlichen Artikeln der Medizin. Zur Entwicklung der Textsorte 'Originalarbeiten' in der „Deutschen Medizinischen Wochenschrift“ von 1884–1989. In: Schröder H. (ed.): Fachtextpragmatik. Tübingen: Narr [Forum für Fachsprachen-Forschung.] 19: 81-98

TABLE OF GRAPHS AND CHARTS

Graph 1.	Causes of injuries in Hungary, Germany and Austria.....	30
Graph 2.	Primary treating doctors the MDRI were created by in Hungary, Germany and Austria	31
Graph 3.	Registration of the exact time of treatment in Hungary, Germany and Austria.....	31
Graph 4.	Registration of the consumption of alcohol and narcotics in Hungary, Germany and Austria.....	32
Graph 5.	Completely and only partially assessable MDRI in Hungary, Germany and Austria....	33
Graph 6.	Comparison of the most frequent terms in parts A and B of the Hungarian MDRI.....	35
Graph 7.	Comparison between the Hungarian and Latin diagnoses in Hungarian MDRI.....	36
Graph 8.	Comparison between synonyms used by physicians and forensic experts in Hungary...	37
Graph 9.	Comparison between the most frequent synonymous groups used in the Descriptions (A) and Diagnoses (B) by physicians and forensic experts (C) in Hungary.....	38
Graph 10.	Comparison of the most frequent terms in parts A and B of the Austrian MDRI.....	40
Graph 11.	Comparison between synonyms used by physicians and forensic experts in Austria.....	41
Graph 12.	Comparison between the most frequent synonymous groups used in the Descriptions (A) and Diagnoses (B) by physicians and forensic experts (C) in Austria	42
Graph 13.	Comparison of the most frequent terms in parts A and B of the German MDRI.....	43
Graph 14.	Comparison between synonyms used by physicians (A) and experts (C) in Germany....	44
Graph 15.	Synonymous groups of soft tissue injuries in descriptions (A) and diagnoses (B) in Freiburg, Germany.....	45
Graph 16.	Synonymous groups of soft tissue injuries in descriptions (A) and diagnoses (B) in Mainz, Germany.....	46
Graph 17.	Comparison between synonyms used in descriptions (A) in Freiburg and Mainz, Germany.....	47
Graph 18.	Comparison between synonymous groups in descriptions (A) in Hungary and Austria.....	48
Graph 19.	Comparison between synonymous groups in descriptions (A) in Austria and Germany.....	50
Graph 20.	Distribution of synonyms in the largest synonymous groups in the German and Austrian sub-corpora.....	51

Graph 21. Comparison between synonymous groups in descriptions (A) in Hungary, Austria and Germany.....	52
Graph 22. Correlation between described (A) and diagnosed (B) injuries.....	53
Graph 23. Correlation between described (A) and assessed (C) injuries.....	53
Graph 24. Correlation between diagnosed (B) and assessed injuries.....	54
Graph 25. Registration of size in Hungary.....	59
Graph 26. Registration of size in Austria.....	60
Graph 27. Registration of size in Germany.....	60
Graph 28. Percentage distribution of registering size and significant differences between the three countries.....	61
Chart I. Layers of medical communication, based on Hoffmann's, Ischreyt's, Möhn's and Pelka's theories.....	05
Chart II. Literal synonyms found in the Hungarian and Austrian sub-corpora.....	49
Chart III. Indication of size through comparison in Hungary.....	59
Chart IV. Evaluability of registered numbers of injuries in MDRI's.....	61
Chart V. Indefinite numerals detected in Hungarian, German and Austrian MDRI's.....	62
Chart VI. Terms describing shape in Hungarian, German and Austrian MDRI's.....	62
Chart VII. Terms describing margins and side-walls in Hungarian, German and Austrian MDRI's.....	63
Chart VIII. Statistics of registered side aspects in the Hungarian sub-corpus.....	66
Chart IX. Statistics of registered side aspects in the Austrian sub-corpus.....	67
Chart X. Statistics of registered side aspects in the German sub-corpus.....	67
Chart XI. Example of the Hungarian MDRI's.....	87
Chart XII. Example of the German MDRI's.....	89
Chart XIII. Levels of terminologisation of forensic expressions.....	92
Chart XIV. The layers of communication represented in the analysed corpus.....	93
Chart XV. Example of the German expert opinions.....	95
Chart XVI. Example of the Austrian expert opinions.....	95
Chart XVII. Example of the Hungarian expert opinions.....	95

Charts in the Appendix

- Chart 1. Synonymous groups with their English translations detected in the corpus in three languages
- Chart 2. Proportion of accidents and assaults in the corpus
- Chart 3. Proportion of clinicians and GPs as primary treating doctors in the corpus
- Chart 4.a. Distribution of the registered date aspects according to regions in the corpus
- Chart 4.b. Distribution of the registered exact time aspects according to regions in the corpus
- Chart 5. Record of alcohol or drug consumption
- Chart 6. Assessability of MDRI according to regions
- Chart 7. Synonymous groups of terms in the descriptions (part A) of the Hungarian sub-corpus
- Chart 8. Synonymous groups of terms in the diagnoses (part B) of the Hungarian sub-corpus
- Chart 9. Synonymous groups of Latin terms in the diagnoses (part B) of the Hungarian sub-corpus
- Chart 10. Synonymous groups of terms in the expert opinions (part C) of the Hungarian sub-corpus
- Chart 11. Synonymous groups of terms in the descriptions (part A) of the Austrian sub-corpus
- Chart 12. Synonymous groups of terms in diagnoses (part B) of the Austrian sub-corpus
- Chart 13. Synonymous groups of terms in expert opinions (part C) of the Austrian sub-corpus
- Chart 14. Synonymous groups of terms in descriptions (part A) of the German sub-corpus
- Chart 15. Synonymous groups of terms in diagnoses (part B) of the German sub-corpus
- Chart 16. Synonymous groups of terms in expert opinions (part C) of the German sub-corpus
- Chart 17. Synonymous groups of terms in descriptions (part A) of the sub-corpus of Freiburg (Germany)
- Chart 18. Synonymous groups of terms in descriptions (part A) of the sub-corpus of Mainz (Germany)
- Chart 19. Terms of the synonymous group 'tenderness on pressure' in the descriptions (A), their related diagnoses (B) and the same injuries in the expert opinions (C) in Hungary
- Chart 20. Terms of the synonymous group 'tenderness on pressure' in the descriptions (A), their related diagnoses (B) and the same injuries in the expert opinions (C) in Austria
- Chart 21. Terms of the synonymous group 'tenderness on pressure' in the descriptions (A), their related diagnoses (B) and the same injuries in the expert opinions (C) in Germany
- Chart 22. Terms of the synonymous group 'bruise' in the descriptions (A), their related diagnoses (B) and the same injuries in the expert opinions (C) in Hungary
- Chart 23. Terms of the synonymous group 'bruise' in the descriptions (A), their related diagnoses (B) and the same injuries in the expert opinions (C) in Austria
- Chart 24. Terms of the synonymous group 'bruise' in the descriptions (A), their related diagnoses (B) and the same injuries in the expert opinions (C) in Germany

- Chart 25. Terms of the synonymous group ‘lacerated wound’ in the descriptions (A), their related diagnoses (B) and the same injuries in the expert opinions (C) in Hungary
- Chart 26. Terms of the synonymous group ‘lacerated wound’ in the descriptions (A), their related diagnoses (B) and the same injuries in the expert opinions (C) in Austria
- Chart 27. Terms of the synonymous group ‘lacerated wound’ in the descriptions (A), their related diagnoses (B) and the same injuries in the expert opinions (C) in Germany
- Chart 28. Registration of characteristics of soft tissue injuries in the Hungarian, Austrian and German sub- corpora
- Chart 29. Registration of characteristics of soft tissue injuries according to regions in the Hungarian, Austrian and German sub-corpora
- Chart 30. Registration of the side aspect of injuries in the Hungarian sub-corpus
- Chart 31. Extract from the concordances of the word ‘left’ in the descriptions (A) of the Hungarian sub-corpus
- Chart 32.a. Extract from the concordances of the word ‘left’ in the diagnoses (B) of the Hungarian sub-corpus
- Chart 32.b. Extract from the concordances of the word ‘left’ in the Latin Diagnoses (B) of the Hungarian sub-corpus
- Chart 33. Extract from the concordances of the word ‘left’ in the expert opinions (C) of the Hungarian sub-corpus
- Chart 34. Extract from the concordances of the word ‘left’ in the descriptions (A) of the Austrian sub-corpus
- Chart 35. Extract from the concordances of the word ‘left’ in the diagnoses (B) of the Austrian sub-corpus
- Chart.36. Extract from the concordances of the word ‘left’ in the expert opinions (C) of the Austrian sub-corpus
- Chart 37. Extract from the concordances of the word ‘left’ in the descriptions (A) of the German sub-corpus
- Chart 38. Extract from the concordances of the word ‘left’ in the diagnoses (B) of the German sub-corpus
- Chart 39. Extract from the concordances of the word ‘left’ in the expert opinions (C) of the German sub-corpus
- Chart 40. Extract from the concordances of the word ‘sérülés’ (=‘injury’) in the descriptions (A) of the Hungarian sub-corpus
- Chart 41. Extract from the concordances of the word ‘sérülés’ (‘injury’) in the expert opinions (C) of the Hungarian sub-corpus
- Chart 42. Extract from the concordances of the word ‘Verletzung’ (‘injury’) in the descriptions (A) of the Austrian sub-corpus

- Chart 43. Extract from the concordances of the word ‘Verletzung’ (‘injury’) in the expert opinions (C) of the Austrian sub-corpus
- Chart 44. Extract from the concordances of the word ‘Verletzung’ (‘injury’) in the descriptions (A) of the German sub-corpus
- Chart 45. Extract from the concordances of the word ‘Verletzung’ (‘injury’) in the expert opinions (C) of the German sub-corpus
- Chart 46. Sample handwritten MDRI from Hungary
- Chart 47. Sample handwritten MDRI from Austria
- Chart 48. Sample handwritten MDRI from Germany

APPENDIX

Chart 1. Synonymous groups with their English translations detected in the corpus in three languages. (If possible, terms are translated literally and not always corresponding to the Anglo-Saxon terminology. Terms usually applied in the Anglo-Saxon territory are marked in *italic*.)

No.	English	German	Latin	Hungarian
1	<i>grazing/ abrasion</i> abraded wound <i>erosion</i>	Schürfung/ Abschürfung Schürfwunde Erosion/ Verätzung	abrasio vulnus abrasum erosio	horzsolás horzsolts seb
2	<i>dried blood</i>	angetrocknetes Blut	-	beszáradt vér
3	<i>haematoma</i> <i>(attribute+) discolouration</i> <i>suffusion</i> <i>décollement/ detachment</i>	Hämatom Einblutung Bluterguss Unterblutung <i>(attribute+) Verfärbung</i> Blutunterlaufung Ablederung	haematoma suffusio	bevézés vérömleny vérbeszűrődés <i>(attribute+) elszíneződés</i> véraláfutás nyúzódás
4	<i>hyperaemia</i> <i>erythema</i> redness	Überdurchblutung Erythem Rötung	hyperaemia erythema	bővérűség/ vérbőség erythema bőrpír
5	<i>oedema</i> <i>swelling</i> <i>thickening</i>	Ödem/ Wassersucht Schwellung Verdickung	oedema	vizenyő duzzanat -
6	<i>burn</i> <i>scald</i>	Verbrennung Verbrühung	combustio	égés forrázás
7	<i>scab</i>	Schorf/ Kruste		pörk
8	<i>excoriation /scratching</i> excoriated ~/ scratch wound	Kratzer Kratzwunde	excoriatio vulnus excoriatum	karcolás/ karmolás karcolt seb/ karmolt seb
9	disruption of the continuity (of the skin)	(Haut)Durchtrennung	-	(bőr) folytonosság- megszakítás
10	<i>epithelial ~/ skin defect</i>	Hautdefekt	defectus cutis	hámhiány/ hámsérülés
11	<i>bite wound</i> -	Bisswunde -	vulnus morsum -	harapott seb kiharapás/ ráharapás
12	<i>incised wound/ incision</i> <i>slash wound</i>	Schnittwunde	vulnus scissum	metszett seb
13	trace	Spur	-	nyom
14	tenderness on pressure/ <i>sensitivity to pressure</i> <i>tenderness</i> <i>pain</i>	Druckschmerzhaftigkeit/ ~empfindlichkeit Empfindlichkeit Schmerz	- - -	nyomásérzékenység érzékenység fájdalom
15	<i>petechial haemorrhage</i>	Petechien	Petechia	petechia
16	<i>lacerated wound</i>	Platzwunde	vulnus ruptum	repszett seb

	(= <i>laceration</i>) 'torn wound' or 'ruptured wound' ruptured-contused wound contused wound/bruised wound <i>rupture</i> <i>scissure</i>	('burst wound') Risswunde Riss-Quetschwunde Quetschwunde Ruptur/ Riss Fissur	 vulnus lacerum vulnus lacerococtusum vulnus contusum ruptura fissura/discissio	('ruptured wound') szakított seb (‘torn wound’) zúzott (-szakított)seb zúzott seb repedés szakadás/szétválás
17	<i>wound</i>	Wunde	vulnus	seb
18	<i>lesion/ injury</i>	Verletzung/ Läsion	laesio	sérülés
19	<i>stab wound/ puncture wound</i>	Stichwunde Stich-Schnittwunde	vulnus punctum	szúrt seb szúrva metszett seb
20	chop ~ / chopped ~ / chopping wound	Hiebwunde	vulnus caesum	vágott seb
21	<i>bleeding</i>	blutend	-	vérző
22	<i>restricted mobility</i>	eingeschränkte Beweglichkeit	-	beszűkülő mozgás
23	<i>foreign body</i>	Fremdkörper	corpus alienum	idegen test
24	<i>contusion</i> <i>bruise</i> <i>bruise mark</i>	Kontusion Quetschung/ Prellung Prell-/ Quetschmarke	contusio contusio -	zúzódás zúzódás -
25	<i>shot wound</i>	Schusswunde	vulnus sclopetarium	lőtt seb
26	<i>epistaxis</i> <i>nosebleed</i>	Epistaxis Nasenbluten	epistaxis	orrvérzés
27	<i>sprain</i> <i>strain</i> <i>strain</i> <i>luxation/ dislocation</i>	Verstauchung Zerrung Verspannung Verrenkung	distorsio distorsio - luxatio	rándulás rándulás húzódás ficam
28	<i>emphysema</i> air	Emphysem Luft	emphysema	léggöyüm levegő
29	trauma <i>blunt trauma/ blunt force</i>	Trauma Stumpfe Gewalt	trauma	trauma tompatrauma/ tompaerő- behatás
30	<i>complaint</i>	Beschwerde	-	panasz
31	<i>relieving posture</i>	Schonhaltung	-	kímélő tartás
32	<i>blast injury</i>	Explosionsverletzung	-	robbanásos sérülés
33	<i>alteration</i>	Veränderung	-	elváltozás

Chart 2. Proportion of accidents and assaults in the corpus

Region	Type	Count	Percentage
Debrecen	Accident	6	10.0%
	Assault	54	90.0%
	Total	60	100.0%
Győr	Accident	3	4.8%
	Assault	59	95.2%
	Total	62	100.0%
Kaposvár	Accident	7	13.7%
	Assault	44	86.3%
	Total	51	100.0%
Pécs	Accident	2	3.4%
	Assault	56	96.6%
	Total	58	100.0%
Szekszárd	Accident	4	7.0%
	Assault	53	93.0%
	Total	57	100.0%
Veszprém	Accident	15	29.4%
	Assault	36	70.6%
	Total	51	100.0%
Freiburg	Accident	2	4.0%
	Assault	48	96.0%
	Total	50	100.0%
Mainz	Accident	5	8.9%
	Assault	51	91.1%
	Total	56	100.0%
Graz	Accident	45	44.6%
	Assault	56	55.4%
	Total	101	100.0%
Total	Accident	89	16.3%
	Assault	457	83.7%
	Total	546	100.0%

Chart 3. Proportion of clinicians and GPs as primary treating doctors in the corpus

Region	Physician	Count	Percentage
Debrecen	Clinician	59	98.3%
	GP	1	1.7%
	Total	60	100.0%
Győr	Clinician	61	98.4%
	GP	1	1.6%
	Total	62	100.0%
Kaposvár	Clinician	44	86.3%
	GP	7	13.7%
	Total	51	100.0%
Pécs	Clinician	55	94.8%
	GP	3	5.2%
	Total	58	100.0%
Szekszárd	Clinician	43	75.4%
	GP	14	24.6%
	Total	57	100.0%
Veszprém	Clinician	50	98.0%
	GP	1	2.0%
	Total	51	100.0%
Freiburg	Clinician	50	100.0%
	GP	0	0.0%
	Total	50	100.0%
Mainz	Clinician	56	100.0%
	GP	0	0.0%
	Total	56	100.0%
Graz	Clinician	101	100.0%
	GP	0	0.0%
	Total	101	100.0%
Total	Clinician	519	95.1%
	GP	27	4.9%
	Total	546	100.0%

Chart 4. a. Distribution of the registered date aspects according to regions in the corpus

Region	Date	Count	Percentage
Debrecen	registered	59	98.3%
	not registered	1	1.7%
	Total	60	100.0%
Győr	registered	61	98.4%
	not registered	1	1.6%
	Total	62	100.0%
Kaposvár	registered	51	100.0%
	not registered	0	0.0%
	Total	51	100.0%
Pécs	registered	57	98.3%
	not registered	1	1.7%
	Total	58	100.0%
Szekszárd	registered	15	26.3%
	not registered	42	73.7%
	Total	57	100.0%
Veszprém	registered	51	100.0%
	not registered	0	0.0%
	Total	51	100.0%
Freiburg	registered	49	98.0%
	not registered	1	2.0%
	Total	50	100.0%
Mainz	registered	56	100.0%
	not registered	0	0.0%
	Total	56	100.0%
Graz	registered	100	99.0%
	not registered	1	1.0%
	Total	101	100.0%
Total	registered	499	91.4%
	not registered	47	8.6%
	Total	546	100.0%

Chart 4. b. Distribution of the registered exact time aspects according to regions in the corpus

Region	Date	Count	Percentage
Debrecen	registered	5	8.3%
	not registered	55	91.7%
	Total	60	100.0%
Győr	registered	31	50.0%
	not registered	31	50.0%
	Total	62	100.0%
Kaposvár	registered	29	56.9%
	not registered	22	43.1%
	Total	51	100.0%
Pécs	registered	1	1.7%
	not registered	57	98.3%
	Total	58	100.0%
Szekszárd	registered	3	5.3%
	not registered	54	94.7%
	Total	57	100.0%
Veszprém	registered	40	78.4%
	not registered	11	21.6%
	Total	51	100.0%
Freiburg	registered	11	22.0%
	not registered	39	78.0%
	Total	50	100.0%
Mainz	registered	28	50.0%
	not registered	28	50.0%
	Total	56	100.0%
Graz	registered	36	35.6%
	not registered	65	64.4%
	Total	101	100.0%
Total	registered	184	33.7%
	not registered	362	66.3%
	Total	546	100.0%

Chart 5. Record of alcohol or drug consumption

Region	Registration of alcohol or drug consumption	Count	Percentage
Debrecen	not registered	41	68.3%
	alcohol consumption	15	25.0%
	no alcohol consumption	4	6.7%
	Total	60	100.0%
Győr	not registered	45	72.6%
	alcohol consumption	14	22.6%
	no alcohol consumption	3	4.8%
	Total	62	100.0%
Kaposvár	not registered	33	64.7%
	alcohol consumption	6	11.8%
	no alcohol consumption	12	23.5%
	Total	51	100.0%
Pécs	not registered	40	69.0%
	alcohol consumption	9	15.5%
	no alcohol consumption	9	15.5%
	Total	58	100.0%
Szekszárd	not registered	3	5.3%
	alcohol consumption	18	31.6%
	no alcohol consumption	36	63.2%
	Total	57	100.0%
Veszprém	not registered	38	74.5%
	alcohol consumption	10	19.6%
	no alcohol consumption	3	5.9%
	Total	51	100.0%
Freiburg	not registered	40	80.0%
	alcohol consumption	9	18.0%
	no alcohol consumption	0	0.0%
	drug consumption	1	2.0%
	Total	50	100.0%
Mainz	not registered	54	96.4%
	alcohol consumption	2	3.6%
	no alcohol consumption	0	0.0%
	Total	56	100.0%
Graz	not registered	95	94.1%
	alcohol consumption	6	5.9%
	no alcohol consumption	0	0.0%
	Total	101	100.0%
Total	not registered	389	71.2%
	alcohol consumption	89	16.3%
	no alcohol consumption	67	12.3%
	drug consumption	1	0.2%
	Total	546	100.0%

Chart 6. Assessability of MDRIs according to regions

Region	Assessability of forensic files	Count	Percentage
Debrecen	completely	57	95.0%
	partly	3	5.0%
	Total	60	100.0%
Győr	completely	54	87.1%
	partly	8	12.9%
	Total	62	100.0%
Kaposvár	completely	36	70.6%
	partly	15	29.4%
	Total	51	100.0%
Pécs	completely	47	81.0%
	partly	11	19.0%
	Total	58	100.0%
Szekszárd	completely	51	89.5%
	partly	6	10.5%
	Total	57	100.0%
Veszprém	completely	48	94.1%
	partly	3	5.9%
	Total	51	100.0%
Freiburg	completely	40	80.0%
	partly	10	20.0%
	Total	50	100.0%
Mainz	completely	45	80.4%
	partly	11	19.6%
	Total	56	100.0%
Graz	completely	82	81.2%
	partly	19	18.8%
	Total	101	100.0%
Total	completely	460	84.2%
	partly	86	15.8%
	Total	546	100.0%

Chart 7. Synonymous groups of terms in the descriptions (part A) of the Hungarian sub-corpus

Term No. Hungary (A)	Descriptions (A)	Term translation into English (A)	Count	Percentage
1	abrasio	abrasion	48	38.4 %
	horzsolás	grazing	73	58.4 %
	horzsoltság	abrased wound	4	3.2 %
	Total		125	100.0 %
2	beszáradt vér	dried blood	18	100.0 %
	Total		18	100.0 %
3	bevérzés	haematoma	31	19.3 %
	decollement	decollement	1	0.6 %
	elszíneződés	discolouration	17	10.6 %
	haematoma	haematoma	42	26.1 %
	nyúzott sérülés	detachment	2	1.2 %
	suffusio	suffusion	40	24.8 %
	véraláfutás	suffusion	15	9.3 %
	vérbeszűrődés	haematoma	6	3.7 %
	vérömleny	haematoma	7	4.3 %
	Total		161	100.0 %
4	bővérűség	hyperaemia	16	48.5 %
	erythema	erythema	1	3.0 %
	hyperaemia	hyperaemia	15	45.5 %
	vérbőség	hyperaemia	1	3.0 %
	Total		33	100.0 %
5	duzzanat	swelling	179	97.3 %
	oedema	oedema	5	2.7 %
	Total		184	100.0 %
6	égési sérülés	combustion	2	100.0 %
	Total		2	100.0 %
7	pörk	scab	3	75.0 %
	var	scab	1	25.0 %
	Total		4	100.0 %
8	excoriatio	excoriation	14	66.7 %
	karcolás/ karmolás	scratching	7	33.3 %
	Total		21	100.0 %
9	folyt. megszakítás	disruption of the continuity	41	100.0 %
	Total		41	100.0 %
10	hámhiány	epithelial defect	16	100.0 %
	Total		16	100.0 %
11	harapott seb	bite wound	16	100.0 %
	Total		16	100.0 %
12	metszett seb	incised wound	9	100.0 %
	Total		9	100.0 %

13	nyom Total	trace	7 7	100.0 % 100.0 %
14	érzékenység fájdalom nyomásérzékenység Total	tenderness pain tenderness on pressure	13 27 133 173	7.5 % 15.6 % 76.9 % 100.0 %
15	petechia Total	petechial haemorrhage	1 1	100.0 % 100.0 %
16	repedés repszett seb ruptura szakított seb zúzott seb Total	rupture ruptured wound rupture torn wound contused wound	3 72 1 4 33 113	2.7 % 63.7 % 0.9 % 3.5 % 29.2 % 100.0 %
17	seb Total	wound	84 84	100.0 % 100.0 %
18	sérülés Total	injury	39 39	100.0 % 100.0 %
19	szúrt seb Total	stab wound	22 22	100.0 % 100.0 %
20	vágott seb Total	chop wound	9 9	100.0 % 100.0 %
21	vérzés Total	bleeding	7 7	100.0 % 100.0 %
22	beszűkült mozgás Total	restricted mobility	9 9	100.0 % 100.0 %
23	idegen test Total	foreign body	2 2	100.0 % 100.0 %
24	contusio zúzódás Total	contusion bruise	4 20 24	16.7 % 83.3 % 100.0 %
25	luxatio Total	luxation	1 1	100.0 % 100.0 %
26	levegő Total	air	2 2	100.0 % 100.0 %

Chart 8. Synonymous groups of terms in the diagnoses (part B) of the Hungarian sub-corpus

Term No. Hungary (B)	Hungarian Diagnoses (B)	Term translation into English (B)	Count	Percentage
1	horzsolás	abrasion	31	81.6 %
	horzolt seb	abraded wound	7	18.4 %
	Total		38	100.0 %
2	bevérzés	haematoma	15	50.6 %
	haematoma	haematoma	1	3.6 %
	suffusio	suffusion	1	3.6 %
	vérömleny	haematoma	11	39.3 %
	Total		28	100.0 %
3	vérbőség	hyperaemia	1	100.0 %
	Total		1	100.0 %
4	duzzanat	swelling	2	50.0 %
	vizenyő	oedema	2	50.0 %
	Total		4	100.0 %
5	égési sérülés	burn injury	2	100.0 %
	Total		2	100.0 %
6	karcolás	excoriation	2	100.0 %
	Total		2	100.0 %
7	hámhiány	epithelial defect	3	100.0 %
	Total		3	100.0 %
8	harapott seb	bite wound	8	100.0 %
	Total		8	100.0 %
9	metszett seb	incised wound	3	100.0 %
	Total		3	100.0 %
10	repedés	rupture	3	2.3 %
	repszett seb	ruptured wound	30	22.6 %
	szakadás	discission	3	2.3 %
	szakított seb	torn wound	1	0.8 %
	zúzott seb	contused wound	96	72.2 %
	Total		133	100.0 %
11	seb	wound	51	100.0 %
	Total		51	100.0 %
12	sérülés	injury	45	100.0 %
	Total		45	100.0 %
13	szúrt seb	stab wound	15	100.0 %
	Total		15	100.0 %
14	vágott seb	chop wound	13	100.0 %
	Total		13	100.0 %
15	vérzés	bleeding	5	100.0 %
	Total		5	100.0 %
16	idegen test	foreign body	1	100.0 %
	Total		1	100.0 %

17	zúzódás Total	bruise	239 239	100.0 % 100.0 %
18	lőtt seb Total	shot wound	1 1	100.0 % 100.0 %
19	orrvérzés Total	nosebleed	2 2	100.0 % 100.0 %
20	ficam rándulás/ húzódás Total	dislocation sprain	1 12 13	7.7 % 92.3 % 100.0 %
21	lég (mell) Total	air (pneumothorax)	1 1	100.0 % 100.0 %

Chart 9. Synonymous groups of Latin terms in the diagnoses (part B) of the Hungarian sub-corpus

Term No. Hungary (B)	Latin Diagnoses (B)	Term translation into English (B)	Count	Percentage
1	abrasio	abrasion	30	78.9 %
	erosio	erosion	2	5.3 %
	vulnus abrasum	abraded wound	6	15.8 %
	Total		38	100.0 %
2	haematoma	haematoma	14	77.8 %
	suffusio	suffusion	4	22.2 %
	Total		18	100.0 %
3	erythema	erythema	1	100.0 %
	Total		1	100.0 %
4	oedema	oedema	1	100.0 %
	Total		1	100.0 %
5	combustio	combustion	1	100.0 %
	Total		1	100.0 %
6	excoriatio	excoriation	3	100.0 %
	Total		3	100.0 %
7	defectus	defect	1	100.0 %
	Total		1	100.0 %
8	vulnus morsum	bite wound	8	100.0 %
	Total		8	100.0 %
9	vulnus scissum	incised wound	5	100.0 %
	Total		5	100.0 %
10	discissio	discission	2	1.4 %
	Fissura	fissure	1	0.7 %
	ruptura	rupture	4	2.9 %
	vulnus contusum	contused wound	105	76.1 %
	vulnus lacerocontusum	lacerated-contused wound	4	2.9 %
	vulnus lacerum	lacerated ~ / torn wound	4	2.9 %
	vulnus ruptum	ruptured wound	18	13.0 %
	Total		138	100.0 %
11	vulnus	wound	5	100.0 %
	Total		5	100.0 %
12	laesio	lesion	2	100.0 %
	Total		2	100.0 %
13	vulnus punctum	stab wound	21	100.0 %
16	corpus alienum	foreign body	1	100.0 %
	Total		1	100.0 %
17	contusio	contusion	187	100.0 %
	Total		187	100.0 %
18	vulnus sclopetarium	shot wound	1	100.0 %
	Total		1	100.0 %

19	epistaxis	epistaxis	4	100.0 %
	Total		4	100.0 %
20	distorsio	sprain	7	100.0 %
	Total		7	100.0 %
21	emphysema	emphysema	1	100.0 %
	Total		1	100.0 %

Chart 10. Synonymous groups of terms in the expert opinions (part C) of the Hungarian sub-corpus

Term No. Hungary (C)	Expert opinions (C)	Term translation into English (C)	Count	Percentage
1	horzsolás	grazing	106	99.1 %
	horzolt seb	abraded wound	1	0.9 %
	Total		107	100.0 %
2	beszáradt vér	dried blood	4	100.0 %
	Total		4	100.0 %
3	bevézés	haematoma	68	53.5 %
	elszíneződés	discolouration	5	3.9 %
	haematoma	haematoma	2	1.6 %
	vérbeszűrődés	haematoma	41	32.3 %
	vérömleny	haematoma	11	8.7 %
	Total		127	100.0 %
4	bővérűség	hyperaemia	16	100.0 %
	Total		16	100.0 %
5	duzzanat	swelling	49	94.2 %
	vizenyő	oedema	3	5.8 %
	Total		52	100.0 %
6	égési sérülés	burn injury	2	100.0 %
	Total		2	100.0 %
7	pörk	scab	1	100.0 %
	Total		1	100.0 %
8	karcolás	scratching	15	100.0 %
	Total		15	100.0 %
9	folyt.megszakítás	disruption of continuity	9	100.0 %
	Total		9	100.0 %
10	hámhiány	epithelial defect	16	100.0 %
	Total		16	100.0 %
11	harapott seb	bite wound	18	72.0 %
	kiharapás	biting out	2	8.0 %
	ráharapás	biting on	5	20.0 %
	Total		25	100.0 %
12	metszett seb	incised wound	18	100.0 %
	Total		18	100.0 %
13	nyom	trace	1	100.0 %
	Total		1	100.0 %
14	érzékenység	tenderness	5	11.9 %
	fájdalom	pain	1	2.4 %
	nyomásérzékenység	tenderness on pressure	36	85.7 %
	Total		42	100.0 %

15	repedés repszett seb szakadás szakított seb zúzott seb Total	rupture lacerated wound discission lacerated wound contused wound	5 119 3 3 30 160	3.1 % 74.4 % 1.9 % 1.9 % 18.8 % 100.0 %
16	seb Total	wound	28 28	100.0 % 100.0 %
17	sérülés Total	injury	54 54	100.0 % 100.0 %
18	szúrt (szúrva metszett) seb Total	stab (stab-incised) wound	30 30	100.0 % 100.0 %
19	vágott seb Total	chop wound	8 8	100.0 % 100.0 %
20	vérzés Total	bleeding	7 7	100.0 % 100.0 %
21	beszűkült mozgás Total	restricted mobility	1 1	100.0 % 100.0 %
22	zúzódás Total	bruise	239 239	100.0 % 100.0 %
23	lőtt seb Total	shot wound	2 2	100.0 % 100.0 %
24	ficam rándulás rándulás/ húzódás Total	dislocation sprain sprain	2 1 6 9	22.2 % 11.1 % 66.7 % 100.0 %
25	levegő Total	air	1 1	100.0 % 100.0 %
26	tompatrauma Total	blunt trauma	3 3	100.0 % 100.0 %

Chart 11. Synonymous groups of terms in the descriptions (part A) of the Austrian sub-corpus

Term No. Austria (A)	Descriptions (A)	Term translation into English (A)	Count	Percentage
1	Schürfung	abrasion	33	91.7%
	Schürfwunde	abraded wound	3	8.3%
	Total		36	100.0%
2	Ablederung	decollement	1	3.2%
	Bluterguss	haematoma	6	19.4%
	Blutunterlaufung	haematoma	19	61.3%
	Einblutung	haematoma	2	6.5%
	Erguss	haematoma	1	3.2%
	Hämatom	haematoma	1	3.2%
	Verfärbung	discolouration	1	3.2%
Total		31	100.0%	
3	Rötung	redness	4	100.0%
	Total		4	100.0%
4	Ödem	oedema	2	7.7%
	Schwellung	swelling	24	92.3%
	Total		26	100.0%
5	Schorf, Kruste	scab	1	100.0%
	Total		1	100.0%
6	Durchtrennung	disruption	1	100.0%
	Total		1	100.0%
7	Defekt	defect	1	16.7%
	Hautdefekt		5	83.3%
	Total		6	100.0%
8	Bisswunde	bite wound	2	100.0%
	Total		2	100.0%
9	Schnittwunde	incised wound	7	100.0%
	Total		7	100.0%
10	Druckschmerzhaftigkeit	tenderness on pressure	34	40.5%
	Schmerz	pain	50	59.5%
	Total		84	100.0%
11	Platzwunde	burst wound	1	5.0%
	Riss	rupture	5	25.0%
	Riss-Quetschwunde	ruptured-contused wound	14	70.0%
	Total		20	100.0%
12	Wunde	wound	1	100.0%
	Total		1	100.0%
13	Läsion	lesion	3	27.3%
	Verletzung	injury	8	72.7%
	Total		11	100.0%

14	Stichwunde Total	stab wound	7 7	100.0% 100.0%
15	Blutung Total	bleeding	7 7	100.0% 100.0%
16	eingeschränkte Beweglichkeit Total	restricted mobility	8 8	100.0% 100.0%
17	Fremdkörper Total	foreign body	1 1	100.0% 100.0%
18	Prellmarke Prellung Quetschmarke Total	bruise mark bruise bruise mark	5 14 1 20	25.0% 70.0% 5.0% 100.0%
19	Luxation Verspannung Zerrung Total	dislocation strain strain	1 11 4 16	6.3% 68.8% 25.0% 100.0%
20	Luft Total	air	4 4	100.0% 100.0%
21	Trauma Total	trauma	2 2	100.0% 100.0%
22	Beschwerde Total	complaint	3 3	100.0% 100.0%
23	Schonhaltung Total	relieving posture	2 2	100.0% 100.0%
24	Veränderung Total	alteration	2 2	100.0% 100.0%

Chart 12. Synonymous groups of terms in diagnoses (part B) of the Austrian sub-corpus

Term No. Austria (B)	Diagnoses (B)	Term translation into English (B)	Count	Percentage
1	Schürfung	abrasion	22	100.0%
	Total		22	100.0%
2	Bluterguss	haematoma	4	36.4%
	Blutunterlaufung	haematoma	3	27.3%
	Hämatom	haematoma	4	36.4%
	Total		11	100.0%
3	Schwellung	swelling	1	100.0%
	Total		1	100.0%
4	Bisswunde	bite wound	2	100.0%
	Total		2	100.0%
5	Schnittwunde	incised wound	3	100.0%
	Total		3	100.0%
6	Schmerz	pain	6	100.0%
	Total		6	100.0%
7	Riss	rupture	6	42.9%
	Riss-Quetschwunde	ruptured-contused wound	7	50.0%
	Ruptur	rupture	1	7.1%
	Total		14	100.0%
8	Wunde	wound	2	100.0%
	Total		2	100.0%
9	Verletzung	injury	5	100.0%
	Total		5	100.0%
10	Stichwunde	stab wound	4	100.0%
	Total		4	100.0%
11	Blutung	bleeding	4	100.0%
	Total		4	100.0%
12	eingeschränkte Beweglichkeit	restricted mobility	1	100.0%
	Total		1	100.0%
13	Prellmarke	bruise mark	2	2.7%
	Prellung	bruise	71	97.3%
	Total		73	100.0%
14	Verrenkung	dislocation	1	4.0%
	Zerrung	strain	24	96.0%
	Total		25	100.0%
15	Emphysem	emphysema	1	33.3%
	Luftbrust	pneumothorax	2	66.7%
	Total		3	100.0%
16	Trauma	trauma	3	100.0%
	Total		3	100.0%

Chart 13. Synonymous groups of terms in expert opinions (part C) of the Austrian sub-corpus

Term No. Austria (C)	Expert opinions (C)	Term translation into English (C)	Count	Percentage
1	Schürfung	abrasion	36	100.0%
	Total		36	100.0%
2	Ablederung	decollement	1	2.3%
	Bluterguss	haematoma	5	11.4%
	Blutunterlaufung	haematoma	26	59.1%
	Einblutung	haematoma	2	4.5%
	Erguss	haematoma	1	2.3%
	Hämatom	haematoma	1	2.3%
	Unterblutung	haematoma	1	2.3%
	Verfärbung	discolouration	7	15.9%
	Total		44	100.0%
3	Rötung	redness	8	100.0%
	Total		8	100.0%
4	Ödem	oedema	1	5.6%
	Schwellung	swelling	17	94.4%
	Total		18	100.0%
5	Verbrennung	burn	1	100.0%
	Total		1	100.0%
6	Schorf.Kruste	scab	2	100.0%
	Total		2	100.0%
7	Kratzer	scratching	7	87.5%
	Kratzwunde	scratch wound	1	12.5%
	Total		8	100.0%
8	Hautdefekt	skin defect	2	100.0%
	Total		2	100.0%
9	Bisswunde	bite wound	2	100.0%
	Total		2	100.0%
10	Schnittwunde	incised wound	5	100.0%
	Total		5	100.0%
11	Druckschmerzhaftigkeit	tenderness on pressure	4	25.0%
	Schmerz	pain	12	75.0%
	Total		16	100.0%
12	Riss	rupture	10	45.5%
	Riss-Quetschwunde	ruptured-contused wound	11	50.0%
	Ruptur	rupture	1	4.5%
	Total		22	100.0%
13	Verletzung	injury	13	100.0%
	Total		13	100.0%
14	Stichwunde	stab wound	10	100.0%
	Total		10	100.0%

15	Blutung Total	bleeding	4 4	100.0% 100.0%
16	eingeschränkte Beweglichkeit Total	restricted mobility	2 2	100.0% 100.0%
17	Fremdkörper Total	foreign body	1 1	100.0% 100.0%
18	Prellmarke Prellung Quetschmarke Total	bruise mark bruise contusion mark	3 70 1 74	4.1% 94.6% 1.4% 100.0%
19	Verrenkung Verspannung Zerrung Total	dislocation strain strain	1 1 21 23	4.3% 4.3% 91.3% 100.0%
20	Luft Luftbrust Total	air pneumothorax	1 3 4	25.0% 75.0% 100.0%
21	Trauma Total	trauma	1 1	100.0% 100.0%

Chart 14. Synonymous groups of terms in descriptions (part A) of the German sub-corpus

Term No. Germany (A)	Descriptions (A)	Term translation into English (A)	Count	Percentage
1	Schürfung	abrasion	13	76,5%
	Schürfwunde	abraded wound	4	23,5%
	Total		17	100,0%
2	Bluterguss	haematoma	1	1,0%
	Blutunterlaufung	haematoma	1	1,0%
	Decollement	decollement	1	1,0%
	Einblutung	haematoma	3	3,0%
	Hämatom	haematoma	80	80,8%
	Verfärbung	discolouration	13	13,1%
	Total		99	100,0%
3	Rötung	redness	8	100,0%
	Total		8	100,0%
4	Schwellung	swelling	23	100,0%
	Total		23	100,0%
5	Verbrennung/ Verbrühung	burn	6	100,0%
	Total		6	100,0%
6	Schorf/ Kruste	scab	2	100,0%
	Total		2	100,0%
7	Kratzer	scratching	13	100,0%
	Total		13	100,0%
8	Hautdurchtrennung	disruption of continuity	7	100,0%
	Total		7	100,0%
9	Hautdefekt	skin defect	4	100,0%
	Total		4	100,0%
10	Bisswunde	bite wound	4	100,0%
	Total		4	100,0%
11	Schnittwunde	incised wound	25	100,0%
	Total		25	100,0%
12	Spur	trace	5	100,0%
	Total		5	100,0%
13	Druckschmerzhaftigkeit	tenderness on pressure	12	40,0%
	Schmerz	pain	18	60,0%
	Total		30	100,0%
14	Petechie	petechial haemorrhage	14	100,0%
	Total		14	100,0%

15	Platzwunde	burst wound	18	75,0%
	Riss	rupture	1	4,2%
	Riss-Quetschwunde	ruptured-contused wound	2	8,3%
	Risswunde	ruptured wound	3	12,5%
	Total		24	100,0%
16	Wunde	wound	12	100,0%
	Total		12	100,0%
17	Läsion	lesion	1	5,6%
	Verletzung	injury	17	94,4%
	Total		18	100,0%
18	Stichwunde	stab wound	21	100,0%
	Total		21	100,0%
19	Blutung	bleeding	20	100,0%
	Total		20	100,0%
20	eingeschränkte Beweglichkeit	restricted mobility	2	100,0%
	Total		2	100,0%
21	Fremdkörper	foreign body	3	100,0%
	Total		3	100,0%
22	Kontusion	contusion	1	5,0%
	Prellmarke	bruise mark	14	70,0%
	Prellung	bruise	5	25,0%
	Total		20	100,0%
23	Schusswunde	shot wound	4	100,0%
	Total		4	100,0%
24	Epistaxis	epistaxis	1	50,0%
	Nasenbluten	nosebleed	1	50,0%
	Total		2	100,0%
25	Emphysem	emphysema	4	57,1%
	Luft	air	1	14,3%
	Lufteinschuss	air	1	14,3%
	Pneumothorax	pneumothorax	1	14,3%
	Total		7	100,0%
26	Trauma	trauma	3	100,0%
	Total		3	100,0%
27	Beschwerde	complaint	3	100,0%
	Total		3	100,0%
28	Schonhaltung	relieving posture	3	100,0%
	Total		3	100,0%

Chart 15. Synonymous groups of terms in diagnoses (part B) of the German sub-corpus

Term No. Germany (B)	Diagnoses (B)	Term translation into English (B)	Count	Percentage
1	Schürfung	abrasion	2	100,0%
	Total		2	100,0%
2	Decollement	decollement	1	3,7%
	Einblutung	haematoma	2	7,4%
	Hämatom	haematoma	22	81,5%
	Unterblutung	haematoma	2	7,4%
	Total		27	100,0%
3	Schwellung	swelling	2	100,0%
	Total		2	100,0%
4	Verbrennung/ Verbrühung	burn	6	100,0%
	Total		6	100,0%
5	Hautdurchtrennung	disruption of continuity	4	100,0%
	Total		4	100,0%
6	Hautdefekt	skin defect	1	100,0%
	Total		1	100,0%
7	Bisswunde	bite wound	4	100,0%
	Total		4	100,0%
8	Schnittwunde	incised wound	10	100,0%
	Total		10	100,0%
9	Petechie	petechial haemorrhage	1	100,0%
	Total		1	100,0%
10	Fissur	fissure	1	4,5%
	Platzwunde	burst wound	14	63,6%
	Riss	rupture	3	13,6%
	Riss-Quetschwunde	ruptured-contused wound	3	13,6%
	Risswunde	ruptured wound	1	4,5%
	Total		22	100,0%
11	Wunde	wound	1	100,0%
	Total		1	100,0%
12	Läsion	lesion	5	41,7%
	Verletzung	injury	7	58,3%
	Total		12	100,0%
13	Stichwunde	stab wound	20	100,0%
	Total		20	100,0%
14	Blutung	bleeding	19	100,0%
	Total		19	100,0%
15	Fremdkörper	foreign body	5	100,0%
	Total		5	100,0%
16	Contusio	contusion	1	5,6%
	Kontusion	contusion	2	11,1%
	Prellung	bruise	15	83,3%
	Total		18	100,0%

17	Schusswunde	shot wound	3	100,0%
	Total		3	100,0%
18	Distorsion	sprain	1	100,0%
	Total		1	100,0%
19	Emphysem	emphysema	1	100,0%
	Total		1	100,0%
20	Trauma	trauma	6	100,0%
	Total		6	100,0%
21	Explosionsverletzung	blast injury	1	100,0%
	Total		1	100,0%

Chart 16. Synonymous groups of terms in expert opinions (part C) of the German sub-corpus

Term No. Germany (C)	Expert opinions (C)	Term translation into English (C)	Count	Percentage
1	Schürfung Total	abrasion	115 115	100,0% 100,0%
2	angetrocknetes Blut Total	dried blood	2 2	100,0% 100,0%
3	Bluterguss Einblutung Hämatom Unterblutung Verfärbung Total	haematoma haematoma haematoma haematoma discolouration	2 50 68 27 145 292	0,7% 17,1% 23,3% 9,2% 49,7% 100,0%
4	Rötung Total	redness	84 84	100,0% 100,0%
5	Schwellung Verdickung Total	swelling thickening	62 2 64	96,9% 3,1% 100,0%
6	Verbrennung/ Verbrühung Total	burn	3 3	100,0% 100,0%
7	Schorf/ Kruste Total	scab	66 66	100,0% 100,0%
8	Kratzer Total	scratching	49 49	100,0% 100,0%
9	Hautdurchtrennung Total	disruption of continuity	84 84	100,0% 100,0%
10	Hautdefekt Total	skin defect	48 48	100,0% 100,0%
11	Bisswunde Total	bite wound	1 1	100,0% 100,0%
12	Schnittwunde Total	incised wound	18 18	100,0% 100,0%
13	Spur Total	trace	4 4	100,0% 100,0%
14	Druckschmerzhaftigkeit Schmerz Total	tenderness on pressure pain	11 3 14	78,6% 21,4% 100,0%
15	Petechie Total	petechial haemorrhage	3 3	100,0% 100,0%
16	Riss Riss-Quetschwunde Risswunde Total	rupture ruptured-contused wound ruptured wound	1 5 11 17	5,9% 29,4% 64,7% 100,0%

17	Wunde Total	wound	21 21	100,0% 100,0%
18	Läsion Verletzung Total	laesion	29 41 70	41,4% 58,6% 100,0%
19	Stichwunde Total	stab wound	7 7	100,0% 100,0%
20	Blutung Total	bleeding	35 35	100,0% 100,0%
21	eingeschränkte Beweglichkeit Total	restricted mobility	2 2	100,0% 100,0%
22	Fremdkörper Total	foreign body	5 5	100,0% 100,0%
23	Prellmarke Total	bruise mark	4 4	100,0% 100,0%
24	Emphysem Luft Total	emphysema air	1 2 3	33,3% 66,7% 100,0%
25	Beschwerde Total	complaint	2 2	100,0% 100,0%
26	Naht Total	suture	2 2	100,0% 100,0%

Chart 17. Synonymous groups of terms in descriptions (part A) of the sub-corpus of Freiburg (Germany)

Term No. Freiburg (A)	Descriptions (A)	Term translation into English (A)	Count	Percentage
1	Schürfung	abrasion	10	83,3%
	Schürfwunde	abraded wound	2	16,7%
	Total		12	100,0%
2	Bluterguss	haematoma	1	4,3%
	Blutunterlaufung	haematoma	1	4,3%
	Hämatom	haematoma	21	91,3%
	Total		23	100,0%
3	Rötung	redness	1	100,0%
	Total		1	100,0%
4	Schwellung	swelling	9	100,0%
	Total		9	100,0%
5	Verbrühung/ Verbrennung	burn	1	100,0%
	Total		1	100,0%
6	Kratzer	scratching	5	100,0%
	Total		5	100,0%
7	Hautdurchtrennung	disruption of continuity	7	100,0%
	Total		7	100,0%
8	Hautdefekt	skin defect	1	100,0%
	Total		1	100,0%
9	Bisswunde	bite wound	1	100,0%
	Total		1	100,0%
10	Schnittwunde	incised wound	20	100,0%
	Total		20	100,0%
11	Spur	trace	5	100,0%
	Total		5	100,0%
12	Druckschmerzhaftigkeit	tenderness on pressure	10	58,8%
	Schmerz	pain	7	41,2%
	Total		17	100,0%
13	Platzwunde	burst wound	10	66,7%
	Riss	rupture	1	6,7%
	Riss-Quetschwunde	ruptured-contused wound	2	13,3%
	Risswunde	ruptured wound	2	13,3%
	Total		15	100,0%
14	Wunde	wound	7	100,0%
	Total		7	100,0%
15	Läsion	lesion	1	9,1%
	Verletzung	injury	10	90,9%
	Total		11	100,0%
16	Stichwunde	stab wound	10	100,0%
	Total		10	100,0%

17	Blutung Total	bleeding	14 14	100,0% 100,0%
18	eingeschränkte Beweglichkeit Total	restricted mobility	1 1	100,0% 100,0%
19	Fremdkörper Total	foreign body	2 2	100,0% 100,0%
20	Kontusion Prellmarke Prellung Total	contusion bruise mark bruise	1 11 4 16	6,3% 68,8% 25,0% 100,0%
21	Schusswunde Total	shot wound	1 1	100,0% 100,0%
22	Epistaxis Total	nosebleed	1 1	100,0% 100,0%
23	Emphysem Lufteinschluss Total	Emphysema Air inclusion	1 1 2	50,0% 50,0% 100,0%
24	Trauma Total	trauma	3 3	100,0% 100,0%
25	Beschwerde Total	complaint	2 2	100,0% 100,0%

Chart 18. Synonymous groups of terms in descriptions (part A) of the sub-corpus of Mainz (Germany)

Term No. Mainz (A)	Descriptions (A)	Term translation into English (A)	Count	Percentage
1	Schürfung	abrasion	1	33,3%
	Schürfwunde	abraded wound	2	66,7%
	Total		3	100,0%
2	Decollement	decollement	1	1,3%
	Einblutung	haematoma	3	3,9%
	Hämatom	haematoma	59	77,6%
	Verfärbung	discolouration	13	17,1%
	Total		76	100,0%
3	Rötung	redness	7	100,0%
	Total		7	100,0%
4	Schwellung	swelling	14	100,0%
	Total		14	100,0%
5	Verbrennung/ Verbrühung	burn	5	100,0%
	Total		5	100,0%
6	Schorf/ Kruste	scab	2	100,0%
	Total		2	100,0%
7	Kratzer	scratching	8	100,0%
	Total		8	100,0%
8	Hautdefekt	skin defect	3	100,0%
	Total		3	100,0%
9	Bisswunde	bite wound	3	100,0%
	Total		3	100,0%
10	Schnittwunde	incised wound	5	100,0%
	Total		5	100,0%
11	Druckschmerzhaftigkeit	tenderness on pressure	2	15,4%
	Schmerz	pain	11	84,6%
	Total		13	100,0%
12	Petechie	petechial haemorrhage	14	100,0%
	Total		14	100,0%
13	Platzwunde	burst wound	8	88,9%
	Risswunde	ruptured wound	1	11,1%
	Total		9	100,0%
14	Wunde	wound	5	100,0%
	Total		5	100,0%
15	Verletzung	injury	7	100,0%
	Total		7	100,0%
16	Stichwunde	stab wound	11	100,0%
	Total		11	100,0%

17	Blutung Total	bleeding	6 6	100,0% 100,0%
18	eingeschränkte Beweglichkeit Total	restricted mobility	1 1	100,0% 100,0%
19	Fremdkörper Total	foreign body	1 1	100,0% 100,0%
20	Prellmarke Prellung Total	bruise mark bruise	3 1 4	75,0% 25,0% 100,0%
21	Schusswunde Total	shot wound	3 3	100,0% 100,0%
22	Nasenbluten Total	nosebleed	1 1	100,0% 100,0%
23	Emphysem Luft pneumothorax Total	emphysema air pneumothorax	3 1 1 5	60,0% 20,0% 20,0% 100,0%
24	Beschwerde Total	complaint	1 1	100,0% 100,0%
25	Schonhaltung Total	relieving posture	3 3	100,0% 100,0%

Chart 19. Terms of the synonymous group ‘tenderness on pressure’ in the descriptions (A), their related diagnoses (B) and the same injuries in the expert opinions (C) in Hungary

Descriptions Hungary (A)	Count
tenderness	10
tenderness, swelling	3
pain	13
pain, restricted mobility	2
pain, haematoma	2
pain, swelling	5
pain, injury	1
tenderness on pressure	67
tenderness on pressure, abrasion	2
tenderness on pressure	1
tenderness on pressure, redness	1
tenderness on pressure, swelling	41
tenderness on pressure , discolouration	3
tenderness on pressure, excoriation	1
tenderness on pressure, pain	4
tenderness on pressure, haematoma	1
tenderness on pressure, epithelial defect	1
tenderness on pressure, grazing	1
tenderness on pressure, hyperaemia	1
tenderness on pressure , suffusion	9
Total	169

Diagnoses Hungary (B)	Count
no entry	59
grazing	3
sprain, strain	4
wound	1
injury	4
suffusion	1
rupture	2
fracture	21
haematoma	1
bruise	70
lacerated wound	3
Total	169

Expert opinions Hungary (C)	Count
no entry	40
redness	1
swelling	9
swelling, fracture	2
tenderness	5
epithelial defect	1
grazing	4
tenderness on pressure	16
tenderness on pressure / restricted mobility	1
tenderness on pressure, swelling	10
tenderness on pressure, discolouration	2
tenderness on pressure, fracture	1
sprain, strain	3
injury	1
rupture	2
fracture	14
fracture, fracture	1
haematoma	5
haematoma, fracture	1
bruise	40
bruise, haematoma	3
bruise, grazing	2
bruise, sprain	1
bruise, injury	1
bruise, fracture	2
bruise, haematoma	1
Total	169

Chart 20. Terms of the synonymous group ‘tenderness on pressure’ in the descriptions (A), their related diagnoses (B) and the same injuries in the expert opinions (C) in Austria

Descriptions Austria (A)	Count
tenderness on pressure	31
tenderness on pressure, haematoma	1
tenderness on pressure, swelling	2
pain	44
pain, restricted mobility	1
pain, relieving posture	1
pain, swelling	1
pain, vertigo	1
pain, strain	2
Total	84

Diagnoses Austria (B)	Count
no entry	58
fracture	1
bruise mark	1
bruise	11
rupture	1
pain	4
sprain	8
Total	84

Expert opinions Austria (C)	Count
no entry	60
haematoma, tenderness on pressure	1
fracture	2
bruise mark	1
bruise	7
bruise, pain	1
bruise, sprain	2
rupture	1
pain	3
sprain	6
Total	84

Chart 21. Terms of the synonymous group ‘tenderness on pressure’ in the descriptions (A), their related diagnoses (B) and the same injuries in the expert opinions (C) in Germany

Descriptions Germany (A)	Count
tenderness on pressure	8
tenderness on pressure, deformation	1
tenderness on pressure, restricted mobility	1
tenderness on pressure, bruise mark	1
tenderness on pressure, swelling	1
pain	14
pain, complaint	1
pain, restricted mobility	1
pain, missing part	1
pain, haematoma	1
Total	30

Diagnoses Germany (B)	Count
no entry	22
distorsion	1
concussion	1
fracture	3
bruise	3
Total	30

Expert opinions Germany (C)	Count
no entry	25
complaint	1
haematoma, skin defect	1
fracture	1
skin defect	1
redness, tenderness on pressure	1
Total	30

Chart 22. Terms of the synonymous group ‘bruise’ in the descriptions (A), their related diagnoses (B) and the same injuries in the expert opinions (C) in Hungary

Description Hungary (A)	Count
contusion	4
bruise	12
bruise, swelling	1
bruise, haematoma	3
bruise, hyperaemia	1
bruise, trace	1
bruise, oedema	1
bruise, wound	1
Total	24

Diagnoses Hungary (B)	Count
no entry	8
injury	1
fracture	1
bruise	10
contused wound	4
Total	24

Expert opinions Hungary (C)	Count
no entry	3
bruise	13
bruise, oedema	1
bruise, fracture	1
bruise, haematoma	5
contused wound, ruptured wound	1
Total	24

Chart 23. Terms of the synonymous group ‘bruise’ in the descriptions (A), their related diagnoses (B) and the same injuries in the expert opinions (C) in Austria

Descriptions Austria (A)	Count
bruise mark	2
bruise mark , haematoma	1
bruise mark, grazing	1
bruise mark, swelling	1
bruise	10
bruise mark, haematoma	1
bruise mark, deformed	1
bruise mark, haematoma	1
bruise mark , grazing	1
contusion mark	1
Total	20

Diagnoses Austria (B)	Count
no entry	8
fracture	1
bruise	11
Total	20

Expert opinions Austria (C)	Count
no entry	3
haematoma	1
bruise mark, bruise	1
bruise	11
bruise, haematoma	1
bruise, grazing	2
contusion mark	1
Total	20

Chart 24. Terms of the synonymous group ‘bruise’ in the descriptions (A), their related diagnoses (B) and the same injuries in the expert opinions (C) in Germany

Descriptions Germany (A)	Count
tenderness on pressure, bruise mark	1
bruise mark	8
bruise mark , haematoma	3
bruise mark, grazing	2
bruise	2
bruise, haematoma	1
bruise, contusion	1
bruise, trace	1
Total	19

Diagnoses Germany (B)	Count
no entry	14
bruise	5
Total	19

Expert opinions Germany (C)	Count
no entry	9
bleeding, haematoma	1
tenderness on pressure	1
haematoma, grazing	1
bruise mark	1
bruise mark, fracture	1
grazing	2
swelling	1
haematoma	1
discolouration	1
Total	19

Chart 25. Terms of the synonymous group ‘lacerated wound’ in the descriptions (A), their related diagnoses (B) and the same injuries in the expert opinions (C) in Hungary

Descriptions Hungary (A)	Count
rupture	3
ruptured wound	68
ruptured wound, swelling	4
ruptura	1
lacerated wound	3
lacerated wound, bite wound	1
contused wound	27
contused wound, abrasion	1
contused wound, swelling	3
contused wound, chop wound	1
contused wound, bleeding	1
Total	113

Diagnoses Hungary (B)	Count
no entry	34
bite wound	2
rupture	1
ruptured wound	25
wound	12
injury	3
fracture	4
bruise	4
contused wound	28
Total	113

Expert opinions Hungary (C)	Count
no entry	6
disruption of continuity	1
bite wound	2
scar	1
grazing	1
rupture	2
ruptured wound	63
ruptured wound, swelling	2
ruptured wound, bruise	4
injury	1
lacerated wound	1
blunt trauma	1
fracture	3
haematoma	1
bruise	10
bruise, bruise	1
contused wound	12
contused wound, swelling	1
Total	113

Chart 26. Terms of the synonymous group ‘lacerated wound’ in the descriptions (A), their related diagnoses (B) and the same injuries in the expert opinions (C) in Austria

Descriptions Austria (A)	Count
ruptured wound	1
rupture	4
rupture strain	1
ruptured-contused wound	12
ruptured-contused wound, decollement	1
ruptured-contused wound, swelling	1
Total	23

Diagnoses Austria (B)	Count
no entry	14
haematoma	1
rupture	2
ruptured-contused wound	5
wound	1
Total	23

Expert opinions Austria (C)	Count
no entry	5
haematoma, swelling	1
deformed	1
bruise, ruptured-contused wound	1
bruise, grazing	1
rupture	3
ruptured-contused wound	8
ruptured-contused wound, decollement	1
swelling, injury	1
injury	1
Total	23

Chart 27. Terms of the synonymous group ‘lacerated wound’ in the descriptions (A), their related diagnoses (B) and the same injuries in the expert opinions (C) in Germany

Descriptions Germany (A)	Count
burst wound	16
burst wound, bleeding	1
burst wound, scar	1
rupture	1
ruptured-contused wound	2
ruptured wound	2
ruptured wound, stab wound	1
Total	24

Diagnoses Germany (B)	Count
no entry	8
fracture	3
burst wound	9
ruptured-contused wound	3
ruptured wound	1
Total	24

Expert opinions Germany (C)	Count
no entry	17
fracture	1
ruptured-contused wound	2
ruptured wound	2
redness, lesion	1
grazing, swelling	1
Total	24

Chart 28. Registration of characteristics of soft tissue injuries in the Hungarian, Austrian and German sub- corpora

Country	Margins	Side-walls	Edges	Tissue bridges	Base	Direction	Surroundings	Size	Depth	Colour/age	Shape	Total	Number of described injuries	Average number of characteristics in one injury
Hungary	63	37		1	1	62	5	522	163	56	62	972	1119	0,87
Germany	5		1		7	10		109	21	44	24	221	399	0,55
Austria	1				4	1		42	22	7	9	86	303	0,28
Total	69	37	1	1	12	73	5	673	206	107	95	1279	1821	

Chart 29. Registration of characteristics of soft tissue injuries according to regions in the Hungarian, Austrian and German sub-corpora

Region	Margins	Side-walls	Edges	Tissue bridges	Base	Direction	Surroundings	Size	Depth	Colour/age	Shape	Total	Number of described injuries	Average number of characteristics in one injury
Debrecen	40	36				10		101	18	3	5	213	166	1,28
Győr	3					4	1	64	27	9	6	114	155	0,74
Kaposvár	5					16		69	33	2	9	134	156	0,86
Pécs	5					10	3	115	28	19	17	197	273	0,72
Szekszárd	6	1		1	1	12	1	87	33	17	16	175	193	0,91
Veszprém	4					10		86	24	6	9	139	176	0,79
Freiburg	3				6	6		51	15	7	6	94	187	0,50
Mainz	2		1		1	4		58	6	37	18	127	212	0,60
Graz	1				4	1		42	22	7	9	86	303	0,28
Total	69	37	1	1	12	73	5	673	206	107	95	1279	1821	

Chart 30. Registration of the side aspect of injuries in the Hungarian sub-corpus

Head injuries Hungary	Percentage
no correlation	2,6%
A = B	3,8%
B = C	8,3%
A = C	51,7%
A = B = C	18,9%
not recorded	14,7%
Total	100,0%
Neck injuries Hungary	Percentage
no correlation	3,4%
A = B	0,0%
B = C	13,8%
A = C	58,6%
A = B = C	6,9%
not recorded	17,2%
Total	100,0%
Upper extremities Hungary	Percentage
no correlation	2,6%
A = B	6,9%
B = C	7,8%
A = C	32,8%
A = B = C	47,4%
not recorded	2,6%
Total	100,0%
Lower extremities Hungary	Percentage
no correlation	0,0%
A = B	8,2%
B = C	9,6%
A = C	27,4%
A = B = C	54,8%
not recorded	0,0%
Total	100,0%
Trunk Hungary	Percentage
no correlation	4,1%
A = B	8,2%
B = C	13,7%
A = C	43,8%
A = B = C	20,5 %
not recorded	9,6 %
Total	100 %

Chart 31. Extract from the concordances of the word ‘left’ in the descriptions (A) of the Hungarian sub-corpus

N	Concordance	Set	Tag	Word #	Sent. #	Sent. Pos.	Para. #	Para. Pos.
1	l, bal humerus, bal IV-V. ujj, baltérd nyomásérzékeny. 224.					6,078	577	77%
2	italisan a középvonaltól kissé balra haránt irányú 2,5 cm-es					5,072	492	38%
3	n nyom.érz., fájdalom. 11.a.1. Baloldalt jelzett arduzzanat					264	36	6%
4	ban szukíti. A hajas fejborön, baloldalt temporo-parietalisa					752	88	38%
5	e vérzés szivárog, ornyergen, baloldalon apró abrasio, 2. b					1,753	196	59%
6	2 mm-es seb. Mandibulae felett baloldalon kissé nyom. érz. A					1,085	123	
7	106.a. Hajas fejbor területén baloldalon a temporalis regio					3,254	326	22%
8	gynyi excor. 11., 11.a. Állon, baloldalon, ajak alatt 0.5 cm					251	34	33%
9	an beszáradt vér 3. alsó ajkán baloldalon apró suturát nem i					2,628	271	76%
10	epesztett sebzés. Steri-strip. Baloldalon occipitalisan elle					3,526	347	18%

Chart 32a) Extract from the concordances of the word ‘left’ in the diagnoses (B) of the Hungarian sub-corpus

N	Concordance	Set	Tag	Word #	Sent. #	Sent. Pos.	Para. #	Para. Pos.
1	zúzódása. Sub. conj. o.s. – A baloldali szem kötohártájána					1,082	208	4
2	-periet. sin. – A hajas fejbor baloldalának zúzott sebe. 31.					618	120	60%
3	. cont. par. cap. l.s. – A fej baloldalának zúzott sérülése;					1,964	349	56%
4	s, kard vagy tor által okozott baleset 220. 220.b. A felkar					3,679	613	85%
5	6.b. Cont. par. thor. l.s.. – Bal oldali mellkasfal zúzódás					71	14	50%
6	a. Cont. reg. auric. l.s.. – A bal oldali fültájék zúzódása.					81	16	44%
7	. Cont. et suff. gen. l.s. – A bal térd zúzódása és bevézés					158	29	40%
8	sebe. Abrasio cubiti l.s. – A bal könyök hámhorszolása. Con					263	50	
9	et reg. occipit.. – A homlok, bal felső szemhéj és a fej zú					299	58	38%
10	rific.. – A jobb combtájék és a bal lábszár felületes harapot					346	66	57%

Chart 32b) Extract from the concordances of the word ‘left’ in the Latin Diagnoses (B) of the Hungarian sub-corpus

N	Concordance	Set	Tag	Word #	Sent. #	Sent. Pos.	Para. #	Para. Pos
.								
1	sebe 6., 6.b. Cont. par. thor. l.s. – Bal oldali mellkasfal					69	13	
2	al zúzódása. Cont. reg. auric. l.s. – A bal oldali fültájék					78	15	
3	a. 7., 7.b. Vuln. lacerum ped. l.s. Laesio tend. ext. dig.					90	17	
4	sio tend. ext. dig. IV-V. ped. l.s. 8., 8.b. Contusio facie					97	19	67%
5	zott sebe. Cont. et suff. gen. l.s. – A bal térd zúzódása és					155	28	
6	Inus sclopetarium reg. mandib. l.s. – A bo-i alsó állkapocs-					193	36	
7	ak zúzott sebe. Abrasio cubiti l.s. – A bal könyök hámhorzso					260	49	
8	állapot. Frontis et supercilii l.s. et reg. occipit. – A ho					292	57	63%
9	mors. reg. fem. l.d. et cruris l.s. superfic. – A jobb comb					338	65	90%
10	In. rupt. capitis reg. pariet. l.s. Rupt. membrana tympani					435	84	

Chart 33. Extract from the concordances of the word ‘left’ in the expert opinions (C) of the Hungarian sub-corpus

N	Concordance	Set	Tag	Word #	Sent. #	Sent. Pos.	Para. #	Para. Pos
1	vedte el. 20., 20.c. A fejteto bal oldalának repesztett sebz					366	22	
2	dalának repesztett sebzését, a bal fülkagyló zúzódását, a ba					371	22	
3	, a bal fülkagyló zúzódását, a bal dobhártya repedését, a ba					375	22	50%
4	, a bal dobhártya repedését, a bal lapockatáj zúzódását és b					379	22	65%
5	nvedte el. 21., 21.c. A homlok bal oldalának zúzódását és há					391	23	11%
6	endbeli bevérzését, valamint a bal emlobimbó-udvar terület b					449	26	75%
7	akadást szenvedett. 2., 2.c. A bal váll szúrt sérülését szen					17	2	30%
8	dte el 3., 3.c. A hajjas fejbör bal oldalának felszínes repes					28	3	38%
9	bzését szenvedte el 5., 5.c. A bal lábhat zúzódását, a fejte					46	5	17%
10	repesztett sebzését, a homlok bal oldalának hámkarcolásait					55	5	67%

Chart 34. Extract from the concordances of the word 'left' in the descriptions (A) of the Austrian sub-corpus

N	Concordance	Set	Tag	Word #	Sent. #	Sent. Pos.	Para. #	Para. Pos
1	ng unter die weichen Hirnhäute linksseitig im Scheitelbereic					813	54	87%
2	erungsschmerz, C6/C7 links mit Linksrotations-, Kyphosierung						346	26
3	-, Kyphosierungsschmerz, C6/C7 links mit Linksrotations-, Ky						344	
4	hten Thoraxkompressionsschmerz links. Hier war auch im Berei						7,188	500
5	indellungsbruch am Hinterhaupt links neben der Mittellinie v					33	3	48%
6	, Kyphosierungsschmerz und CT1 links mit Inspirationsschme						350	26
7	s linken Unterschenkeldrittels links eine blutergußbedingte					4,457	287	43%
8	ch eine Kopfgelenksblockierung links, IP's auf C2/C3 rechts					335	26	28%
9	rmögen der HWS war rechts 30°, links 45° eingeschränkt. Das						318	24
10	ne Scheidewandverkrümmung nach links. Eine Nasenatmungsbehin						7,410	523

Chart 35. Extract from the concordances of the word 'left' in the diagnoses (B) of the Austrian sub-corpus

N	Concordance	Set	Tag	Word #	Sent. #	Sent. Pos.	Para. #	Para. Pos
.								
1	e ist eine Unterkieferprellung links, nicht frisch, angegebe					1,878	128	75%
2	einen Bruch der IV.-IX. Rippe links 51.B: 52.B: 53.B: deu					1,252	74	75%
3	ündung des äußeren Gehörganges links angegeben. 27.B: > Kein						690	41
4	n und äußeren Schienbeinkopfes links angegeben. 8.B: Als Dia						69	7
5	ch der äußeren Augenhöhlenwand links angegeben. 10.B: Als Di						144	10
6	ine traumatische Ohramputation links und ein Spontanpneumoth						879	49
7	ingerenkte) Schulterverrenkung links angegeben. 3.B: Als Dia						10	
8	h der Wange und am Unterkiefer links; massives Geräusch beim						1,266	77
9	atischen Trommelfellverletzung links. b) zweiter Arzt: Die D					800	48	32%
10	inen Bruch des kleinen Fingers links, eine Beckenprellung, w					1,319	81	58%

Chart 36. Extract from the concordances of the word 'left' in the expert opinions (C) of the Austrian sub-corpus

N	Concordance	Set	Tag	Word #	Sent. #	Sent. Pos.	Para. #	Para. Pos
1	Ein weiteres Hämatom am Bauch linksseitig, knapp oberhalb d						13,298	695
2	hehen im Bereiche der 7. Rippe links bestätigt werden. Die b					11,189	571	60%
3	chiebung des Nasenrückens nach links. Die Verletzung wurde a						11,356	583
4	reibung „die Schnittverletzung links thorakal bis zu 2/3 Fin					10,292	518	21%
5	chehen im Bereich der 7. Rippe links mit geringgradiger Knic					11,075	564	38%
6	alb des Nabels mit Verlauf von links oben nach rechts unten					7,620	376	85%
7	inen Bruch des kleinen Fingers links, eine Prellung des Beck					6,984	343	67%
8	reibung „die Schnittverletzung links thorakal bis zu 2/3 Fin					9,675	484	21%
9	treifenförmige Hautrötung nach links hinten unten. Die Verle					10,895	550	8
10	einen minimalen Gelenkserguss links. Bei der MR-Untersuchung						14,694	778

Chart 37. Extract from the concordances of the word 'left' in the descriptions (A) of the German sub-corpus

N	Concordance	Set	Tag	Word #	Sent. #	Sent. Pos.	Para. #	Para. Pos
1	erlid. 39.A: Mehrere Einstiche linksthorakal (6-7), abgeschw					1,345	101	63%
2	ion links, Beckenstauchschmerz links. Multiple Schürfwunden u						282	21
3	n am Oberschenkel streckseitig links - 2 cm durchmessende gr						3,422	257
4	eine Platzwunde der Augenbraue links. Am Thorax rechts ventr						388	28
5	oben. Dorsal über der Schulter links zeigte sich eine kleine					454	34	33% 0
6	as Kind zeigte ein Schonhinken links ohne klinische Zeichen					3,733	285	58%
7	end, ebenfalls am Oberschenkel links kleines Hämatom und Häm						3,715	283
8	bds streifenfrörmige Hämatome, links bis zur Brustwarze zieh						3,707	283 32%
9	hen, Abduktion des Bulbus nach links nicht ganz möglich. Z.n						1,001	73
10	. 47.A: Schwellung periorbital links, ein diskretes Hämatom					1,573	117	12%

Chart 38. Extract from the concordances of the word ‘left’ in the diagnoses (B) of the German sub-corpus

N	Concordance	Set	Tag	Word #	Sent. #	Sent. Pos.	Para. #	Para. Pos
1	Interkostalraum. Pneumothorax links. Subkutane Einblutung.						436	42
2	nfraktur links, Monokelhämatom links, V.a. SAB. 27.B: trauma						489	48
3	raktur - Felsenbeinquerfraktur links mit Blutung aus dem li					465	45	79%
4	undebrisse. 24.B: - SHT mit EDH links - Contre coup rechts fr					449	45	24%
5	lis), Schnittverletzung Rücken links, Brustkorb rechts. 20.					371	35	91%
6	: Tiefe Schnittverletzung Hals links mit Durchtrennung der g					356	35	26%
7	rbitaboden-und Jochbeinfraktur links, Monokelhämatom links,						487	48
8	im Bereich des Collum scapulae links - Ältere Rippenfrakture					225	19	71%
9	rechts frontal und ausgeprägt links frontal und parietal mi					750	86	48%
10	n 5. ICR links 2. Pneumothorax links. 3. Massives Weichteile					1,211	153	

Chart 39. Extract from the concordances of the word ‘left’ in the expert opinions (C) of the German sub-corpus

N	Concordance	Set	Tag	Word #	Sent. #	Sent. Pos.	Para. #	Para. Pos
1	des Brustbeins beginnt und mit Linksumschneidung des Nabels						7,313	392
2	nt eine massive Schwellung des linksseitigen Handrückens m					12,598	647	33%
3	nblutungen. Knapp oberhalb des linksseitigen Anteils der Hal					12,223	627	21%
4	rfärbung - In der Nackenregion linksseitig, in der behaarten					15,856	796	44%
5	n der Halshaut, insbesondere linksseitig, mit Übergang auf					13,290	688	72%
6	etzung des linken Nasenflügels linksseitig an der Oberlippe					6,044	318	19%
7	sende, reizlose, ältere Narbe. Linksseitig auf Höhe des Schu					3,516	179	17%
8	e stumpfer erscheinend als der linksseitig gelegene. Am inne	3,428				175		93%
9	igen Krustenbildung. Am Nacken linksseitig, eine diskrete, d					17,226	860	33%
10	lich tingierte Flüssigkeit ab. Linksseitig von der Ohrmusche					5,075	267	11%

Chart 40. Extract from the concordances of the word ‘sérülés’ (=‘injury’) in the descriptions (A) of the Hungarian sub-corpus

N	Concordance	Set	Tag	Word #	Sent. #	Sent. Pos.	Para. #	Para. Pos
1	es zúzódás, duzzanat, áthatoló borsérülés nincs 167., 167.a.					4,499	443	7
2	egy felületes, kb. 2-3 mm mély borsérülés 208. 208.a. A fels					5,664	540	87
3	szolható. Izom-, ideg-, ín- és érsérülés nincs. 271., 271.a.					8,178	763	67%
4	lna felett 1cm-es zúzott szélú hámsérülés, melyben kis csont					8,857	831	71%
5	obb felkar külső oldalán varas hámsérülés látható. 12. A hát					2,307	242	90%
6	kéz I ujj végpercén felületes hámsérülés és duzzanat. A bal					3,087	310	82%
7	b 1,5 cm-es felszínes, vonalas hámsérülés. 311., 311.a. Bal					9,828	936	83%
8	A tarkótájékon gyermektenyéren hámsérülés. 183., 183.a. * A					4,867	478	75%
9	ájdalmas, rajta több felületes hámsérülés. Orra duzzadt, fáj					10,063	953	
10	áfutás. 7. A jobb fülén 2mm-es hámsérülés látható. 8. A feje					2,250	238	88%

Chart 41. Extract from the concordances of the word ‘sérülés’ (=‘injury’) in the expert opinions (C) of the Hungarian sub-corpus

N	Concordance	Set	Tag	Word #	Sent. #	Sent. Pos.	Para. #	Para. Pos
1	6., 116.c. A homlok repesztett borsérülését szenvedte el. 11					2,941	136	56%
2	ását és felületes, horzsolásos borsérülését szenvedte el. 27					8,205	233	11%
3	jó-, vegetatívuma stabil volt, gerincsérülésének ellátása cél					9,621	275	47%
4	kéz I. ujj végpercén felületes hámsérülés és duzzanat kialak					2,544	117	73%
5	tlelet hiányos leírása miatt e hámsérülés jellege nem eldönt					8,115	230	
6	rcolt sérülései, a jobb felkar hámsérülése körül sárgás bor					1,790	88	45%
7	ét, az orr hámsérülését az áll hámsérülése és mindkét oldalo					1,387	76	44%
8	nak hámszúzódását, a hát kisebb hámsérüléseit, a jobb térd kü					2,570	118	50%
9	vérzését, a hát karmolás szerű hámsérüléseit szenvedte el. 9					2,242	107	95%
10	bb alszáron 5-10 cm hosszúságú hámsérülések és a jobb tenyér						8,693	237

Chart 42. Extract from the concordances of the word ‘Verletzung’ (*injury*) in the descriptions (A) of the Austrian sub-corpus

N	Concordance	Set	Tag	Word #	Sent. #	Sent. Pos.	Para. #	Para. Pos
.								
1	le, dazu wurde in Klammer eine Brillenverletzung angemerkt.						5,533	356
2	Hinweis auf das Vorliegen von Gelenksverletzungen ergab sic						2,222	147
3	trauma“ und eine unverschobene Gesichtsschädelverletzung. Di						3,405	225
4	eren Hinweise auf eine frische Knochenverletzung, insbesonde						4,349	279
5	erungen der HWS, keine frische Knochenverletzung (zusätzlich						4,444	286
6	ererkrankung. Kein Hinweis auf Knochenverletzung. 48.A: Die						4,473	288
7	unauffällig, kein Hinweis auf Knochenverletzung, 59.A: Entl					4,824	310	94%
8	icheren Zeichen einer frischen Knochenverletzung, allerdings					4,876	315	43%
9	auf eine frische traumatische Knochenverletzung. 12.A: Das					1,180	81	
10	waren keine sicheren frischen Knochenverletzungen ersichtli					1,155	79	88%

Chart 43. Extract from the concordances of the word ‘Verletzung’ (*injury*) in the expert opinions (C) of the Austrian sub-corpus

N	Concordance	Set	Tag	Word #	Sent. #	Sent. Pos.	Para. #	Para. Pos
1	cher Sicht am ehesten als eine Abstützverletzung im Zuge ein					14,339	757	74%
2	es um eine Sturz- bzw. um eine Abstützverletzung gehandelt h						14,446	762
3	n nach nicht zwingend für eine Abwehrverletzung. 68.C: xy ,					7,728	381	
4	lutunterlaufungen als typische Abwehrverletzungen aufgetrete						14,366	758
5	Mitte hin und mündet in einer Ausstichverletzung. Im Verlau					4,043	201	
6	a auch hier keine wesentlichen Begleitverletzungen vorhanden						14,398	760
7	e noch erkennbar sein. Weitere Begleitverletzungen an den da						6,272	304 14%
8	chenkel wurde als punktförmige Bissverletzung beschrieben, a						5,162	253
9	h der beiden Unterarm um tiefe Bissverletzungen, die bis in					5,146	252	72%
10	g nicht erklären können. 38.C: Bissverletzungen im Bereich b					5,118	251	21%

Chart 44. Extract from the concordances of the word ‘Verletzung’ (*injury*) in the descriptions (A) of the German sub-corpus

N	Concordance	Set	Tag	Word #	Sent. #	Sent. Pos.	Para. #	Para. Pos
1	dorsal. Kein Hinweis für eine Abdominalverletzung, keine Ko						4,128	316
2	n Handrücken bds. Im Sinne von Abwehrverletzungen. 52.A. Meh						4,029	298
3	rmige Hämatome, Zustand nach Bissverletzung mit offenen St						3,226	241
4	Freiburg: 1.A: Hautverletzung ca. 2 cm lang u					2	1	12%
5	enke Dorsalseite, keine äußere Hautverletzung. Quere Durchtr						754	59
6	ine Abdominalverletzung, keine Kopfverletzung. Übrige Extrem						4,130	316
7	h, Kieferwinkel rechts 38.A: Messerstichverletzung Nacken,					3,444	258	13%
8	hmisch, Peripherie warm. 35.A: Messerstichverletzung im rech						3,302	250
9	inks überwiegend frisch. 28.A: Messerstichverletzung links t					1,040	79	18%
10	raxmuskulatur, im Rahmen einer Messerstichverletzung. Luftei						2,057	157

Chart 45. Extract from the concordances of the word ‘Verletzung’ (*injury*) in the expert opinions (C) of the German sub-corpus

N	Concordance	Set	Tag	Word #	Sent. #	Sent. Pos.	Para. #	Para. Pos
1	ten Körpervorderseite und zwei Ausschussverletzungen an der						3,351	171
2	le Tätowierung. 5.C: Singuläre Bauchstichverletzung, durch w						789	
3	seitig fand sich eine typische Bissverletzung. 11.C: : 6,5x3					12,079	620	
4	nzte Hautunterblutung: = Saug-Bissverletzung („Knutschfleck						16,576	8
5	dizinischer Sicht ist von zwei Einschussverletzungen an der					3,344	171	42%
6	offene 1 cm lange Hautrötung (Fingernagelverletzung?). Im N							
7	durales Hämatom), Contre-coup (Gegenstoßverletzung) rechts f						5,282	277
8	al zwischen den beiden offenen Hauptverletzungen kann mit Rü						17,085	853
9	, 2,7 cm messende glattrandige Hautverletzung, abschnittswei					3,903	198	66%
10	artige, angedeutet bandförmige Hautverletzung. An der Rückse						3,497	177

Chart 46. Sample handwritten MDRI from Hungary

Extract from a Hungarian MDRI recording a lacerated wound

Az alkoholos állapot fizikális jelei (alkoholos lehelet, arcbőr, kötőhártyák állapota stb.) és psychés tünetek (beszéd, magatartás, tájékozódás, emlékezőképesség stb.): Nem tiltak idomult.

A külsérelmi nyomok (sebek) helye: alakja, hossza, szélessége, mélysége (a lehetőséghez képest mm, cm pontossággal), a sebszélék, sebzugok, sebfal, sebalap, sebkörnyezet (szennyeződések) leírása: lövési, szúrási sérülés esetében a sérülés be- és kimeneti nyílásának talpsíktól mért távolsága (több külsérelmi nyom esetében azokat testtájanként vagy fix anatómiai ponthoz viszonyítva folytatólagosan sorszámozva kell felsorolni): Felső és alsó ajka is egyben durvult, alsó ajkán 1 cm-es feltűnés repelt sebt. f. felső I. fog mozog.

A szakorvosi leletek (rtg. stb.) részletes feltüntetése: —

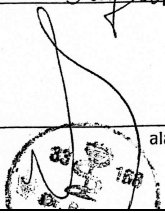
A sértült ellátása (gyógykezelés, kötés, műtét, rendelőintézetbe, fekvőbeteg-gyógyintézetbe irányítása stb.): kezeletti orvosoknál javult.

A körisme (magyarul és latinul): Dehiscens laceratio labii sup. et inf. (a felső és alsó ajkán szúrási, durvult.) Vénus nyíl. laci inf. (az alsó ajkán repelt sebt.)
Adiposa necrosis.

Vélemény: A gyógytartám szövdménymentes gyógyulás esetén előreláthatólag 8 napon belüli – 8 napon túli, kb. _____ nap.

Megjegyzés: (pl. várható-e maradandó testi fogyatékoság vagy súlyos egészségromlás): ill. traumati visszaleletől függ

B. Boglár, 2009 év augusztus hó 22. nap.

P. H.  aláírás

*A nem kívánt szöveget törölni kell.

Chart 47. Sample MDRI from Austria

Extract from an Austrian MDRI recording stab wounds

Landeskrankenhaus - Universitätsklinikum Graz Universitätsklinik für Chirurgie

Klinikvorstand: o.Univ.Prof.Dr. HJ. Mischinger
A-8036 Graz, Auenbruggerplatz 29, Tel.: 0316/385-12623, Fax: 0316/385-595-12718
hans.mischinger@medunigraz.at, Internet: <http://chirurgie.uniklinikumgraz.at>

Steiermärkische Krankenanstaltengesellschaft m.b.H.

Medizinische Universität Graz



Klinische Abteilung für
Gefäßchirurgie
Leiter: Univ.Prof. Dr. T. Cohnert
Ambulanz EG
Tel.: +43(0)316/385-12941

Ambulant am: 20.10.2012
Fallnummer:

Gefäßchirurgie Befund

Diagnose(n): V.ict.reg.submandibularis dext operat- 2 Stichverletzungen am Hals re.
V.ict.reg antebrech.dors sin operat- Stichverletzung am Unterarm li.
V.sciss. reg.parastern. dext- oberflächliche Wunde parasternal re.
V.ict.reg. vert. L1/2- Stichverf. über den Wirbelkörper L1/L2

Therapie: Tetabulin wurde bereits gestern verabreicht, Unters., Wundvers., retour ad Station.

Graz, am 20.10.2012 / HaCh

Sehr geehrte Frau Kollegin, sehr geehrter Herr Kollege!

Anamnese:

Pat. wurde gestern akut vom UKH nach Raufhandel m. Stichverletzungen übernommen. Im Vordergrund standen 2 Stichverl. am Hals re.. Pat. wurde sofort in den OP weitergeleitet u. die Wunden versorgt (siehe OP- Befund). Weiters wurde bereits in der Ambulanz eine Schnittverletzung am li. Unterarm versorgt. Weiters zeigte sich eine oberflächliche S Hautverletzung am Thorax re. Parasternal.
Bei der heutigen durchgeführten Untersuchung fiel eine weitere 2 cm lange Stichwunde am Rücken in Höhe L1/L2 auf. Die Sensibilität und Motorik an beiden UE unauffällig.

Status:

Versorgung der Wunde am Rücken in der Wundversorgung, Einspritzen v. 2% igem Lokalanestätikum, Inspektion, die Dornfortsätze L1/L2 freiliegend, Stichkanal nach re.lateral in die paravert. Muskulatur ca. 2 cm in die Tiefe sondierbar, Rücksprache m. OA Schleifer, da Pat. neurolog. unauff. ist, keine weitere tiefe Inspektion bzw. Bildgebung erforderlich, Einlegen einer Laschendrainage u. Adaption der Wunde mittels einer Naht,

Seite 1/2

V O B I Ä H E I C

Chart 48. Sample handwritten MDRI from Germany

Extract from a German MDRI recording a lacerated wound

AOK	LKK	BKK	IRK	VDAK	AEV	Knappschaft
Name, Vorname des Versicherten						
geb. am						
Kassen-Nr.		Versicherten-Nr.		Status		
Vertragsart-Nr.		VK gültig bis		Datum		

KLINIKUM DER JC

Adn

Aufnahme-Nr. _____

Ko.-Stelle _____

Name _____

Vorname _____

Fam.-Stand _____

Geb.-Datum _____

Geb.-Datum _____

Staatsang. _____

Straße _____

Haus-Nr. _____

PLZ _____

Wohnort _____

Telefon-Nr. _____

Kostenträger _____

Hauptversicherer Name, Geb.-Dat. _____

Anschrift Hauptversicherer _____

Arbeitgeber _____

Hausarzt _____

Eingewiesen von Uhrzeit _____

Unfallort und -zeit _____

Anamnese, Unfallort u. -zeit, Fragestellung

Die Patientin sei von Hause die Treppe hinuntergestürzt & bewusstlos hingefallen & in Armee & EB rasch

Tetanusanamnese: Gegeben in der Vergangenheit

Befund

Recht weiche, unproduktive, nicht, Dislokation & Trauma-
 fähig in Verbleib, & ganzseit. Defizite,
 ca 4 cm lange oberflächliche Kopfplatzwunde occipital,
 DS occipital, sonst & DS am Schläfel, NWS +
 restliche WS frei Nasax + Balle stabil, & Kompression

Gewünschte Untersuchung Spinnweb DS in Handgelenk & Wunde
 & DS in der Tabaklinie, DS peripher intakt

Schädel II + re Handgelenk I

Röntgenbefund

⊙ # Schläfel
 Anterior

Diagnose

Kopfplatzwunde occipital

Paralyse rechte Extremitäten 50% f

20.7.07

Therapie und weitere Therapieempfehlung

WV + Punkt in CA, TD - Infiltration

zu beachten

Bericht am

15.07.07

Unterschrift des Arztes

[Signature]

OWN PUBLICATIONS

1. Fogarasi K. 2009. Some Communication Problems in the Forensic Medical Discourse Community. *Orvosi és Gyógyszerészeti Szemle*. University of Medicine and Pharmacy of Targu Mures. Volume 55/2009. 135-137
2. Fogarasi K. 2009. Hibásan kiállított leletek biztosítás- orvostani következményei. *Biztosítási Szemle*. LV. / 8-9. 22-27
3. Fogarasi K. 2010. A nominális valencia szerepe traumatológiai sérülésleírások értelmezésében. Online publikáció: In: A Magyar Tudományos Akadémia Alkalmazott Nyelvészeti Doktorandusz Konferenciájának online kötete. Budapest: MTA Nyelvtudományi Intézet
Poster: <http://www.nytud.hu/alknyelvdok10/prez/fogarasi.pdf>
Article: <http://www.nytud.hu/alknyelvdok10/proceedings10.pdf> 31-45
4. Fogarasi K. 2010. A beteg neve: orvosi szaknyelv. In: Zimányi Árpád (ed.): *A tudomány nyelve - a nyelv tudománya*. MANYE XIX. konferenciakötet. Eger: Esterházy Károly Főiskola. Cd-Proceedings. 952-959
5. Fogarasi K. 2010. Sebtípusok, sebleírások terminológiai problémái traumatológiai látteleteken. In: *Porta Lingua. Tudományterületek és nyelvhasználat*. Debrecen: Szaknyelvoktatók – és Kutatók Országos Egyesülete. 121-138
6. Fogarasi K. 2010. Terminology of wounds. A contrastive survey on terms in the technical literature of Forensic Medicine in Hungary. *Acta Medica Marisiensis*. Volume 56/ Number 6/ 2010. 587 – 597.
7. Fogarasi K. 2011. Terminological Problems and Information Missing in Descriptions of Injuries in the Hungarian Forensic Medical Discourse. *Acta Medica Marisiensis*. Volume 57. 183-185
8. Fogarasi K. 2011. Sebtípusok és sebjellemzők terminológiája az igazságügyi orvostanban. In: *Az alkalmazott nyelvészet ma: innováció, technológia, tradíció. A Magyar Alkalmazott Nyelvészek és Nyelvtanárok XX. Kongresszusának Konferenciakötete*. Budapest – Debrecen: MANYE – Debreceni Egyetem. 320-327
9. Fogarasi-Nuber K. 2012. Sérülésleírások terminológiájának német-magyar kontrasztív vizsgálata. In: *Porta Lingua*. Szaknyelv kutatási irányzatok és alkalmazások. Debrecen: Szaknyelvoktatók – és Kutatók Országos Egyesülete. 35-50

10. Fogarasi-Nuber K. 2012. Rechtsmedizinische Terminologie in der Befunderhebung von Weichgewebeverletzungen. Eine korpusgestützte Analyse des Terminusgebrauchs in Ungarn und in Deutschland. In: Leonard Pon, Vladimir Karabalic, Sanja Cimer (ed.) *Applied Linguistics Today: Research and Perspectives. Angewandte Linguistik heute: Forschung und Perspektiven*. Frankfurt a.M. Bern [etc.]: P. Lang. 131-143

11. Fogarasi-Nuber K. – Rébék-Nagy G. 2012. Soft Tissue Injuries in Hungarian and Austrian Medical Diagnostic Reports. *Acta Medica Marisiensis. Book of Abstracts*. University of Medicine and Pharmacy of Targu Mures. Volume 58. 41

ACKNOWLEDGEMENT

First and foremost, I would like to express my sincere gratitude to my linguistic supervisor and mentor Dr. Gábor Rébék-Nagy for his continuous support of my Ph.D. studies and research, as well as for his motivation, commitment, enthusiasm and immense helpfulness. His guidance was a great support during the whole research and the writing of this thesis.

I owe the same high degree of gratitude to my supervisor Prof. Dr. Thomas Riepert for the professional forensic guidance, support and constant encouragement. I am particularly grateful for his suggestion for a comparative study with German MDRI and for providing me with invaluable forensic knowledge and a deeper insight into the forensic medical approach.

I would also like to thank the following forensic institutions for providing access to the immense amount of data serving as the basis for this research: Department of Forensic Medicine at the University of Pécs, Department of Forensic Medicine at the University of Debrecen, Department of Forensic Medicine at the Medical Center of the Johannes Gutenberg-University of Mainz, Department of Forensic Medicine at the University of Freiburg, Department of Forensic Medicine at the University of Graz, Institute of Forensic Experts and Forensic Research (= IFEFR, in Hungarian ISZKI) in Szekszárd, IFEFR in Győr, IFEFR in Kaposvár and IFEFR in Veszprém. I wish to acknowledge the patience and practical help provided by the administrative staff of these institutions, with collecting and anonymising forensic files.

Furthermore, I am especially grateful to my sister Ágnes Fogarasi who has always been a constant source of help and encouragement in writing the thesis.

I highly appreciate the constructive suggestions given by Dr. Vilmos Warta, Dr. habil. Judit Muráth, Ryan A. Scott and Nóra Tóth. Special thanks must go to Philipp Schneider for helping me with formatting the thesis.

My gratitude is also extended to Adrienn Dömse for helping me with the data processing and, especially to Ildikó Csoboth for her professional advice on performing the statistical analyses.

Most useful critical remarks and suggestions provided by Dr. habil. Zsuzsa Kurtán and Assoc.-Prof. Dr. Mario Darók, preliminary opponents of this dissertation, were greatly appreciated.

I would not have been able to complete this work without the invaluable support of Prof. Dr. István Bajnóczky, who drew my attention to this linguistic problem. Not only did he confirm that this issue was worthy of further, more thorough research, but he never failed to motivate and help me throughout the work.

Last, but not least, I wish to thank my parents and my husband for their patience and encouragement.