

accorded with that of other observers I have collected all the instances in my private case-books subsequently to the date of publication of my first paper. I find records of 35 cases. Three of these must be at once excluded as the retinal affection was not typical. One of these died, however, about a couple of years later, one is living after three years, and the other cannot be traced. Of the remaining 32 suitable for our purpose I am unable to trace nine, thus leaving 23 (see table). Three are known to be living. Of these, one a man, aged 36 years, was first seen in July, 1904; the kidney affection had been previously recognised. Two were women and both had suffered during pregnancy. One, aged 35 years, seen in March, 1891, recovered vision partially, but became affected again in the next pregnancy, two years later, with resulting blindness. The other woman, aged 45 years, seen after the birth of the first child, in January, 1897, made a good recovery. These, with other instances of the albuminuria of pregnancy, will be considered again later. The remaining 20 were ascertained to have died as follows: two at the end of one month, two at two months, one after three months, two after four months, one after five months, one after six months, two after nine months, one after 12 months, one after 15 months, one after 22 months, two after 24 months, one after 28 months, two after 32 months, and one after four and a half years. The average duration of life in these cases is $14\frac{1}{2}$ months, but added to the eight previously recorded, making a total of 28, the average is barely one year. This average (12 months), compared with Dr. Miley's of four and a half months for hospital patients, fully bears out the contention of the less fatal significance of renal retinitis in private patients. The period is, nevertheless, a very brief one and my cases, as well as the observations of others to which allusion has been made, clearly show that the appearance of changes in the retina is a sign-post of the systemic havoc wrought by the chronic nephritis and that it portends a fatal termination, it may be in a few months, and rarely longer than two years. The renal disease associated with pregnancy is rightly excluded from consideration in this connexion. For, fortunately, it not infrequently happens that with the termination of gestation the albumin disappears and the retinal disease clears up, though often vision may remain seriously affected and it is recognised that the condition is not fatal to life in the same way as in chronic Bright's disease. Among my cases is one instance (No. 31) of a woman who was affected during pregnancy. The renal condition, however, persisted, and it did not appear to me to fall precisely among ordinary cases of Bright's disease with pregnancy and it has not therefore been excluded.

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ON THE CHEMICAL MECHANISM OF GASTRIC SECRETION.¹

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It has long been known that the introduction of certain substances into the stomach provokes a secretion of gastric juice. This is regarded as in no sense depending upon mere mechanical stimulation of the mucous membrane and it has been thought that the nervous mechanism of the gastric glands may be susceptible to certain local chemical stimuli. On the analogy of what has been held to be the mechanism at work in the secretion of pancreatic juice by Bayliss and Starling it is probable that, in the process of absorption of digested food in the stomach, a substance may be separated from the cells of the mucous membrane which, passing into the blood or lymph, later stimulates the secretory cells of the stomach to functional activity. The following observations support this view. If an extract in 5 per cent. dextrin of the fundus mucous membrane be injected into the jugular vein there is no evidence of secretion of gastric juice. If the extract be made with the pyloric mucous membrane there is evidence of a small quantity of secretion. With dextrin by itself there is no secretion. Extracts of fundus mucous membrane in dextrose or maltose give no secretion; extracts of pyloric

mucous membrane give marked secretion; dextrose or maltose alone brings about no secretion. If extracts be made with commercial peptone it is found that no secretion occurs with the fundus mucous membrane, a marked secretion with the pyloric mucous membrane; the peptone alone gives a slight secretion. If the extracts be made by boiling the mucous membrane in the different media the effect is just the same—that is to say, the active principle, which may be called "gastric secretin," is not destroyed by boiling.

Finally, it may be pointed out that such absorption as occurs in the stomach apparently takes place in the pyloric end. With the pig's stomach, in which the true cardiac region differs from the typical fundus region in having only simple glands as in the pyloric, extracts of the cardiac region in general have the same efficacy in promoting secretion as do pyloric.

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A CASE OF STRANGULATED HERNIA OF THE SMALL INTESTINE AND BLADDER.

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THE patient, a male, aged 70 years, was admitted into Claybury Asylum on March 5th, 1904, suffering from senile melancholia. He was restless, apprehensive, and had delusions of persecution and was impulsive at times. There was well-marked arterio-sclerosis with some cardiac hypertrophy. The lungs were healthy. The patient had a double inguinal hernia, on the right side direct and irreducible, on the left oblique and reducible. He was wearing an old double inguinal truss.

On March 9th he was visited at 9 A.M. He had vomited once early in the morning and was complaining of abdominal pain. He was lying on his back with the legs drawn up and was in evident distress. There was frequent retching; his pulse was 90, small and hard; his temperature was 98° F. There had been no action of the bowels for 24 hours and he had passed no urine during the night. There was a hard, tender swelling of the size of an orange, just above and to the right of the symphysis pubis; this was dull on percussion and conveyed no impulse on coughing. There were no other signs and the left hernia was easily reducible. The case was clearly one of strangulated hernia. A catheter was passed and about ten ounces of urine were withdrawn. At 11 A.M. chloroform anaesthesia was induced. With the usual anti-septic precautions the skin was incised over the swelling in a vertical direction, and after dividing and reflecting the various layers a hernial sac was exposed. The neck of the sac was then defined. It was easily separated from its surroundings except on its lower aspect where it was closely adherent to an ill-defined swelling, which, together with it, was protruding through a small opening in the abdominal wall. The sac was next opened and found to contain some blood-stained fluid, a small clot, and a knuckle of small intestine. After enlarging the ring the bowel could be drawn down and being in a healthy condition was returned into the abdomen. The sac was then held up out of the way with artery clips. As above stated, the sac was attached below to a swelling which was of about the size of a testicle, firm to the touch, and intimately adherent to its surroundings; it was covered by muscular and old inflammatory tissue and could not be defined at all clearly. On passing the finger into the abdomen through the hernial sac the peritoneum was found clear on all sides; the swelling could be felt passing through the ring but was not traceable beyond. In attempting to define this structure with the knife handle what appeared to be a hernial sac containing a little fluid was exposed; this was nicked and the opening was enlarged, when a small quantity of urine escaped. Through this opening a finger could be passed through the abdominal ring into the bladder. Every effort was made to keep the two parts of the wound separate. The hernial sac was dissected from the bladder as far as possible, ligatured, and the distal portion was excised. The bladder was closed by a continuous catgut suture passing through the outer coats and the whole wound was cleansed thoroughly with a 1 in 20 carbolic lotion, subsequently with boric acid lotion.

¹ A paper read before the Royal Society on May 18th, 1905.