more time and care.] A transplant of the fascia lata was cut $\frac{1}{2}$ in. longer than the gap which was to be bridged, and sufficiently broad to allow of its being rolled into a tube. It was laid beneath the ends of the tendon, to which it was carefully sutured with fine catgut, and the sides of the transplant were then wrapped round the tendon ends, and so held by further sutures that it had the appearance of a rolled cigarette, with the remains of the tendon at either end resembling the tobacco. In this case a skin covering could not be provided, and the area had to be covered by a pedicled flap cut from the thigh. The pedicle was divided at the end of a fortnight, and a week later the patient was allowed to make a little movement, but this was not encouraged until six weeks following operation. The usefulness of the finger was completely restored.

III.

Transplants are also useful to cover the exposed brain, where the membranes are deficient, thus preventing it becoming adherent to the scalp.

In one case a patient suffered from severe Jacksonian epilepsy, with almost daily fits, following a gunshot wound of the head, which had already been trephined. On turning back the skin flap it was found to be adherent to the unprotected brain over an area as large as half a crown, and after separation this area presented the appearance of lacerated brain tissue, with a small old blood clot in the centre. The trephine opening was $2\frac{1}{2}$ in. in diameter. A flap of fascia lata was cut $\frac{1}{2}$ in. larger than this opening, and, after separation of the dura from the margins of the bony aperture, the edges of the fascial flap were tucked in so as to form a complete covering for the exposed brain, and a light curtain over the aperture in the skull. The skin flap was then reapplied and carefully sutured without drainage. The patient made a complete recovery, and had no further fits up to the time that I last saw him, some three or four months after operation. It is intended at a later date to close the opening in the skull by bone grafting, now that an efficient background has been provided.

IV.

Similarly, fascia lata may be used for repairing the urethra. I used it in the case of a large fistula which had been operated upon four times without success. I found a rounded opening in the penis, just in front of the scrotum, which would admit the end of a lead pencil. The skin was tucked in, and was adherent to the edges of the urethral mucous membrane. The parts were carefully exposed, using a median incision, and the skin and the urethra were very thoroughly separated. By using a flap cut from the side of the channel which had been established between the urethra and the surface I was able to close the latter without appreciably narrowing its lumen. This looked as if it might of itself have been efficient, but previous operations on these lines having failed, I felt that I must reinforce the union if success was to follow. I therefore covered the area with a flap of fascia lata about $1\frac{1}{2}$ in. long by $\frac{3}{4}$ in. broad. This was closely fixed over the sutured urethra with fine catgut, and the skin was very carefully drawn together over the fascia and sutured. At the same time a perineal drain was introduced and kept *in situ* for a fortnight. This patient made a complete recovery. There was never any leakage or any suggestion of subsequent stricture, and seven months after the operation I was able to pass a No. 10 rubber catheter without the slightest difficulty.

I have been surprised at the behaviour of the transplants in the presence of active infection. In one case of arthroplasty of the elbow, which I recorded in the *Edinburgh Medical Journal* (May, 1914), there was a severe outburst of suppuration, but in spite of that the large flap of fascia lata which had been used did not slough, and the result as regards movement was excellent.

Similarly, in one of the cases in which the fascia was used to repair a tendon, there was the recrudescence of sepsis which is so familiar in connexion with war wounds. After the discharge of pus the edges of the skin wound separated, exposing what looked like a big yellow slough, but actually the fascial tendon. It was not interfered with, and in a remarkably short time the wound healed by granulation, and the process of repair of the tendon was evidently not interrupted, for the patient regained movement in the terminal joint of the thumb.

These are illustrations of a few of the uses of fascial transplants. Ingenuity and necessity will suggest many more, and my experience leads me to believe that it can be freely used wherever it will fulfil the indications in view.

I have had no trouble associated with the area from which the flap is cut. I always expose it through a vertical incision on the outer side of the thigh, and, except where the transplant has been a very small one, I do not resuture the fascia, and I have seen no trouble from the break in the covering of the thigh muscles, though the patients sometimes complain of soreness and aching in that area for a time.

THREE ACUTE ABDOMINAL CASES.

BY

J. LIONEL STRETTON,

SENIOR SURGEON, KIDDERMINSTER INFIRMARY AND CHILDREN'S HOSPITAL.

THE three cases here reported have occurred since July, 1919, and are all of sufficient rarity to justify their publication. I have never seen a polypus of the stomach before, and I have never found an extensive haemorrhage between the walls of the intestine. The ovarian tumour is rare because of its size. The largest one I had removed previously contained four gallons. In these days it is seldom indeed that they are allowed to reach such dimensions.

CASE I.—*Polypus of Stomach.*

In July, 1919, I was asked to see a man aged 59, in consultation with Dr. Emrys-Jones, who was acting as locum tenens for Dr. Askey Wood. The patient had been suffering for six months from intermittent pains in the abdomen, which were thought to be biliary or renal colic. I ascertained that the pain came on about fifteen minutes after food of any description, but it was more severe after solid than liquid food. If the patient was lying in bed upon his back the pain did not occur, but if he was sitting up it always came on. There was no vomiting. The bowels were constipated. He had lost flesh (1st.). The conjunctivae had an icteric tinge and he appeared to be ill. The abdomen was too rigid to make a full examination, but there was tenderness two inches above and to the right of the umbilicus.

Operation.—I advised an exploratory operation, and the patient was admitted to the infirmary on July 21st, 1919. On July 22nd, under ether and chloroform administered by Dr. W. Miles, the abdomen was opened by a vertical incision through the right rectus muscle. The liver and gall bladder seemed to be normal. There was no dilatation of the stomach, and its appearance was natural. On manipulating the pylorus with my fingers and thumbs I could feel a substance which slipped from side to side within the stomach, and which appeared to be pedunculated. A transverse incision was made over this "substance." On exposure it proved to be a pedunculated polypus about $1\frac{1}{2}$ in. long and $\frac{3}{4}$ in. broad. The pedicle was attached to the posterior wall of the stomach about an inch inside the pyloric orifice. It was ligatured and removed. The stomach and abdominal wounds were closed in layers.

Description of Polypus.—The specimen removed was sent to Birmingham University for examination. Dr. Ball reported as follows:

"*Polypus of Stomach.* The growth is a simple adenoma consisting of gland spaces lined by a columnar epithelium. The epithelium shows degenerative and proliferative changes, and is frequently desquamated into the lumen of the acinus, but is everywhere contained within the basement membrane, and is, I think, without malignancy. Some of the acini are enlarged to form cysts, the contents being derived from degeneration of the lining cells."

After-History.—The patient made an uneventful recovery. The abdominal wound was healed on July 30th and the sutures were removed from it. He was able to take food without pain, and was discharged from the infirmary on August 18th. I saw him on October 2nd. He was then well, had gained 6 lb. in weight, and could take solid food without discomfort.

The diagnosis in this case appeared doubtful, but had we appreciated the importance of the history we might have suspected such a condition. The fact that the patient was free from pain when lying on his back was certainly significant when considered with the condition revealed at the operation—namely, "a pedunculated polypus . . . attached to the posterior wall of the stomach about an inch inside the pyloric orifice."

CASE II.—*Large Haemorrhage into Wall of Caecum.*

On October 4th, 1919, I was asked to see, with Dr. Brocket of Stourport, an unmarried lady, aged 22. She had been seized with sudden pain in the right iliac region the previous evening, when she vomited. The temperature was 101° and the pulse

120. The abdomen was too tender to palpate. There appeared to be a mass in the right iliac fossa. She was removed to my nursing home.

Operation.—Ether and chloroform were administered by Dr. Craig, and Dr. Brocket assisted me. The abdomen was opened by a vertical incision through the right rectus muscle. Some serous fluid escaped, and a large cystic mass was seen. It was about eight inches by four inches, and extended down into the pelvis. When it was delivered it was found to be the caput caeci. The appendix was inflamed. It was removed and the stump inverted with a purse-string suture. During the manipulation the cyst burst, and a pint and a half to two pints of blood escaped. The collapsed cyst wall appeared to be composed of peritoneum and the muscular wall of the caecum. There had, in fact, been a haemorrhage between the muscular and mucous coats of the caecum. The bowel was returned to the abdomen and a drainage tube left in the lower angle of the abdominal wound.

After-History.—The following day the patient's condition was unsatisfactory; her pulse and temperature were still up, and there was some abdominal distension. She was again placed under chloroform and ether by Dr. Craig, and I opened up the wound. Nothing further was discovered; the caecum had a more normal appearance, as the collapsed sac wall had contracted. The drainage tube was left in. The patient gradually improved. The tube was removed on October 10th; the stitches were taken out on October 15th. The wound had healed, except the sinus where the tube had been. She was discharged on November 8th.

I do not think the inflammation of the appendix was sufficient to account for this haemorrhage. It appears to me more probable that it was due to a strain received by the patient during the afternoon of October 3rd, when, in her capacity of lady gardener, she was moving a number of chrysanthemums in pots.

CASE III.—Large Ovarian Cyst.

A married woman, aged 61, was sent to me by Dr. Crawford Newland, suffering from a large abdominal tumour. She stated that she had been aware of it for three years, but that it had increased in size more rapidly during the last six months. The girth at the umbilicus was 56 in. From the ensiform cartilage to the pubes was 25 in. The tumour was freely movable and fluctuating. On November 4th, 1919, under chloroform and ether administered by Dr. W. Miles, the abdomen was opened by a vertical incision through the right rectus. The cyst was tapped and the fluid withdrawn. The cyst wall was ligatured and removed. It was a cyst of the right ovary. The fluid measured 6½ gallons, and the solid weighed 3 lb. 2 oz.

The patient made an uneventful recovery. The wound was healed and the stitches were taken out on November 12th.

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

A NEEDLE IN THE ALIMENTARY CANAL.

At a meeting of the Midland Medical Society held at Birmingham on November 12th, 1919, Mr. Christopher Martin showed a specimen of a concretion formed around a pin in the appendix. I think the narration of the following case may prove interesting.

After a rather long walk (August, 1913) a lady complained of severe pain in the region of the anus. I saw her soon after, and on examination felt what I at first took to be a hairpin fixed across the bowel close to the anus. After some difficulty I managed to remove it. It proved to be a darning needle 1½ in. long, quite black and dull. The patient had no idea how it came there. It must presumably have been swallowed, possibly in soup.

The history of the case as given by the patient herself is remarkable, indicating that, in the course of perhaps nearly twenty years, the needle travelled the whole length of the alimentary tract without producing a fatal result, although it apparently came near doing so. In 1897 the patient suffered from indigestion and what was diagnosed as gastritis, and was allowed only fluid food. In 1907 she had a violent attack of haematemesis, bringing up about 2 pints of pure blood, and she nearly died; the haemorrhage ceased within forty-eight hours, after treatment including rectal feeding, ice, and albumin water. Subsequently she suffered from occasional recurrences of acute epigastric pain. In July, 1913, about a month before the needle was found, she had an attack of acute pain in the region of the duodenum, which a medical man whom she consulted in London thought might be appendicitis, but when he heard the story of the needle he concluded it was due to that. With regard to the severe

haemorrhage in 1907, it is probable that the needle pierced some blood vessel in the neighbourhood of the stomach. Altogether I consider the passage of the needle during all those years through the whole alimentary tract very remarkable, and the patient is to be congratulated on its successful termination. She has had no recurrence of any symptom of gastritis since the discovery of the needle.

Chichester.

HEYWOOD SMITH.

MAMMARY SARCOMA IN OLD AGE.

An interesting pathological curiosity is presented in the following case:

Mary N., admitted May 7th, 1902, for senile dementia, died on October 11th, 1919, at the age of 98, from sarcoma of the breast with pulmonary metastases.

Three and a half months earlier attention was drawn to the right breast by the fact that during routine bathing she shielded the organ with her hand. There was no sign of trauma nor had there been any history of injury or previous indication of any new growth.

The breast did not appear to be enlarged, but seemed to be painful, as she resented the slightest interference. The nipple was not displaced; several hard small masses were scattered through the substance of the gland; their outlines were indefinite, and they did not appear to be attached to the skin, the nipple, or the pectoral muscle. The axillary lymphatic glands were not enlarged; owing to her senile state operation was not undertaken.

The breast rapidly increased in volume and soon attained the size of a football. The skin became stretched and shiny, the veins enlarged in size, and increased in number. The whole organ pulsated visibly and palpably, and in places appeared to be cystic. The skin eventually gave way over the upper and outer part of the mass, but the patient died before a fungating mass could form. On one occasion during the last month the patient coughed up a small clot of blood, but apart from this the symptoms and signs were localized to the right breast.

Pathological Characters.

The right breast with some remnants of pectoral muscle weighed 11 lb. 14 oz. The growth had infiltrated the pectoralis major but had not extended to the chest wall. Beneath the skin were plexuses of dilated veins and numerous haemorrhages. On section an irregularly shaped central cavity holding about half a pint of dark brown fluid and blood clot was found. The surface of the walls of the cyst were roughened by clot deposit and tissue torn by haemorrhages. The tumour cut toughly and varied in appearance, in some parts white, in others intensely vascular and spotted with numerous haemorrhages of varying size. The associated axillary and clavicular lymphatic glands were not enlarged. The left breast showed no abnormality. The right lung weighed 21 oz., the left 18 oz. Scattered through the substance of both lungs, but more particularly just below and on the surface of the visceral pleura, were numerous metastases, varying in size from small well defined pea-like nodules to one the size of a turkey's egg, forming a sessile tumour at the base of the right lung in the mid-axillary line, its pleural surface having contracted recent adhesions with the parietal pleura. The smaller nodules on the pleural surface had a white smooth button-like appearance, their sessile character being due to collapse of the adjoining lung tissue. The metastases on section presented a similar appearance and density to the original growth, the smaller were white and fleshy and the larger strewn with numerous haemorrhagic points. The pulmonary tissue intervening between the metastases showed no gross abnormality. The pleural cavity and parietal pleura were otherwise normal. The heart and liver showed senile degenerative changes. The brain was atrophied, especially the frontal convolutions where the thickness of grey matter was much reduced.

The kidneys weighed, right 4 oz., and left 3 oz.; on section the cortex was indistinguishable from medulla; both were paler and tougher than normal, and the capsules stripped with difficulty, tearing away portions of the adherent renal tissue. The vessels were arterio-sclerotic.

Microscopic sections were made from the breast growth and from one of the pulmonary metastases by the paraffin method. Both showed similar microscopic characters, the only difference being that the section from the secondary deposit appeared more vascular than that from the parent growth. The cells were large spindles; the intervening matrix was slightly fibrillated, and the vessels lined by cells similar to those of the rest of the tumour. Glandular acini were not observed in the section either of the parent growth or the secondary deposit.

T. C. GRAVES, M.D., B.Sc.Lond., F.R.C.S.Eng.,
Medical Superintendent, the Hereford County
and City Mental Hospital.

THE late Mr. William Carnelley, of Fallowfield, has bequeathed £2,000 to the Beckett Hospital and Dispensary, Barnsley, for the endowment of two William Carnelley beds, £1,000 to the Manchester Royal Infirmary and Dispensary, £400 to St. Bartholomew's Hospital, London, and £300 to Guy's Hospital, London.