and disability continuing, nephrectomy was eventually resorted to.

The subsequent fate of patients submitted to nephrectomy must always be worthy of attention, but the comparatively short period which has elapsed since many of my operations were performed, and the difficulty of tracing hospital cases, renders the record I am now about to mention of less value than it would otherwise have been.

Eight of the 9 patients operated on outside the General Hospital remain well; 1 is suffering from recurrence of growth; the longest interval of time since the first of these operations is nine years.

Of the hospital patients I am unable to learn anything concerning 10; of the remaining 20, 19 are alive, and as far as can be gathered in reasonable health, several of them expressing themselves as "in very good health." One patient is dead, a woman operated on five and a half years ago, when 38 years of age, for a huge polycystic kidney. The other kidney, at that time just palpable, rapidly increased in size, but remained for a long time fairly efficient in its excretory functions, and the patient was enabled to lead an active and useful life, which without nephrectomy would not, I think, have been possible. In September, 1906, the excretion by the remaining kidney was becoming very insufficient, and the patient died in January last, after a brief illness the details of which I have not been able yet to obtain.¹

REFERENCE.

¹ *Lancet*, May 20th, 1906, p. 1326.

A CASE OF PYONEPHROSIS CONTAINING TYPHOID BACILLI IN PURE CULTURE.

By FRANCIS L. A. GREAVES, F.R.C.S.ENG.,

HONORARY SURGEON TO THE DERBYSHIRE ROYAL INFIRMARY AND TO THE SPECIAL DEPARTMENT FOR DISEASES OF THE THROAT, NOSE, AND EAR.

IN the report of the proceedings of the Clinical Society of London held on May 10th, 1907, Drs. H. French and M. Louisson contributed a paper on the extent to which Widal's reaction persists after recovery from typhoid. The following case is worth recording from this point of view:

History.

A. B., aged 35, who was sent to me at the Derbyshire Royal Infirmary by Dr. Chawner of Clay Cross, suffered from typhoid fever rather more than six years ago. The disease was acquired from contaminated well water. After eleven weeks' illness he apparently became convalescent and was allowed to get up, but a week later he had a severe relapse and was in bed again for about seven weeks. He recovered and returned to work as a collier.

He said that during his illness he had occasional difficulty in passing water. He passed "lumps of flesh like liver as big as peas" for about a fortnight; he then passed thick water with pieces of "phlegm" in it, especially towards the end of micturition. This has occurred occasionally ever since.

Seventeen weeks before admission he complained of pain in the left loin and was attended by Dr. Chawner of Clay Cross for nephritis. After eleven weeks of pain he returned to his employment and managed to work for three weeks, when the pain became worse, and he went to bed again. Two weeks before admission a swelling was noticed in the left loin. The pain had been constant in the left side, but had extended occasionally to the left groin and testicle. There had been occasional attacks of vomiting. He had lost flesh considerably; the bowels had been fairly regular, but lately somewhat constipated.

Condition on Admission.

He was a distinctly emaciated and anxious-looking man, with a pale, earthy complexion, and a somewhat dry, slightly-furred tongue. The temperature was normal and the pulse 80. The urine, 1028, acid, contained neither albumen nor sugar.

A large, tender swelling was seen extending from the left costal margin to about 2 in. from the left iliac crest. It extended forwards to the middle line, and was more prominent above the level of the umbilicus. The swelling did not descend on respiration. It was tender on palpation, was smooth and rounded, and no irregularities, such as notches or nodules, could be felt anywhere. A distinct thrill could be felt by a hand placed on the tumour in front if light percussion was made in the loin; fluctuation could also be made out. The percussion note was dull and could not be separated from splenic dullness. The liver was not felt. Nothing abnormal was detected in the chest, and no signs of disease were found elsewhere.

On the day following admission the urine was examined with the result: Specific gravity, 1020; acid; trace of albumen; no

sugar; deposit of urates. Segregation of the two ureters was performed on two occasions by Luys's separator. No urine was obtained from the left half of the bladder.

Operation.

On April 12th, three days after admission, he was placed under an anaesthetic and cystoscopy performed.

The right ureteric opening was seen to be normal. The left ureteric opening was difficult to see, as it was surrounded by a stellate arrangement of engorged veins. No urine was observed to issue from it, and no pus. Nothing else abnormal was seen in the bladder. The patient was placed semi-prone on the right side, and the usual left lumbar incision was made. After the muscles were incised, a trocar and cannula was introduced into the tumour, and pus appeared. This was received into a sterilized test tube for further examination. The opening was enlarged, and an exploratory finger felt a large stone in the left ureter. This was extracted without much difficulty. The sac was enormous, but soon contracted on being emptied. Its content was pus with hardly any urinous odour. Two drainage tubes were inserted, and the wound closed in the usual way.

After-history.

The operation was followed by a quite uninterrupted recovery. The average urinary output before operation was 22 oz., after operation 67 oz. Three weeks after operation there was only a small sinus left; one week later the last tube was removed, and this rapidly closed. He was sent to the Convalescent Home five weeks after the operation.

Bacteriological Report.

The pus was sent to the Clinical Research Association, and the following reports were received:

I.

The only organism met with in the pus and in the culture prepared from it is a Gram-negative bacillus, belonging apparently to the *enteritidis* group. Its pure cultures will require further investigation, and the identification of the bacillus is difficult and may be impossible. A further report will follow in due course.

II.

The organism isolated from your case of pyonephrosis has all the cultural and microscopical characters of the *Bacillus typhi-abdominalis*. When freshly isolated the bacillus showed no tendency to become agglutinated on treatment with a serum from a case of enteric, and we were therefore inclined to believe it was not the typhoid bacillus. However, after sub-cultivation several times the organism now gives a fairly well-marked reaction.

The suggestion was made that Widal's reaction should be tried, and a specimen of the patient's blood was sent up and the following report was received:

This serum shows the reaction characteristic of typhoid fever with all the dilutions employed—namely, 1 in 10, 1 in 25, 1 in 50.

A fortnight later a second specimen is reported upon as follows:

The serum gives a well-marked Widal's reaction, producing rapid agglutination of typhoid bacilli in dilutions of 1 in 10, 1 in 25, 1 in 50, and well-defined clumping within thirty minutes with a dilution of 1 in 200. An attempt was made to isolate the bacilli from a portion of the dressings and drainage tube, but without success, owing to contamination by other organisms.

The calculus was nearly entirely phosphatic, with a centre which contained phosphates and a predominance of oxalates.

I have no knowledge of calculous disease as a sequela of typhoid fever, and on looking up the subject of typhoid pyelitis I can find no case recorded where a calculus was formed subsequently. It is possible that the calculus was pre-existing, but I do not think it probable, as there were no symptoms of urinary trouble before the attack of enteric, and they were so extremely prominent during the attack. I think the case is sufficiently interesting to report, both on account of its rarity and on account of the persistence of the typhoid bacilli in the kidney for so many years.

TWO CASES OF SUPRAPUBIC LITHOLAPAXY.

By R. HEARD, M.B., B.CH., ETC., I.M.S.,

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THE two cases of vesical calculus reported below are interesting in so far as they were dealt with, with excellent results, in a manner somewhat different to that usually adopted. The patients were both young children of poor physique, on whom it was impossible to perform the usual "crushing operation," even with modern perfected instruments.

The stones could only be removed by the suprapubic

route. No attempt was made to remove the stones entire through the bladder wound; they were first broken through a small opening, with a lithotrite of the usual pattern, into a few small fragments. These were extracted, with fine dressing forceps, thus avoiding unnecessary wounding of, or damage to, the bladder.

Though suprapubic lithotomy is the operation of election with surgeons in England, it would seem to be looked upon with a certain amount of disfavour by surgeons of experience in India, who appear to prefer the perineal route, a crushing operation being performed through a median urethral incision. By this route I have myself crushed and evacuated, with excellent results, a stone weighing 8 oz., but cases are often met with where this method is not available. In India the after-treatment of operative cases is often beset with much difficulty, as it is, at times, impossible to procure efficient nursing. In the majority of cases the patient has to be left to the care of his "friends," who are usually of small intelligence and most unreliable.

A point that requires to be taken into consideration is the damage which is not infrequently sustained by the bladder during the extraction of a large stone entire with forceps, which, though intended for that purpose, are clumsy, and take up a great deal of space. This difficulty is largely obviated by using, before extraction, a lithotrite to break the stone, and by then employing (to remove the fragments) ordinary dressing forceps, whose blades have been dressed with a flake of cotton-wool, whilst a stream of boracic solution is kept flowing through the bladder by means of a cannula passed either through the urethra or, where this is not possible (as in Case II), into the wound. By this method the damage to the bladder and its mucous membrane is reduced to a minimum.

The operation is lengthened a little by the crushing procedure; this, however, is not of much importance in the majority of cases. In cases where a saving of time is a consideration, as in a litholapaxy in small children, where a large stone has to be crushed very fine to admit of its being evacuated through a fine cannula, I have found the binaural sound (of my own design) most useful in rapidly locating the fragments, and thus preventing the delay in searching for them, which is unavoidable if they are felt for in the ordinary way.

Another very simple expedient is to allow the patient, after the first crushing and evacuation, partially to regain consciousness, and the bladder will then contract, driving the particles of stone into the trigone, whence they can be removed without difficulty.

CASE I.

A Mohammedan male child, aged 7 years, of poor physique, who had had symptoms of stone for eight months, was sounded on June 7th, and the stone found to be too large to be crushed by the largest lithotrite that could be passed.

On June 8th I performed suprapubic cystotomy, assisted by Mr. David Heron, F.R.C.S.E. A small opening only was made in the bladder, through which the stone was broken into a few fragments with a No. 10 lithotrite. The fragments were removed separately with a fine dressing forceps, while a stream of boracic solution was kept flowing through the bladder by means of a cannula passed through the urethra. The fragments of stone (phosphatic) weighed $\frac{1}{2}$ oz. The bladder and abdominal wounds were sutured, a small piece of rubber drainage tube being placed in the lower part of the abdominal wound. Urine was passed by the urethra for three days. The patient received an aperient on the third day, after which, probably from straining, the urine began to pass through the wound. On June 22nd all urine passed in the natural way, and patient left the hospital, cured, on June 29th, twenty-one days after the operation.

CASE II.

A Sweeper male child, aged 3 years, was, as regards bodily development, more like an infant of 9 months. He was very weak and emaciated and the subject of chronic malaria. Symptoms of stone, present since 1 year of age, had very much increased for the past five months. No ordinary sound could be passed owing to the smallness of the parts. A stone was felt with a bent probe, passed into the bladder, and found to be of considerable size. On June 27th I removed the stone, as in Case I, with the exception that the stream of boracic solution was kept flowing into the bladder through the abdominal wound, as no catheter could be passed by the urethra. The bladder was sutured, but urine passed through the wound from the first; it passed by natural channel on July 6th, and the patient left hospital on July 11th, the local conditions being perfectly satisfactory, the wound healed, and the general condition much improved. Quinine was administered during convalescence, owing to a sharp attack of malarial fever the

day after the operation. In this case the stone (uric acid) weighed 100 grains.

I have also removed another stone by the same method in the case of a boy 7 years of age, in whose bladder the blade of the lithotrite broke after partial crushing of the stone. The boy was practically well twelve days after the operation.

SUPPURATING VAGINAL CYSTS.

By J. B. HELLIER, M.D.LOND.,

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SUPPURATION in vaginal cysts may cause severe and irritating leucorrhoea. These cases are rare, but it is important that their occasional occurrence should be recognized.

The first case I saw was that of a young girl of about 17, who was brought to me by her mother several years ago, because of severe purulent leucorrhoea. The hymen was normal. On rectal examination it was easy to feel an elongated, soft oval swelling in the vagina. Vaginal examination showed that this lay between the anterior vaginal wall and the bladder, and it was discharging by a small aperture near the os uteri. Incision and packing soon cured the abscess, which was not very large, but which extended from near the meatus urinarius to the cervix.

I now quote a case which is quite recent, and I am indebted to Dr. Mary E. Phillips, of Leeds, for the opportunity of treating it.

Miss Y., aged 35, had enjoyed perfectly good health till six months before I saw her, and had always menstruated regularly without pain and without excess. For the last six months she had not felt very well, but four months previously she had some vaginal haemorrhage. A fortnight previously she had some symptoms which she ascribed to influenza and at the same time began to have a very offensive purulent vaginal discharge. When I first entered the room which she occupied the fetor was so extreme that I suspected malignant disease. She had a healthy aspect, and was not emaciated. The vulva, perineum, and adjacent parts were reddened and inflamed on account of the irritant action of the thin sero-purulent leucorrhoea. The vagina was of virgin type, and the os was reached with difficulty. The anterior vaginal wall bulged into the canal like a cystocele, but the insertion of a bladder sound showed that the bladder did not extend into the swelling. No pain or other local symptom was complained of. On May 4th I incised the cyst wall freely, and let out a considerable quantity of thin fetid pus. I made no attempt to dissect out the cyst wall, but scraped it thoroughly, swabbed it with tincture of iodine, and packed with gauze. The cavity healed up by granulation in a very satisfactory way.

It is most probable that both these cysts were derived from Gaertner's duct. The aperture by which the abscess was discharging in the second case was not seen. If in either of these cases the discharge had flowed through a somewhat larger opening, so that the cyst cavity had ceased to be obviously distended, the true diagnosis might have long remained undiscovered, and such a case might be treated for an almost indefinite period by vaginal injections without cure.

Systematic examination in some other cases of purulent vaginal discharge may reveal discharging sinuses. There was no gonorrhoea in either of these patients, but this is a condition that might have been thought of on account of sudden purulent leucorrhoea arising without obvious cause, and a serious and unjustified suspicion might have been entertained. Gonorrhoeal vaginal discharge is, however, not strikingly offensive except in patients who fail to cleanse the external parts, and who suffer from eczematous vulvitis, etc. Apart from pregnancy and the puerperal state, there are only four causes of very offensive vaginal discharge which are at all common: First, retained pessaries or foreign bodies; secondly, malignant disease; thirdly, necrotic changes in myomata or polypi; fourthly, discharging sinuses or fistulae.

THE provincial meeting of the Incorporated Society of Medical Officers of Health will be held at the Town Hall, Colchester, on Saturday, July 13th, at 11.15 a.m. After the transaction of formal business, Dr. W. G. Savage, President of the Eastern Counties Branch of the Society, will open a discussion on recent work upon the bacteriology of typhoid fever in its relationship to preventive measures. After luncheon a visit will be paid to the Byfleet oyster beds, where the methods of the oyster fishery will be illustrated by hauls in different parts of the beds. Dr. W. G. Savage will provide afternoon tea on board the hospital ship.