and for three days made considerable progress, being able to sleep and to take food. At the end of this time she became very much blanched, and an examination showed that the huge cyst was full of blood. She rapidly sank, and on the fourth day died from hæmorrhage. When she was moribund four pints of saline solution were injected into her arm; but this had only the effect of rallying her for a few hours.

The patient's wretched condition previous to operation rendered surgical intervention extremely hazardous; but when she had apparently started on the road to recovery it was a great disappointment that she died. Had she been in a condition to undergo the necessary manipulation after the hæmorrhage took place her interest would, I think, have been best served by turning out the blood clots and packing the cavity with gauze.

Having regard to the fact that the hæmorrhage, which at the *post-mortem* examination was ascertained to have come from a large vein in the wall of the cavity, did not occur until three days after the operation, it is improbable that the blunt scoop had any share in its causation; nevertheless, in future I should, in a similar case, make no attempt at a thorough evacuation of the cyst contents, but would merely provide efficient drainage.

The last case is that of a boy, aged 12, who came under my care in September, 1896. He had a small tumour in his epigastric region which had been observed for the first time three months previously. It was globular, hard, painless, and followed the liver in its respiratory movements. Before operating, the presumption was strongly in favour of a hydatid of the liver, but the extraordinary mobility of the tumour, which permitted of it being displaced to the left and downwards for quite 3 inches was somewhat perplexing. On opening the abdomen the tumour came easily into the wound, and on incising it the cyst, an acephalous one, was readily removed. The opening in the liver was stitched to the parietes, and the boy made a rapid recovery. The remarkable mobility of the tumour was due to the excessive length of the ligaments of the left lobe of the liver.

Owing largely to the excellent work done by Mr. Lawson Tait, and by our medical brethren in Australia, the treatment of hydatids of the liver has within recent years undergone great changes, and, I think, great improvement. Formerly, unless a hydatid was suppurating or was so near the surface as to make it practically certain that it was adherent to the abdominal walls, it was either aspirated, injected with some irritant such as iodine, or subjected to electrolysis by means of two steel needles thrust into the sac. These measures, especially the last, while they often yielded excellent results, were fraught with two dangers. The punctures sometimes leaked, and, owing to the irritating nature of the hydatid fluid, caused peritonitis, or they set up suppuration in the cyst.

It has been observed that a hydatid cyst, especially if inflamed, occasionally pointed, and finally burst through the abdominal parietes, and so effaced itself. The essential feature in this natural way of cure is the gluing of the peritoneal covering of the tumour to that of the abdominal wall, whereby the peritoneal cavity is shut off. A study of this phenomenon led surgeons to imitate it by dividing the abdominal wall, including the parietal peritoneum, over the tumour, and either by a ring of sutures or by simply packing the wound with gauze to induce plastic exudation between the opposed peritoneal surfaces. After the lapse of a few days the cyst was opened and drained. But increased experience showed that this plan was not to be universally relied on, and latterly the tendency has been more and more to expose the tumour, and, after carefully surrounding it with sponges, to open it, and stitch the edges of the cut liver to the skin. Like almost every recent advance in abdominal surgery, the success of this plan is dependent upon the ability of the surgeon to operate under aseptic conditions.

THE ninth International Congress of Hygiene and Demography will be held in Madrid from April 10th to 17th, 1898.

DR. RODET, the well-known bacteriologist of Lyons, has been appointed Professor of Bacteriology in the University of Lyons.

A CASE OF OVARIAN CYSTOMA ASSOCIATED WITH PROLAPSUS UTERI, TREATED BY OVARIOTOMY AND HYSTEROPEXY.

By JAMES SWAIN, M.S., M.D.LOND., F.R.C.S.ENG.,
Professor of Surgery at University College, Bristol; Assistant Surgeon to the Bristol Royal Infirmary.

IT is most unusual to find the intra-abdominal pressure incidental to the growth of an ovarian tumour sufficient to cause extrusion of the uterus, although in this case there was doubtless a predisposition to downward displacement, owing to many hours of standing in a shop, and the occurrence of tedious labour necessitating the use of instruments at her confinement some years before.

S. C., aged 47 years, was admitted under my care at the Bristol Royal Infirmary in August, 1896, complaining of the "womb coming down" and the existence of piles. She had noticed a gradual enlargement of the abdomen since the previous Christmas, and the distension had become so great that she was practically incapacitated from all work. She was married at 28 years of age, and had had three children, the youngest now being 8 years old. She had an anxious expression, and there was much general emaciation with considerable dyspnoea. The abdomen, which measured 42 inches in circumference at the umbilicus, was very tense and prominent, especially on the right side; and its cavity apparently contained a large, globular, smooth-walled cyst, through the greater part of which fluctuation was perceptible, although here and there some more solid portions of tumour could be felt. There was an unvarying dullness, with its convexity upwards reaching from the pubes nearly to the ensiform cartilage, with resonance in the flank on either side—in short, the swelling presented the usual characteristics of an ovarian cystoma. There was complete procidentia uteri, the uterus being entirely outside the vagina, much hypertrophied and about 5 inches in length. The rectal wall was also considerably prolapsed.

On August 18th I performed ovariectomy through an incision three inches long about midway between the umbilicus and pubes. About thirty-seven pints of thick yellowish-white fluid escaped; the empty cyst was turned out, and the pedicle ligatured in the ordinary way. The procidentia uteri was now reduced *per vaginam* by one of my colleagues, and two silk-worm gut sutures were passed transversely into the fundus of the uterus about three-quarters of an inch apart, and each suture being buried in about one inch of uterine tissue. The ends of each of these sutures were brought through the whole thickness of the parietes bounding the lower part of the incision on either side, particular care being taken to include the peritoneum, and the ends when tied were left long to distinguish them from the other sutures which closed the rest of the wound. A large rubber ring pessary was then introduced into the vagina to aid in supporting the heavy uterus.

The patient had an uninterrupted recovery. On September 24th the stitches holding the uterus in position were removed, the uterus now being much diminished in size; and the patient went to her home in Wales on October 5th. On December 7th the uterus, which although fixed to the abdominal wall was somewhat mobile at its point of attachment, was found to be of about normal size, and the ring pessary was removed. The patient had considerably increased in weight, and was apparently perfectly well.

The performance of hysteropexy in this case added little to the risk, and was largely instrumental in adding to the after-comfort of the patient. The operation has many advocates and many opponents. The latter point to possible difficulties—which undoubtedly occur in some instances—such as abortion or intestinal obstruction. Abortion may occur in retroflexion and other displacements of the uterus, and therefore unless it can be shown that it is more common in a uterus which has been fixed to the anterior abdominal parietes, its occasional occurrence cannot be used as a forcible argument against the remedy under consideration. The most important step of the operation is to be careful that the peritoneal surfaces of the uterus and of the abdominal wall are brought together. The adhesions so formed subsequently stretch so that the uterus becomes, as it were, suspended from

a new ligament, and the mobility thus allowed—which is easily observable in cases that have been operated upon a few months previously—is all-important in permitting the necessary expansion of the uterus during pregnancy, and so obviating to a large extent the tendency to abortion which is said to exist.

It would be outside the province of this short paper to discuss the relative value of hysteropexy and the so-called "Alexander's operation," but in a recent case of hysteropexy under my care, the superiority of this operation in cases possibly associated with adhesions was made abundantly evident by the existence of adhesions which were by no means apparent before the abdomen was opened, and which would have rendered futile any attempt at shortening of the round ligaments.

Hysteropexy in selected cases is quite justifiable, and has already done much to relieve the intolerable pain sometimes associated with a displaced and adherent uterus in which milder means have failed.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

TETANUS COMPLICATED BY TYPHOID SYMPTOMS AND MANIA: RECOVERY.

On March 25th, J. L. P., a young Dutchman 24 years old, came to me complaining of a sore on the back of his right hand, with pains shooting up the arm. I found in the middle of the dorsum of the right hand a small solid purplish tumour about as large as a pea, and it formed the centre of a bleb, about the size of a penny, which contained a thin serum. There was some redness and swelling of the hand, and pain in Crookshank's gland. I dissected away the skin forming the bleb, and dried the wound. It then appeared raw, and of a raspberry formation. I applied lunar caustic, and dressed the wound with a compound tincture of benzoin on lint. The next day he said he felt better, and had slept well; I then gave him some ichthyol and boric ointment to keep applied to the wound, and cauterised it on March 27th, 28th, and 30th. On March 30th it appeared quite healed. On April 3rd I found the tumour, which had previously almost entirely disappeared, forming "proud flesh." I cauterised it on that and the next day, but on April 5th he complained of having been very restless all the previous night and that the arm was very painful, and I then cut out the growth with a sharp scalpel, and touched a few points which were left with caustic, and applied a soothing dressing. In the evening I was summoned in great haste. I found that he had just recovered from a spasmodic attack. While I was present another came on—he was lying quiet and conscious, and said he felt all right, except for the pain in the arm, when suddenly he stiffened himself out lying on his back, twisted from side to side slowly, his teeth became fast locked, and he became unconscious; but in a few minutes the spasm passed and consciousness returned.

I judged the case to be tetanus, and at once administered full doses of chloral and potassium bromide. I advised a consultation, and the medical man called in agreed with me as to diagnosis and treatment. The painful arm and hand were well bathed in a hot infusion of poppy and camomile heads, and a hot linseed poultice applied constantly over the wound. This greatly relieved the pain, but the attacks came on with increased severity, being very frequent, especially about 10 a.m. each day. The teeth during an attack were always firmly locked, and a stick had to be held in his mouth to prevent the tongue being bitten. The attack usually began by pain shooting along the arm and over the cardiac region. Then cramps ensued, commencing in the legs. For the first few days and nights he could not sleep for more than a few minutes at a time. A hypodermic injection of morphine, gr. $\frac{1}{4}$, had no effect, and the next night chloral, gr. xxx, and tinct. opii, xv $\mathfrak{m}$, had very little.

On April 7th (the third day of the spasms) I gave him the following mixture: R pot. brom. $\mathfrak{z}$ iv, chloral hyd. grs. xl, tinct. opii, $\mathfrak{m}$ xl, aquam ad $\mathfrak{z}$ ij. M. dose $\mathfrak{z}$ ijj, well diluted

with water, every two hours until sleep ensued, and during each attack chloroform was administered by inhalations. Between April 7th and 10th he took ten ounces of this mixture. After the first day or so only $\mathfrak{z}$ ij and sometimes $\mathfrak{z}$ were given, according as necessity was shown, either by increase in the number or violence of the spasms, or by restlessness. He was able to sleep fairly well, was hungry when awake; the spasms gradually diminished, and finally ceased about April 12th. Just before the attacks entirely ceased they were characterised by the patient's throwing himself back and lying on his back with half-closed eyes for a few minutes, during which time he appeared to be quite unconscious. The bowels, which tended to constipation, were kept acting two or three times a day by enemata and a mixture containing magnesium sulphate. The wound on the hand healed in a few days, but the spasms continued for several days longer. The pulse up to April 12th was always very full and regular—about 90 to the minute. About April 10th he complained of a good deal of pain in the bladder, which diminished on using copious draughts of barley water and some tincture of hyoscyamus.

On April 12th and 13th his temperature began to rise and pulse rate quickened, and a new set of symptoms showed themselves, approaching those of typhoid fever. On April 15th he complained very much of sore throat and mouth. In a few days he became quite insane, inclined to be violent, contradictory, and cross with everyone. About April 20th the fever left him. The insanity lasted until about April 30th, when he began to go about again. He is now quite recovered, and got married a month after leaving his bed. I am inclined to think that the patient had his first spasm or premonitory symptoms on the night before I operated the second time. The character of the spasms, generally beginning with cramps in the legs and ending in locking of the jaws, render it almost impossible to doubt that he suffered from tetanus. The low feverish symptoms were in great part due to the irritable state into which the digestive, urinary, nervous systems and mucous membranes were thrown, by the large and constant doses of chloral, bromides, and opium.

I do not think that many cases of tetanus have recovered which have been as near death as this. I attribute the patient's recovery to the almost heroic use of sedatives before the poison had made much way in the system, and to the patient's naturally good and sober constitution.

W. ARCHER ISAAC, M.D., B.A. (Univ. Dub.),
Molteno, South Africa. District Surgeon.

SELF-INFLICTED WOUND OF ABDOMEN; PROTRUSION OF VISCERA; RECOVERY.

THE patient, a man aged 32, was admitted into the Oldham Infirmary on the evening of May 10th. The man had wounded his abdomen with a razor after a quarrel with his wife, and he was brought to the infirmary on a hand ambulance by the police, the wound being covered with some wet lint.

On admission the patient was collapsed, his pulse being 60 a minute and very weak. On removing the blankets in which he was wrapped and the lint covering the abdomen, it was seen that the stomach, the transverse colon, the omentum, and the small intestines had escaped through the wound and completely covered the surface of the abdomen. The man was put under chloroform and the protruded viscera examined for any wound. During all the manipulations that followed a stream of hot sterilised saline solution was allowed to run over the bowels. No wound of viscera was found, and there was no hemorrhage. The protruded viscera were then returned and the peritoneal cavity washed out. The wound was now seen in its full extent. It was 9 inches long, and passed from immediately over the symphysis pubis obliquely upwards towards the right side of the umbilicus, ending 2 inches above that point. The wound was closed in the usual manner, and a Keith's drainage tube was introduced at the lower end. A small quantity of blood-stained fluid was sucked up through this during the night.

The man rallied excellently, and next morning expressed himself as quite well. The Keith's tube was removed. His temperature was 99°, the pulse 78. His after-progress was uneventful. The stitches were removed on the tenth day, the wound being soundly healed. The patient was kept on