up on the usual splint, with a gum and chalk bandage. Very little oozing of blood followed; but much pain was complained of for twelve hours after the operation.

June 22d. The boy's foot was in excellent position; the sole resting on the splint, and blocked immovably by an adjusted piece of felt-sheeting.

July 9th. The boy was convalescent.

August 15th. All mechanical appliances were removed, and some thickened tissue was encouraged to diminish on the outer side of his foot, by laying the foot gently on its outer side. The foot was essentially in a flat position, but there still existed about a quarter of an inch of elevation of the heel, due to rigidity of the tendo Achillis. I did not deem it advisable to divide the tendon, because the case was due to a paralytic cause.

August 23rd. He is now practising and learning to walk on his newly adjusted balance.

CASE III. *Talipes Equinus, Left Foot*.—J. B., aged 10, was admitted into Mark Ward, on June 22nd, 1881.

I met with this boy in St. James's Park, on June 20th, 1881; my attention was drawn to his crutch, and his progression on the dorsum of his left foot. The boy gave me his correct address; and his mother readily sanctioned her son's admission into Westminster Hospital.

At three years and a half old, his mother noticed that the child walked lame; but there was no history of a fit; if any happened, it must have been nocturnal. At four years old, he had measles in the Highgate Convalescent Home, and lost the sight of his left eye. His left foot had steadily become worse; there was wasting of the leg, and gradual shortening. He had been treated twice in the Great Ormond Street Hospital, twice in the Westminster, and twice in the Victoria Hospital for Children. He had been freely tenotomised, and galvanised.

On admission, it was seen to be an extreme case of left talipes equinus; the boy hobbled on a crutch, and supported partially his weight on the dorsum of the foot, over the summits of the metatarsal bones. The phalanges were all rigidly flexed. There were three large indurated corns, and general thickening over the dorsum of the foot. The leg and foot were wasted, and there was shortening of the left leg to the extent of one inch. He had some old rubeolous scars over his trunk, arms, and legs. There was opacity of the lower segment of the left cornea; the sight of the left eye was lost, but the globe was of natural size.

On June 25th, I resected this boy's transverse tarsal arch, by means of the saw and director here shown.

I dissected out a wedge-shaped piece of skin from the inner and outer sides of his left foot. With a blunt periosteal curved knife, I freed the tendons, artery, vein, and nerves, so that the director could be freely passed between the bones of the tarsus and the important soft structures over the dorsum. The director was then held by Mr. Butler as a retractor; the probe-ended saw was slid along the groove on the under aspect of the director; and an accurate wedge of bone was sliced out and readily removed by a pair of bone-forceps. The wedge included slices of the astragalus, os calcis, scaphoid, and cuboid bones. The base of the wedge was, of course, at the dorsum; apex toward the sole. Natural contour was gained, and the foot was put up in a splint, and gum-and-chalk bandage applied over it. No dressings were used, but a daily wash of carbolic water.

August 11th. The boy's convalescence had been absolutely perfect; his foot and toes were at right angles to his leg. He left his bed today, and was measured for a pair of ordinary boots; the sole of the left boot to be one inch higher than that of the right. A small granulating wound existed over the outer side of the foot.

August 23rd. He put on his new pair of boots, and walked up and down the ward, assisted by holding one hand of the nurse. It was the first time that he had walked on the sole of his left foot for six years. This case was exhibited to the surgical visitors at the International Medical Congress, and all were much struck at the result.

CASE IV. *Right Talipes Equino-Varus*.—S. W., aged 11, was admitted into Mark Ward on July 28th, 1881. During dentition,

at fifteen months old, he was very ill, and had a fit during the night; and subsequent paralysis of his right leg resulted, so far as his hip. There was no family disposition to deformity. He had measles in infancy. There was no disparity in the length of his legs.

On admission, the boy presented a well-marked case of talipes equinovarus of the right foot; the muscular development of the right leg was retarded. The tendo Achillis was very tense; the os astragali and scaphoid were dislocated forwards and outwards. He walked with difficulty and pain on his external malleolus, os calcis, cuboid, and outer metatarsal bones. There was a huge bursa over the right cuboid surface.

On August 4th, in the presence of many visitors to the International Medical Congress, I excised a wedge-shaped piece of bone, as in the previous case. The foot was placed in natural position, and fixed with a gum-and-chalk bandage.

August 6th. His foot had slipped out of place during his sleep, by undue strain of the tendo Achillis; therefore, on readjusting the splint, I divided the tendon from a posterior point.

August 24th. The boy is going on in all respects well, and remains still under treatment.

October 21st, 1881. I saw all three of the boys (Cases ii, iii, and iv) this day, walking freely, without the aid of any mechanism, excepting that of a cork sole to each shortened leg.

I cannot but acknowledge, with much gratitude, the earnest care and attention that has been paid to these boys by the resident surgeon, dressers, and nurses of the hospital. Were not our hospital in good sanitary order, and scrupulous cleanliness enforced, it would be impossible to carry out the complete absence of all dressings to the wound. I wish forcibly to insist that the pain caused by dressings is injurious; that the mental apprehensions of children are not to be ignored; and the further that a surgeon prevents mental or bodily suffering, the nearer does he approach the *beau idéal* of perfect surgery.

HYDROPERITONEUM, TRACED TO CHRONIC OVARITIS: OÖPHORECTOMY: RECOVERY.

By ALBAN DORAN, F.R.C.S.,

Surgeon to Out-Patients, Samaritan Free Hospital.

E. M., AGED 23, single, was admitted into the Samaritan Free Hospital in November 1879, under the care of Dr. G. G. Bantock. Nine weeks previous to admission, her abdomen began to enlarge, with slight œdema of the lower extremities; in the course of a month, the abdominal distension had increased so as to cause dyspnoea. Mr. Case of Fareham, finding that the enlargement was evidently due to a collection of free fluid in the peritoneal cavity, tapped the abdomen, and removed four and a half gallons of fluid. The patient rested in bed for four days, and the abdomen began to enlarge once more, a week later. When she was admitted into the hospital, her thorax was carefully examined, but no sign of cardiac nor pulmonary disease could be detected; she had neither been subject to cough nor to any form of rheumatism. Her appetite was very good, nor was there any pain nor sickness after food; her tongue was clean; and the bowels acted regularly without the aid of drugs. When she was at rest in the ward, the excretion of urine amounted to about a pint and a half daily—that fluid being, in this case, of a pale sherry colour, with a slight cloudy deposit of mucus; it was acid; its specific gravity was 1025, without albumen or excess of phosphates.

On inspection, the abdomen, which measured thirty-eight and a half inches in circumference at the umbilicus, was found to appear flattened anteriorly as the patient lay on her back, and there was a clear percussion note over any part of the abdomen that lay uppermost. Fluctuation was free in every direction; but no enlargement of the liver or of any other organ, nor any tumour, could be felt. The fluid in the peritoneum—for there was no doubt of the nature of the abdominal swelling—pressed into Douglas's pouch to such an extent as to push down the posterior wall of the vagina, simulating a rectocele. The patient looked healthy, excepting slight blueness of the lips and the tips of the fingers, which could be accounted for by the dyspnoea due to the distension of the abdomen.

The case being so obscure, Dr. Bantock determined to make an exploratory incision—the more especially, since previous paracentesis had proved of no permanent benefit. On December 17th, 1879, this operation was undertaken. A very weak solution of phenol (1 in 50) was employed in the form of spray. On making the incision, twenty-two pints of ascitic fluid escaped. Dr. Bantock found the liver quite healthy to the eye and touch; he could not detect any enlargement of the kidneys, nor any tumour either in the abdomen or the pelvis. It must here be noted that, for no apparent reason, menstruation, which had

commenced at fifteen and continued with perfect regularity for two years, had ceased entirely for six years. This had led to a suspicion of some form of ovarian disease existing as the cause of the ascites. At the operation, to quote Dr. Bantock's notes: "Both ovaries were in their natural position, and not enlarged; or, if so, very little. But their peculiar condition arrested my attention. Their surface was very irregular, hard, and warty. On bringing them into view, they were much paler than natural, and, on palpation, presented a semi-cystic character. Could this be the cause of the ascites? There could be little doubt that this condition was connected with the absence of menstruation. I determined to remove the ovaries. The pedicle was rather short, and, on drawing the right ovary into view, the outer edge, consisting of the two layers of peritoneum, was very tense. I first secured this by means of a fine ligature (No. 1 silk), I then transfixed and tied in two with No. 3 silk, the outer transfixing silk being brought round the pedicle after the ovary was cut away. The left ovary was treated in the same manner; but, owing to its close connection with the sigmoid flexure, its removal was attended with greater difficulty." The uterus was found to be drawn somewhat backwards; and, owing to some change in its ligaments, partly due to the ligatures on the very short ovarian pedicles, was so tense that it was very difficult to introduce even a small sponge into Douglas's pouch. Owing to the difficulty in getting the peritoneum dry by attempting to remove thoroughly the blood-stained serum, which oozed freely from it in the pelvic region, a drainage-tube was introduced. The operation, performed by Dr. Bantock, with the assistance of Mr. Meredith and myself, lasted one hour; after three-quarters of that time had elapsed, the spray failed, and was not replaced for five minutes, the operation being continued in the interval.

I examined both ovaries immediately after their removal. The right measured one inch and five-eighths; the left, one inch and three-quarters. In both, the external and internal appearances were similar. The tunica albuginea was pinkish; it had not its normal shiny white appearance, and had lost its smooth polished feeling when touched with the fingers. It was puckered in several places; but no new cicatrix, nor any prominence of a cyst or corpus luteum, remained. On section, the whole of the central portion of the stroma was found to have broken down, apparently by mucoid degeneration, leaving a cavity in which, in the right ovary, about a dozen Graafian follicles (from one-twentieth to one-eighth of an inch in diameter) projected, like a row of pearls. They were readily detached from the very soft stroma around their outer part, and all that were opened contained perfect ova, with the germinal spot and vesicle well-marked. In the left ovary, there were very few such follicles; the central softening was less marked. In both, the stroma immediately under the albuginea was unusually tough.

For several days after the operation, much serum escaped from the drainage-tube, saturating the dressings; and what remained in the tube became less and less blood-stained. The temperature never rose above 100.6°. On the sixth day, only two ounces of straw-coloured serum were drawn from the tube, which was removed, and two inches of narrow India-rubber tubing substituted; this was taken away within twelve hours. On the seventh day, the drainage-tube aperture had almost closed; the first stitches were taken out of the abdominal wound on the ninth day. A fortnight later, the patient returned home.

The ascites never returned, as, indeed, has been the case after the mere opening of the abdominal cavity without removal of any organ; and, seventeen months after the operation, Mr. Case kindly wrote to me the following account of the patient's condition: "She is looking very well, and says she is able to do her work without trouble; and the only thing she complains of is a little weakness of the legs and slight leucorrhoeal discharge. She has had no menstrual discharge since her return."

There can be little doubt that, in this case, ascites was due to inflammation of the pelvic peritoneum, and there is strong evidence leading us to believe that the morbid process commenced in the ovaries. Pathologists are very chary about admitting the possibility of ascites from primary inflammation of the peritoneum; and few would admit that such inflammation could give rise to effusion filling the peritoneal cavity to the extent seen in cases of cardiac disease, in cirrhosis, and in this instance now under our consideration. Considering the distinctly morbid state of the ovaries, we are not justified in dismissing this case as an example of "idiopathic ascites". Let it be remembered that the interior of the ovaries contained normal Graafian follicles, yet ovulation had been arrested for years, for not only was there suppression of the closely related phenomenon of menstruation, but also total absence of corpora lutea, and not a sign of any follicular cicatrix on the surface of the ovary. It is clear that some change in the tunica albuginea and subjacent stroma had prevented the rupture of the follicles, for these little cavities all appeared healthy, whilst the morbid thick-

ening and roughness of the superficial part of the ovary was evident. A very slight change in the surface of the ovary may produce irritation of the adjacent peritoneum; and, if continued for a prolonged period, may in this way give rise to considerable effusion into the peritoneal cavity. It is not to the point to question whether the morbid changes in the ovaries were primary, or due to uterine disease; that the ovaries were diseased we know, and it is presumably through them that the peritoneum became affected. They showed every sign of a very chronic state of inflammation. Now, a large smooth-walled ovarian cyst seldom sets up peritonitis with ascites; but, let some solid vegetations protrude from a rent in the cyst wall, then the peritoneum is very likely to become distended with serum, through irritation. Many will say that the irritation is due to morbid cells from the vegetations; but we must not be too ready to ascribe malignancy to these cells. Let us rather look upon them as simple irritants—such as would be inflammatory effusions thrown from the surface of an ovary. In a case under the care of Mr. Spencer Wells, described by myself in the last volume of the *Transactions of the Pathological Society* (vol. xxxi, page 174), not only ascites, but pleuritic effusion, was set up from the irritation (prolonged for over a year) of a discharge from papillomatous growths in the Fallopian tube. Cells certainly escaped into the peritoneum; but it is most significant that ascites never recurred after the operation in April 1879, and the patient is now quite well. In fact, the discharge, and the cells it contained, irritated and inflamed the peritoneum, causing ascitic effusion. Had the disturbance of the serous membrane been due to malignant action on the part of the cells, the patient would hardly be to this day free from abdominal disease. Dr. Bantock's case bears a strong resemblance to this one, as far as the ascites is concerned; and it must be remembered that both commenced with symptoms of disease in the region to which the cause of peritoneal irritation was traced.

Dr. Matthews Duncan has recently turned attention to "hydroperitonæum" (*Medical Times and Gazette*, vol. ii, 1879, page 547); and, in his valuable paper on this subject, he shows that passive peritoneal effusions have, in all well-described cases, a definite cause—such as cancer of the peritoneum; but as to the disease, as an idiopathic affection, he states most definitely: "I am not aware that it" (referring to a large collection of fluid in the peritoneum) "spontaneously and rapidly disappears; but many cases were recorded, which were *probably* of simple hydroperitonæum, and where spontaneous cures, or cures after repeated tapings, took place; and I have seen such cases." Dr. Duncan then gives a supposed case, occurring in a girl aged 19: she was tapped; six months later, she was *slowly refilling*. In short, the "idiopathic" form of hydroperitonæum must be extremely rare; and, considering the condition of the ovaries, Dr. Bantock's case cannot fairly be considered as a primary peritoneal effusion.

NOTES ON A CONJOINT EPIDEMIC OF FACIAL ERYSIPELAS AND ENTERIC FEVER

AT THE SOMERSET AND BATH LUNATIC ASYLUM IN 1879, AND REAPPEARANCE OF ERYSIPELAS IN 1881.

By C. W. C. MADDEN-MEDLICOTT, M.D.

SOME particulars on the above-mentioned epidemics may be of interest to all engaged in sanitary investigations; and, therefore, a condensed account is herewith given.

The outbreak of facial erysipelas involved, from its commencement, no fewer than forty-six cases, with five deaths—namely, thirteen males and thirty-three females, and ranged over a period of six months. The first case occurred in December 1878, on the female side of the Somerset and Bath Lunatic Asylum; and it raged continuously from this date to the 18th February 1879—no fewer than nineteen cases occurring in this period, of whom nineteen inhabited the most recently erected part of the asylum, namely, the infirmary and east wing. These two buildings join each other at right angles, and had been occupied about three and a half years. The majority of these cases were of a very severe type, and were ushered in by previous sickness and rigors. The face and forehead had the peculiar "butterfly-shaped" stamp of redness characteristic of facial erysipelas, and there was also brawiness of the cheeks; while the thermometer registered a temperature varying from 103 to 105 degrees in the axilla, and the pulse ranged from 130 to 140. In some cases, sharp diarrhoea occurred; in others, the face became much disfigured and inflamed; while severe multiple abscesses formed in the eyelids, neck, and scalp—in fact, in some cases, suppuration was most profuse.

On the first outbreak, the following measures were adopted for treatment and precaution. The patients were at once placed in single rooms,