abdomen, but after a few hours she got up again and went about her work as usual. She noticed that the menses came on after this, but were very dark and very scanty. On May 8th, five days after the first attack, when she was washing clothes, she was again suddenly attacked with great pain in the stomach, and became cold as death. She was carried upstairs to bed, and remained there in a state of great collapse from May 8th to 13th, when, as there was no improvement, she was sent into the hospital.

Her condition on admission was that of great collapse, pallor, coldness of surface, feeble pulse, etc. Physical examination of the abdomen revealed a rounded mass, softish and smooth, low down and to the right of the middle line. Impulse applied to the cervix uteri was communicated to the tumour. There was mucus and blood in the vagina. The cervix uteri was deeply torn on the left side. The thoracic and other organs were normal.

I first saw the case on May 15th, two days after admission, and eight days after the second attack I found the condition in the abdomen as already stated. Percussion over the lower part of the abdomen was clear, and nothing was to be felt in Douglas's space. As she seemed to be rallying we agreed to watch events.

On May 17th I received an urgent message that the patient was vomiting, very much worse, and anxious to have something done. After chloroform had been administered I made a small exploratory incision between the pubes and umbilicus, with a view to verify the diagnosis of ruptured tubal pregnancy, which had been made from the first by Mr. Emery, the house-surgeon. On opening the peritoneum the abdomen was found to be full of black clotted blood. The incision was at once enlarged, and a hand introduced to compress the right broad ligament to prevent fresh bleeding, which was feared might recur on the pressure being relieved by opening the abdomen and removing the clots. However, when the clots were removed there was no sign of recurrence or even of recent bleeding. We found a rent in the fundus of the uterus on the right side, extending from the middle to the origin of the right Fallopian tube. The right side of the fundus was twice the breadth of the left. The length of the rent was nearly 2 inches. This opened into a spherical cavity filled with fibrin, which was removed, finding no trace of cyst wall or ovum.

After carefully clearing the peritoneal cavity, we removed the right tube and ovary. Then after carefully washing out the fundus of the uterus, the rent was closed with four fishing gut sutures, the edges being inverted slightly. After again carefully clearing out and inspecting the peritoneal cavity, a drainage tube was put in, and the abdomen closed in the ordinary way.

The patient made a good recovery, and was discharged on July 2nd about six weeks after operation, with a small sinus at the lower end of the wound in the site of the drainage tube. This sinus remained open for some months, discharging a suture now and again till it healed.

About eight months later the patient had a severe attack of dysentery, and since then has had more or less diarrhoea at every monthly period.

The usual treatment in these cases is to remove the uterus. This I ascertained afterwards from some remarks made by Mr. Bland Sutton some time after I operated on my case. He also mentions that he had heard of a case which had been treated in a manner similar to the method I had adopted, and considered it an advance on the previous method of removing the uterus. So that with ordinary surgical principles it is possible under this Listerian dispensation to be wisely ignorant of the orthodox procedures of a less happy time.

THE PRINCE OF WALES'S FUND.—The Honorary Secretaries of the Prince of Wales's Hospital Fund for London request us to announce that an illustrated programme of the Royal Jubilee procession will be published in aid of the funds, to which the entire profits will be devoted. It will give detailed particulars of the procession, and 64 pages of illustration. The volume, the publication of which has been authorised by the Prince of Wales, will be sold at the price of 1s., and will be on sale four or five days before the date of the procession.

FOUR CASES OF INTRAUTERINE DEATH: SPONTANEOUS EXPULSION OF THE OVUM LONG AFTER ITS DEATH.

By JAMES OLIVER, M.D., F.L.S., F.R.S. EDIN.

CASE I. *Retention of a 4½ Months' Product of Conception for Two and a Half Months after its Death.*—M. R., aged 26, and married eight years, had had four children and no miscarriage. The last child was born in June, 1890, and was suckled until June, 1892. After this confinement the menstrual discharge reappeared in September, 1891, and it recurred regularly thereafter for six months. She menstruated for four days in March, 1892, the discharge ceasing on March 24th. From March 24th until August 15th there was complete amenorrhoea. From August 15th until August 29th there was a slight amount of coloured discharge every day. During the fourteen days that this hæmorrhagic discharge was noted, she complained occasionally of slight pain in the lower abdomen. From August 29th until September 21st, when she came under my observation, there had been no recurrence of the hæmorrhagic discharge. On September 21st, 1892, the following notes of the physical signs were made: "There is nothing to note regarding the abdominal examination. Vaginal examination: The cervix uteri is located towards the left side of the pelvis; it is not soft. The os is directed downwards. In front and to the right of the cervix the vaginal roof is pushed down by a somewhat lobulated swelling of about the size of an ordinary cocoa-nut; this swelling is the body of the uterus." On October 21st, 1892, a blood-coloured discharge was again observed, and simultaneously pain was experienced in the lower abdomen. On the following morning a mass was extruded from the vagina, almost round in shape, with a diameter of about 3 inches. It contained a foetus which measured in length 5 inches, and appeared to be 4½ months old. The placenta was hard and cup-shaped.

REMARKS.—This patient became pregnant whilst suckling. The foetus died probably about August 15th, conception having occurred soon after the menstruation in March.

CASE II. *Retention of a 5½ Months' Fetus for Three Months after its Death. Death of Fetus probably dependent upon an Epileptic Seizure attacking the Mother.*—J. C., aged 22, married twelve months, who had had no child and no miscarriage, came under my observation on March 29th, 1893. She then stated that she had not menstruated since July 20th, 1892. She added that during the three weeks preceding an epileptic seizure which she had on January 5th, 1893, she had observed the movements of the child, but since this attack she had felt no movement. On March 29th the following notes were made: "Colostrum can be obtained from both breasts. The abdomen is occupied by a central and globular swelling which extends from the pubes to within an inch of the umbilicus. The cervix uteri is soft and the os is patulous. The abdominal tumour is the enlarged uterus. On auscultation, neither the placental *souffle* nor the foetal heart could be detected." On April 10th, what appeared to be a 5½ months' foetus was expelled.

REMARKS.—In this case the death of the foetus was probably dependent upon the epileptic seizure. Throughout the existence of the foetus *in utero* no external hæmorrhage occurred until a few hours before the dead ovum was expelled.

CASE III. *Retention of an Embryo of from 4 to 6 Weeks for Four Months after its Death.*—E. S., aged 40, and married thirteen years, had had seven children and no miscarriage. The last child was born in March, 1892; it was not suckled, and the menstrual discharge reappeared five weeks after this confinement. During the succeeding twelve months menstruation recurred regularly. She menstruated as usual in April, 1893, the discharge ceasing on April 14th. From April until the last week in July there was complete amenorrhoea. During the last week in July a hæmorrhagic discharge from the vagina was observed, and although slight in amount this discharge had been noted every day thereafter until the patient came under my care, on September 6th, 1893, when the following notes were made: "Abdominal examination is negative. Vaginal examination: The cervix uteri, which is

firm, is located rather higher than usual, and far back. The os is not patulous. The body of the uterus, enlarged to the extent of an eight or nine weeks pregnancy, is detected readily by bimanual examination. On September 24th, labour-like pain was experienced, and a mass was expelled from the vagina. This mass, which was of the size of an orange, contained an embryo of about $1\frac{1}{2}$ inch in length and $1\frac{1}{2}$ ounce of dark biliary-looking fluid.

REMARKS.—In this case the death of the embryo was probably due to defective evolutionary power in the fecundated ovum, and no external hæmorrhage occurred for three months after its death.

CASE IV, *Retention of a 3 or a $3\frac{1}{2}$ Months' Fœtus for Five Months after its Death.*—R. S., aged 40, and married fourteen years, had had five children and two miscarriages. The miscarriages occurred between the births of the fourth and fifth children, and the last child was born in 1890. She ceased menstruating on August 26th, 1895, and thereafter there was complete amenorrhœa until February 12th, 1896, when a dark blood-coloured discharge from the vagina was observed. On March 18th, 1896, the patient came under my care, and she stated that daily since February 12th the blood-coloured discharge from the vagina had been noted. She had complained of no pain. On March 18th the following notes were made. "Abdominal examination is negative. Vaginal examination: The cervix, which is soft, is located towards the left wall of the pelvis, and the os is slightly open. By bimanual examination the body of the uterus is readily defined, and is equal in size to about a ten weeks pregnancy. The consistence of the uterus is doughy, and its right half is lobulated. No colostrum could be obtained from the breasts."

From March 18th until April 24th there was daily a blood-coloured discharge from the vagina. On April 24th with a slight labour-like pain, a mass was expelled from the vagina. This mass contained what appeared to be a 3 or a $3\frac{1}{2}$ months fœtus, and, although the membranes were perfectly intact, the sac contained no fluid.

REMARKS.—In this case the fœtus had probably died in the early part of December, but no external hæmorrhage was observed until February 12th.

NOTE ON A PECULIAR POST-MORTEM APPEARANCE OF THE CARDIAC WALLS.

By F. PARKES WEBER, M.D.,
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THE heart in question was that of a man, aged 56, who had disease of the aortic valve and a malignant tumour of the liver. He died from chronic jaundice and progressive cachexia. The necropsy showed that the tumour was a primary columnar cell carcinoma, completely enclosing the gall bladder, which was crammed full of gall stones. There were a few secondary nodules in the liver, but no metastatic growths were observed in other parts of the body.

The heart was hypertrophied, and there were thickening and retraction of the aortic valves, but the cardiac walls presented an unexpected appearance, namely, multiple spots of a paler colour than the rest of the cardiac tissue. These patches were observed under the exocardium, and on cutting into the heart muscle they were found to be scattered about throughout the cardiac substance. They were somewhat globular in shape, and on the average about the size of a small pea. The tissue of which they were composed seemed to the naked eye to be of the same consistence as, and continuous with, that of the rest of the heart muscle. The only difference which distinguished these spots from the tissue around them was that they were less red, and this, associated with the universal icteric staining, gave them a dirty yellowish appearance. In the centre of some of these spots a minute speck could be distinguished with the naked eye, as if from the prick of a pin.

Under the microscope collections of bacilli, which had taken on the ordinary logwood stain deeply, were seen occupying spaces (sometimes blood vessels) amongst the muscle fibres. These spaces had apparently formed the centres of the pale areas observed by the naked eye, the

main part of the areas having stained just the same as the ordinary cardiac tissue.

Though the necropsy was performed on the day following the patient's death (the commencement of January), I believe that the pale areas in the heart muscle were due to *post-mortem* changes, that is, to some chemical action exerted by the products of metabolism of *post-mortem* growths of bacilli on the tissue around them.

The position of the bacillary colonies, sprinkled as they were through the cardiac substance, necessitates the conclusion that the parent microbes of the colonies must have been disseminated during life, though the absence of an inflammatory reaction shows probably that they only commenced to grow after the blood stream had ceased.

It must be mentioned that besides the definite foci already alluded to there were likewise scattered bacilli seen in other parts of the sections, especially at the edges, as if their growth had continued after the *post-mortem* examination; the pieces removed for microscopic examination were unfortunately not immediately placed in an antiseptic hardening reagent. However, the main conclusion which I have stated remains, I believe, unaffected, for there is no other way of accounting for the unusual appearance of the cardiac substance, an appearance which attracted the attention of, and was novel to, all those present at the *post-mortem* examination. In short, my explanation is that micro-organisms (more or less saprophytic in character) from the intestine or gall passages, gained an entrance during the last moments of life into the blood stream, and by the blood were scattered through the different tissues of the body, so that instead of the *post-mortem* changes having to spread from the intestines, air passages, etc., they commenced at many different spots at the same time, there being already single microbes scattered through the tissues, each one ready to form a colony the moment that the tissue life around it became extinct. The reason why similar appearances were not observed in other tissues is probably, first, that they were not carefully looked for; and secondly, that the comparatively homogeneous texture and tint of the heart substance renders it particularly easy to recognise circumscribed changes, even though slight, in this organ.

NOTES ON AN EPIDEMIC OF RUBELLA.

By W. J. J. ARNOLD, B.A., M.B.R.U.I.,
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THE case mentioned in the BRITISH MEDICAL JOURNAL of April 23rd by Dr. Waters accords more with the clinical features of rubella than those of scarlet fever. Subsequent desquamation is not conclusive evidence that a given rash was that of scarlet fever, nor is the fact that rheumatism complicated the course of the illness.

Desquamation to a greater or less extent is quite common after rubella, though it is often overlooked, owing to its usually limited distribution and the minute size of the epithelial scales.

A word or two on an epidemic which recently occurred in this neighbourhood may be of interest, as illustrating the points of distinction between the two affections. The note is based on the observation of considerably over 200 cases. In its mode of onset the disease closely resembled scarlet fever, —headache, sore throat, vomiting, rise of temperature, and quickened pulse. One of the most striking differences between these two diseases is to be found in the pulse-rate. In all the cases in this epidemic its frequency bore a distinct relation to the temperature, being increased as the temperature rose, but where the temperature was but slightly elevated the pulse, as compared with the rapid and excited pulse of scarlet fever, was distinctly slow and quiet. In one case only did it rise beyond 120 per minute, in very few did it reach this figure, and in the vast majority it was but little over 100 per minute.

The rash appeared almost invariably on the first day, though in one or two instances it was delayed till the second. The rash was of a fainter red shade than that of scarlet fever, and more papular, giving rise very commonly to the "goose skin" condition.