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.,
Physician, German Hospital, Dalston.

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.,
Aberdare.

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.

Contrary to what is generally stated, I never observed the rash on the face, though a suffused blush at the commencement of the illness was common. The white line which remains for a few seconds on drawing the fingernail across the skin, and which is spoken of as "typical" in scarlet fever, I invariably failed to produce. If this line be pathognomonic of the scarlet fever rash, as some say it is, its absence would be a valuable sign to rely on in distinguishing the two rashes.

Enlargement of the posterior cervical glands was a constant and marked feature, I think, without exception, in all the cases. In the great majority of the cases little complaint of illness was made, and that only transitory, seldom lasting beyond the first or second day; and, with rare exceptions, the appetite was scarcely, if at all, impaired. In some few, however, convalescence was not established for a week or ten days.

In one case, that of a child aged 5, the temperature rose to 105° on three or four successive days; there was considerable delirium; pulse as rapid as 130, and there was very abundant rash, followed by conspicuous desquamation, which was general over the body, and was not completed till some weeks had elapsed. There were several other cases which resembled this one, though of lessened severity.

Many of the children, including the child above-mentioned, were, despite the precautionary orders to the contrary, allowed to play in the open air during the desquamation stage, yet no harm resulted.

In all the cases which were at all severe the urine was examined for albumen on different occasions, yet in not one instance was albumen present. In two cases pains in the joints were complained of for three or four days, accompanied by slight exacerbation of the fever, but ending in rapid convalescence. No ear mischief was discoverable in any case, and catarrhal symptoms were uniformly absent.

In general practice the two diseases are undoubtedly often confounded, and this fact frequently accounts for the supposed appearance of scarlet fever twice in the same patient. If in doubt I believe that most practitioners err on the side of safety, and pronounce in favour of the more serious disease, though this course often involves an unnecessary amount of restriction in the treatment of the patient, considering that rubella is practically free from the grave complications and sequelæ attendant upon scarlet fever.

THE PRODUCTION OF ASEPSIS IN ACUTELY SEPTIC WOUNDS BY THE FREE APPLICATION OF PURE CARBOLIC ACID.

By A. ERNEST MAYLARD, M.B.LOND., B.S.,
Surgeon to the Victoria Infirmary, Glasgow.

The following brief extracts of cases show the great potency of pure carbolic, when freely applied, of rendering rapidly aseptic all the parts of an acutely septic wound. In some of these cases the septic process was that of acute traumatic gangrene, and some ounces of the pure acid were brushed over the raw and freely exposed surfaces. In each instance in which it was employed improvement set in immediately after the application.

CASE I. Extensive Laceration of Foot by Railway Accident: Amputation: Traumatic Gangrene: Free Application of Pure Carbolic Acid: Cessation of Septic Process: Cure.—A. B., aged 35 years, was admitted into the Victoria Infirmary in March, 1897. His foot had been badly smashed by a railway accident. The foot was amputated, but the stump became attacked with typical acute traumatic gangrene. The question became one of reamputation or a trial of carbolic acid. The latter method was selected, the whole wound exposed, and the acid freely applied. Improvement was noticed the next day. The acid was applied daily for about a week until all smell had disappeared, all inflammation checked, and healthy granulations were seen to be springing up. As soon as the stump was quite aseptic sufficient bone was removed to enable proper flaps to be formed.

In this case the man's great pain subsided, and all constitutional symptoms at once disappeared on the first application of the acid. No anæsthetic was needed for applying the acid. The result of checking the septic process was to allow more of the limb being saved than would have been possible if reamputation had had to have been performed for the traumatic gangrene.

CASE II. Extensive Tuberculosis of Hip-joint: Acute Suppuration: Amputa-

tion at Hip: Acute Inflammation and Sloughing of Wound: Free Application of Pure Carbolic Acid: Cessation of Septic Process: Cure.—A girl, aged 15 years, practically eaten up with tuberculosis, and possessing little or no recuperative power, was admitted into the Victoria Infirmary in January, 1897. The hip-joint had been excised some weeks previously; a large acute abscess had formed in front of the thigh. The child's condition became such as to render it advisable to amputate at the hip-joint. The anterior flap contained part of the lining wall of the large septic abscess. Transfusion of saline solution was performed immediately after the operation; the pulse and general condition greatly improved. Notwithstanding stuffing and dressing, the large wound became actively septic, and the girl very ill; secondary hæmorrhage was feared, for considerable-sized sloughs were separating, and the discharge was very fetid. The wound was freely opened up, and every part of it copiously swabbed with pure carbolic. The following day showed much improvement both locally and generally. In less than a week the whole septic process was stopped; healthy granulations were seen springing up everywhere, the patient eating and sleeping well, with a normal temperature.

In this case matters looked as bad as they well could, and a nurse was in constant attendance for fear of secondary hæmorrhage. In one of the dressings, after the wound had become practically aseptic and was healing rapidly, we discovered a part of the femoral artery with the ligature attached to it, which had almost separated. The artery itself, however, was well covered over with healthy granulations. It is therefore beyond doubt that had we not checked promptly the septic action, we should have had secondary hæmorrhage.

CASE III. Extensive Laceration of Foot: Acute Traumatic Gangrene: Free Application of Pure Carbolic Acid: Immediate Cessation of Septic Process: Cure.—A boy, aged 24 years, was admitted into the Victoria Infirmary suffering from an extensive lacerated wound of the foot, with dislocation of the internal cuneiform. The case was first seen by my assistant colleague, Dr. Grant Andrew, who replaced the bone, cleaned the wound, and dressed antiseptically. In the course of a few days, however, sloughing set in, with acute inflammation and much fetor of the discharge. It was considered necessary to amputate. An attempt, however, was first made with pure carbolic acid freely applied to every part. Marked improvement at once set in, and the boy left the hospital with a serviceable foot.

The satisfactory progress which at once set in this case after the first application of the acid was very striking. Every effort had been made by prolonged submersion in antiseptic solutions to render the parts aseptic but without avail, and amputation was urgent if the inflammation had not been stopped by the acid.

CASE IV. Extensive Laceration of Forearm and Hand: Amputation: Acute Gangrene of Stump: Free Application of Pure Carbolic Acid: Immediate Cessation of Septic Process: Cure.—A man, aged 27, was admitted to the Victoria Infirmary having received an extensive lacerated wound of the soft part of the forearm and hand. An endeavour was made by carefully cleansing and dressing to save the parts. Amputation had, however, to be performed at the junction of the middle and upper thirds of the forearm. The stump became attacked with acute traumatic gangrene. The flaps were opened out, and pure carbolic acid applied freely to every part. The septic process at once ceased, the temperature fell, and in the course of a few days the wound became quite healthy, and a good stump without further operation resulted.

In this case the man, on the morning following that on which the application had been made, told us he had slept well, had been free from pain, and felt hungry. His temperature had fallen from 102.8° F. to 99.4°. Nothing could have been more striking than the comparison of the man's condition, both locally and generally, before and after the application.

I could add other cases to those briefly narrated above to show how powerful is the germicidal effect (for such I believe to be the action) of pure carbolic acid in all kinds of acute septic cases, whether these be of the nature of acute abscesses, of acute gangrene, or of septic inflammatory processes connected with malignant disease. There appears to be no pain connected with the application of the acid except so far as is entailed in the mechanical manipulation of the wound and its surfaces. When sloughs exist these should be practically soaked in the acid. On the living tissues the acid appears to have no deleterious effect; if allowed, however, to run over the skin it excoriates and causes pain.

NON-VENEREAL BUBO.

By CHARLES C. GODDING, M.R.C.S.,
Fleet-Surgeon, H.M.S. Centurion, Hong Kong.

[Communicated by the DIRECTOR-GENERAL OF THE MEDICAL DEPARTMENT R.N.]

SINCE my paper on Non-veneræ Bubo appeared in the BRITISH MEDICAL JOURNAL of September 26th, 1896, three communications have been made relating to this disease: two from