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.

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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.

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[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

army medical officers—one suggesting a purely venereal origin, the other boils, dhobi, itch, malaria, and septic infection from intestines; finally, Dr. Cantlie's account of these idiopathic buboes, given at the Epidemiological Society, December 16th, and published in the *BRITISH MEDICAL JOURNAL*, January 9th, 1897, connecting them with plague, and classifying them as *pestis minor*. I should like to deal as briefly as possible with each of these propositions, and to state explicitly that my remarks apply only to non-venereal bubo.

It is an old idea that the prevalence of these bubo cases in the army is due to venereal disease, but, in order to show reason for my conviction that venereal disease is not a cause, I have investigated the personal histories of 13 men in this ship who suffered from the disease during the past year (1896) with these results: In 4 young men there was no venereal history whatever; in 1 senior petty officer certainly none for many years; in 5 there had been no venereal history for about eighteen months; 1 had a doubtful history before joining the service, and in 2 only was there any considerable venereal history. The cases with venereal history do not last longer, and the results of treatment also discountenance the venereal idea; mercury and potassium iodide are absolutely harmful, as I found out many years ago, these drugs increasing the general cachexia and tendency of the bubo to suppurate. All cases of bubo associated with venereal disease are invariably so classified.

Malaria, dhobi, boils, and sepsis from intestines are causes suggested by Surgeon-Major B. M. Skinner, A.M.S.¹ I do not consider malaria to be a common cause, and my opinion is fixed because I have found quinine useless, have practically abandoned it, and, as stated in my paper, only give it in those cases in which there are definite indications for its use. My recent cases also are men who have mostly been with me in this ship for the last three years, and who have shown no signs of malarial poisoning. Sympathetic bubo associated with boils, dhobi, etc., would be returned nosologically under their respective headings; but admitting these as immediate causes of origin, they do not account for the long train of constitutional symptoms which mark this disease. The suggestion of septic poisoning from the intestine is very plausible, but in none of my cases has there been dysentery or symptoms of ulceration of the bowel, and I imagine the treatment (free use of arsenic) would very soon have given prominence to such conditions.

As to *pestis minor*, Dr. Cantlie's account of these idiopathic buboes corresponds very closely to my own, especially the symptoms of fever, anæmia and bogginess of the bubo towards the twentieth day. The possible connection of non-venereal bubo with plague has certainly never before occurred to me; doubtless many abortive cases of plague occur during an epidemic (and the same may be said of other epidemic diseases) when from some personal idiosyncrasy the individual is partially protected, and these abortive cases may have given rise to the idea; and had non-venereal bubo been unknown till after the plague epidemic there would have been still more substantial grounds for the association, but non-venereal or sympathetic bubo is a disease which has long existed, and has a distinct nosological heading.

Finally, I have seen these cases for the last twenty years, in various places, the worst on the East African Coast, when there was no suspicion of plague, and for many years past the *Health of the Navy* shows a fairly constant number of these cases, so I fail to draw any connection between the two diseases.

In the absence of any account of this disease, the treatment is necessarily an outcome of personal experience. I deprecate surgical interference for two reasons: (1) Because they are operations on patients already suffering from a disease marked by anæmia and weakness, and consequently (2) the wounds often take a long time to heal, and the resulting scars are sometimes truly formidable and liable to break down. See Case III in my paper.

I think excision of inguinal glands has become rather a matter of routine, and is sometimes undertaken without due regard to the value of the glands. On the other hand, believing as I do that this is a constitutional disease, it would be very illogical on my part to expect to cure it by excising these enlarged glands, which are only a local symptom. This is a

distinct disease; has long existed, and though there are some intractable cases requiring operation, yet the disease can mostly be cured by constitutional treatment. I have received a gratifying account of a case in H.M.S. *Redpole* at Hankow from Surgeon M. J. Rodd, and there are now many recovered men in this ship with sound groins and useful glands to support the statement. I now regard arsenic almost as specific in these cases as quinine in malaria.

NOTE.

¹ BRITISH MEDICAL JOURNAL, January 9th, 1897.

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

A CASE OF RECURRENT BULLOUS KERATITIS.

Cases of bullous keratitis are interesting not only because of their rarity, but also from a pathological point of view. It will be understood that I do not include vesicular keratitis or herpes corneæ, which has been so fully described by Horner. In the course of four years I have only seen three cases of recurrent bullous keratitis—one in Fuchs's clinic, another when house-surgeon with Mr. Berry at Edinburgh, and the one at present under my care. The causes are chiefly two, each giving rise to a distinct form. One form is illustrated by the following case:

Mrs. C., 42, was sent to me three months ago by Dr. Howell of Middlesbrough. She complained of great pain in the right eye, as if there were a foreign body in it. The upper lid was red and somewhat swollen, and there was marked lachrymation and photophobia. The eye itself showed much circumcorneal injection, and occupying the lower half of the cornea was a very large bulla, with opaque contents. The tension was +1. The cause is old deep-seated disease (irido-choroiditis) with raised tension, causing probably œdema of the cornea. A large iridectomy had been performed previous to my seeing the case, and the left eye showed old iritis, with complete posterior synechiæ, and cataract.

Treatment consisted in applying cocaine, removing the bulla as thoroughly as possible with a pair of iris forceps, and the application of a firm pad to keep the eyelids steady, the pad to be removed once or twice daily for the purpose of having the eye washed with weak boracic lotion and applying a little boracic ointment to the edges of the lids. Eserine was also occasionally instilled.

If there is a specific history suitable remedies should be administered, and followed up with tonics. Tonics in any case should be given as the patient gets run down from the constant irritation. The patient should also be out as much as possible.

This case has greatly improved under treatment, but a good deal of corneal opacity remains.

The other form, first described by Professor Hansen Grut, of Copenhagen, results from a superficial wound of the cornea. The symptoms are much the same, but the bulla is usually smaller and has clear contents, and tension is not raised. The tendency to recurrence in this form is ascribed to faulty healing, the epithelium being readily detached so as to form a bulla.

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G. VICTOR MILLER, M.B.

INVERSION AND AVULSION OF THE UTERUS: RECOVERY.

I was sent for in haste five miles down the country on December 29th, 1896, to see a woman who had just been confined. On my arrival at the house the midwife informed me that the child had been born two hours before on the floor, while the mother was on her hands and knees. After separating the child and getting the patient into bed, she found a large lump protruding from the vagina, which she thought was the head of another child, and consequently pulled on it for three-quarters of an hour, until she got it away. I immediately examined this, and found it to be the inverted uterus. This I turned back again, and found the whole of the uterus and cervix, with its peritoneal covering, and one