wall, pendulous parts of the genitalia, seem to be invariably affected. The abdominal viscera and intestinal canal also are prone to attack. Internal pain is followed by indigestion, sometimes by vomiting, and diarrhoea is frequent. This latter, indeed, seems generally to act as a curative agency, and to occur at a period of crisis. In one case that came under my notice there was deep perineal effusion into the perirectal tissue, which was followed by sharp dysentery. The hard and soft palates, the fauces, and pharynx are usually affected, but though the oedema comes so dangerously near the glottis, I have not known an instance of the larynx being attacked. Rapin, in describing what was doubtless a case of this malady as a localised cutaneous disease,¹ pointed out that there was no itchiness. This absence of itchiness in wandering oedema is peculiar, but appears to be invariable; it differentiates the malady widely from urticarial affections, and may be taken as a characteristic symptom.

The duration of the illness is generally about three days, but it is often protracted to a week or even longer. Diarrhoea and copious perspiration are frequently associated with its subsidence, and have doubtless a curative effect, but these symptoms are by no means constant concomitants of the malady.

During the attack the condition of the patient is not characteristic of severe illness. The temperature is but slightly increased, the pulse and heart maintain their normal condition, and there is no albumen in the urine. There is generally gastro-intestinal disturbance from the first—indigestion, and occasionally vomiting. Headache is often severe.

The tendency is always to recovery, though it is obvious that, in view of the danger of oedema attacking the air passages, there must ever be considerable anxiety as to the progress of even the mildest cases. It is probable that a tendency to recurrence is a characteristic of wandering oedema, but the cases which have been recorded are too few to justify a conclusion, and more information on this point is desirable. Sufficient data are not yet before us to justify the acceptance of theories as to the causation of wandering oedema, and ascertained facts are too rare and isolated to establish its pathology.

In a case in which I was able to make a cover-glass preparation of the oedematous fluid a short round-ended bacillus was found. It has a tendency to bipolar staining, but refuses to grow on glycerine agar, blood serum, or potato. It is apparently, like the bacillus of malignant oedema, an anaërope, but an opportunity for further cultivation experiments has not occurred, and, in the absence of definite knowledge, it would be premature to claim for it a pathogenic power. Microscopic examination of the blood does not reveal the presence of a malarial or other parasite. Localised oedemas are always difficult of explanation. No theory has as yet been accepted as accounting for the localised oedema that follows the bite of a centipede or the sting of a scorpion, though it appears now to be probable that in the oedematous fluid which is secreted there is an antitoxin and curative agency to the poisons.

Two conditions suggest themselves at first sight as being likely factors in the causation of wandering oedema—gout and urticaria; but, as the symptoms develop, it will be seen that neither of them satisfactorily accounts for the various phases of the malady. In none of the cases that are reported or that have come under my own observation has there been a history of gout or have the sequelæ justified the supposition of a gouty diathesis. Urticaria also seems to be ruled out of court by the absence of itchiness, the character of the swelling, and the progress of the symptoms.

In three of the four cases that came under my notice there was a history of mushroom poisoning. Discomfort was felt after eating tinned French mushrooms, and the attack came on within forty-eight hours in one case, and in another in seventy-two hours. In a third case, which was milder, edible mushrooms, grown in the Straits Settlements from English spawn had been eaten a week before; and in the fourth case—that of a Malay lad—though there was no definite evidence as to the mushrooms having been eaten, herbs that had been gathered for the family curry where fungi grow plentifully, had been freely partaken of. These facts would seem to afford presumptive evidence that wandering oedema is the result of fungus poison, though they are

scarcely sufficient in number to be conclusive. In any case, it is apparent that it is to a poison that the symptoms must be attributed, but whether the poison is one which has been introduced from without or has been within the body—a product of perverted metabolism—it is difficult to say. The symptoms are as far removed from the ordinary manifestations of agaricin poisoning as they are from gout.

If it is true that wandering oedema has a tendency to recur, the theory that it is due to a poison formed within the body would be considerably strengthened, while the theory of ingestion would be correspondingly weakened. But the cases that have been reported as recurrent appear doubtful instances of the disease, with the probable exception of Kruger's case,² in which the patient had repeated attacks of oedema, and died suddenly from oedema of the glottis. Some of the cases (at least of those described by Dr. Allan Jamieson in the chapter on Urticaria in his *Diseases of the Skin*, and quoted from Strübing, Quincke, and others as acute circumscribed cutaneous oedema) are doubtless identical with wandering oedema and have nothing in common with urticarial affections. But further reports of cases are necessary before the causation and affinities of this malady can be considered as at all settled; and it is to be hoped, now that attention is being directed to the subject, that these will be forthcoming.

REFERENCES.

- ¹ *Revue Médicale de la Suisse Romande*, xii, 1886. ² *Lancet*, February 9th, 1890.

SKIN ERUPTIONS OCCURRING IN PATIENTS ALREADY SUFFERING FROM INFECTED WOUNDS.

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IN THE BRITISH MEDICAL JOURNAL for 1892, vol. i, p. 861, I published a case of dermatitis of the eczema type beginning in a septic axillary wound, which ran an acute course, and was attended by universal exfoliation. During the last two years I have kept a record of cases in my private and hospital work which I believe originated in a similar way, namely, by the absorption of some morbid matter into the circulation.

CASE I. *Pemphigus Foliaceus*.—Hospital patient: Referred to me by Dr. Shaw, of the South Dispensary, on July 3rd, 1895. It appeared that the patient, a girl, aged 9 years, had sustained an injury to her skull by falling from a swing. On admission to hospital the whole cutaneous surface was intensely red and peeling in large dry flakes, for the most part leaving large circular areas of various sizes. In a few days her mouth became affected, the epithelium wrinkling and peeling off, exposing a raw and bleeding mucosa. On July 15th, distinct but flaccid bullæ appeared on the trunk and extremities. In spite of treatment the child succumbed on July 24th, and a post-mortem examination revealed an old superficial injury of the scalp in the left suboccipital region with the remains of extravasated blood beneath it.

CASE II. *Acute Pemphigus*.—Hospital patient: This eruption followed an injury to the hand from a steel hook in a strong, healthy young butcher. The eruption was universal, and consisted of large and small bullæ with serous contents. When admitted the wound had nearly healed. The patient was discharged cured in about six weeks.

CASE III. *Pemphigoid Eruption*.—Private patient: Seen with Dr. Moyle, of Walton. A bullous eruption of both hands, forearms, and face in a lady who was suffering from a whitlow of the right thumb. The contents of the bullæ were serous, sero-purulent, and in a few instances sanguinolent. Dr. Moyle informed me that the patient made a good recovery.

CASE IV. *Impetigo*.—Hospital patient: Developed an impetiginous eruption on the left side of the face and neck and posterior auricular region, also a pustular folliculitis of extensor surface of left arm while suffering from an onychia of the right forefinger.

CASE V. *Acute Dermatitis*.—Private patient referred by Dr. Leask, of Birkenhead: Acute dermatitis of the eczema type of left hand and forearm after a severely-lacerated wound of palm. The scrotum was also inflamed and irritable. Dr. Leask informed me that there was no further extension of the disease, and the patient made a good recovery.

CASE VI. *Erythematous Dermatitis*.—Hospital patient: A workman presented himself with an eruption of an erythematous and scaly character on the trunk, more particularly on the anterior surface. The penis and scrotum were oedematous and scaling. A few papules were present on the left forearm, and the corresponding axillary glands were enlarged and swollen. He was also suffering from a whitlow of the middle finger of left hand and suppurating of the palm, for which he had been under treatment at a general hospital, and during which the eruption appeared.

CASE VII. *Papular Eczema*.—Hospital patient: While under treatment for a varicose ulcer of the leg, developed a papular eczema on the inside of both legs, thighs, and flexor surface of forearms and elbows.

CASE VIII. *Erythema Multiforme*.—Hospital patient: While suffering from an extensive impetigo of the face, developed an erythema multiforme on the trunk and extremities.

CASE IX. Eczema.—Hospital patient: While under treatment for tinea barbae, developed a papular and erythematous eczema of flexor surface of both upper arms. Worse on the right, and involving bend of elbow.

CASE X. Eczema.—Hospital patient: While under treatment for a bulla of right forefinger, the cause of which it was impossible to ascertain, developed an attack of eczema of the left arm and left side of face.

CASE XI. Vesicular Eruption.—Private patient: A lady showed me a small "blister" on the right ring-finger, for which a mild boracic ointment was ordered. In a few days she developed a large vesicular eruption on both hands, attended with *malaise*, headache, and gastro-intestinal catarrh.

CASE XII. Erythema Multiforme.—Hospital patient: A girl, aged 12, six or seven weeks before coming under observation, had pediculi capitis and "sores" on the scalp. On January 4th "blisters" first formed round the mouth and nostrils, became purulent and confluent, and now presented the appearance of an ordinary impetiginous eruption. On January 11th a multiform erythema, very extensive and well marked, appeared on both arms; at the same time a bullous erythema appeared on the face and front of neck.

REMARKS.

These twelve cases may be divided into two classes: First, those in which the eruption followed the infliction of an injury; and, secondly, those in which a pre-existing inflammatory condition of the skin, presumably of a non-traumatic origin, being in evidence. A condition common to both was the formation of pus and sepsis. It is interesting to observe the different types of the eruptions and the preponderating number of cases classed as eczematous, six being of this class, three pemphigus or pemphigoid, two erythematous, and one impetiginous.

What are these different pathological conditions due to? Are they caused by one poison or many generated in the process of sepsis? Is it possible that the same poison will induce one type of eruption in one individual and a different one in another. I venture to think that one toxin is capable of causing them all, the difference in type being due to the susceptibility of the tissues of the patients attacked with this modified form of septicæmia. The eruptions were all acute or subacute, and as far as can be ascertained were attended with more or less systemic disturbance.

Do not the foregoing cases suggest to us that many skin affections which have been attributed to vasomotor disturbance and reflex irritation are due to the absorption of micro-organisms or their products either by the skin or alimentary tract? It behoves us, therefore, to pay more attention to wounds of the integument, however trifling, in endeavouring to explain the cause of certain skin diseases.

ANTISTREPTOCOCCUS SERUM IN SEPTIC ABSORPTION.

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RECENTLY much has been said and written concerning serum-therapy. Having read of several successful results following the use of the antistreptococcus serum, I was led to employ it in the treatment of the following case:

L. M., aged 30, admitted to the Glasgow Hospital for Diseases of Women on May 28th, 1897. She was suffering from a bleeding fibroid, and on June 2nd the operation of oöphorectomy was performed. For the week succeeding the operation the temperature never rose above 100° F., the pulse was full and regular, and from 80 to 90 per minute.

On June 10th the temperature was above 100° F., and phenacetin in doses of 10 gr. thrice daily was ordered. In spite of this the temperature stood at 102° F. on June 15th. In addition to the phenacetin, 2 gr. of quinine every two hours were now ordered. This treatment was continued until June 18th, the temperature in the meantime ranging between 101° and 102.4°.

On June 20th, as the temperature showed no signs of rising higher, and as the pulse during the whole course of this increase in temperature never exceeded 95, and the patient looked somewhat better, it was deemed advisable to curtail the antipyretic remedies; accordingly the quinine was reduced to 6 gr. a day.

On the evening of June 21st the temperature was 102.2°; 10 gr. of phenacetin and 5 gr. of quinine were administered. The temperature in the morning was 102.8°, and the pulse for the first time was over 100. The antipyretic remedies were

now pushed, but by the afternoon the temperature had reached 103.8°, and pulse 110. In the evening the temperature was 104.6° and the pulse 120.

On June 23rd the temperature in the morning was 102° F., the pulse 120, small and wiry; the tongue was very foul, the lips quite anæmic; the countenance presented a pale and pinched expression, and the patient, although conscious, lay in a kind of torpor, hardly answering the questions addressed to her. At 1.30 P.M. 5 c.cm. of the antistreptococcus serum was injected into her left arm. At 6 P.M. her temperature was 104.6° F.; after she had had 10 gr. of phenacetin it fell to 101.4° F. in the course of an hour.

On June 24th, in the arm where she had received the injection the patient complained of pain and swelling; the temperature was 104.6° F., the pulse 112. She again had 5 c.cm. of the serum injected into the right arm; in the afternoon the temperature was 100° F., the pulse 90, but in the evening the temperature was 103.4° F. and the pulse 95.

On June 25th she suffered much from the pain and swelling in both her arms; she was, however, brighter, and answered questions readily; her tongue had begun to clean at the tip and round the edges; the temperature was 100° F., while the pulse was 80.

From this time onwards the patient ceased to give us any concern, and, although the temperature for some days longer went up in the evening to 101° F.—only once to 102° F.—the exhibition of phenacetin in one dose of 10 gr. had the effect of again bringing it down. Ultimately it came down to normal, where it remained, and the patient was dismissed on July 13th, 1897.

REMARKS.

Had I given a larger injection as recommended, a more rapidly favourable issue might have resulted; but the 5 c.cm. plus the 10 gr. of phenacetin had the remarkable effect of controlling the temperature. It was not, however, until another 5 c.cm. of the serum had been injected that a marked change for the better ensued. I am inclined to believe that the recovery which resulted in this case, and with the small quantity of serum used, was due in a great measure to the prompt use of the serum at an early stage of danger.

CHOREA IN RELATION TO SCARLET FEVER.

By JAMES PRIESTLEY, M.D.R.U.I.,

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It would seem doubtful whether chorea should be considered a sequela of scarlet fever or not. Thus, Henoch says: "I have only twice seen chorea during the acute stage of scarlet fever. I have never seen it as a sequela. Considering the very large number of choreic children whom I have had the opportunity of observing this fact seems remarkable, for other authors say they have often seen chorea after scarlet fever." Nor is it mentioned by Goodall and Washbourn,¹ nor by Caiger.² But in the Collective Investigation Committee's report³ scarlet fever is given as the sole antecedent in 6 per cent. Cheadle also recognises it as a sequela, but qualifies the opinion by adding that "scarlet fever chorea is almost certainly a rheumatic chorea." Osler⁴ gives 3 cases in 533.

FREQUENCY.

During the years 1894, 1895, and 1896, 8,360 cases of scarlet fever were under treatment at the North-Eastern Hospital of the Metropolitan Asylums Board, and of these 5,355 were completed there. Thirteen cases of chorea were observed, which gives a proportion of 1 in 412 completed cases. Osler found 1 case of chorea to every 180 patients treated at his infirmary; hence it would appear that chorea is less frequent among scarlet fever patients than among patients in general.

RHEUMATISM.

Five of the 13 cases tabulated on the next page had rheumatic manifestations—that is, 39 per cent. or 9 times the percentage of rheumatism in scarlet fever.⁵ The rheumatism in each instance immediately preceded, or presented itself simultaneously with, the chorea. As is well known, the rheumatism or joint affection which occurs as a complication of scarlet fever sets in towards the end of the first week; but in these cases it was considerably later, indicating a difference in