

a senior; he therefore prepared for a journey abroad to study the experience of other schools, especially those of Great Britain, the Rotunda of Dublin being one of the first he intended to visit. In March following, the chair he had recently quitted again became vacant, and Semmelweis was appointed to occupy it for two years as assistant professor to Dr. Klein. While scarcely in possession of the chair, the sad intelligence of the death of his friend, Prof. Kolletschka, reached him. The Professor fell a victim to the results of a dissection wound, causing phlebitis, aggravated by pleurisy, pericarditis, peritoneal and cerebral complications, with secondary abscesses. The sad history of the young physician's case made a deep impression on Semmelweis. He says, "Kolletschka's fatal symptoms unveiled to my mind an identity with those I had so often noticed on the deathbed of puerperal cases." The more he thought of Kolletschka's illness, the more he saw reason to conclude that his surmises were correct. The cause of Kolletschka's death, he said, was poisoning by decomposed particles of a dead body; if, therefore, his symptoms were similar to those of the disease which carries off so many women in puerperal condition, then similar causes must exist here as existed in Kolletschka's case. After further research, Semmelweis felt able at last to explain what had seemed so obscure. The prevailing tendency of anatomical studies at Vienna impelled the professors, their assistants, and the students to devote much time to the dissecting-rooms. After dissecting it was customary to wash the soiled hands with soap and water, which was insufficient, as the cadaverous smell emanating from the hands of the dissectors evidently proved that particles of decomposing matter were still adhering to the nails and fingers. These were brought in contact with the genital organs of the parturients during examinations, giving an opportunity for the absorption of septicæmic poison by a process similar to that which happened in Kolletschka's case.

The time had now arrived for Semmelweis to enunciate his doctrine of septicæmic poisoning, and at the same time he pointed out the prophylactic process by the use of antiseptic applications. Starting from this point of view, Semmelweis issued orders in May, 1847, that in the Clinique No. 1 every person, before proceeding to examine any patient, should thoroughly wash his hands with liquid chlorine or chlorinated lime-water. The result of this rule was soon manifest, since in the month of May the percentage of mortality stood at 12·24. By the following November and December the number was reduced to 3·04. In October a very striking incident occurred. A parturient woman suffering from cancer of the uterus was admitted; twelve patients were examined after her; all, except one, suffered from childbed fever, and died. In November eight fatal cases resulted from infection, caused by a patient suffering from caries of the knee giving off offensive emanations which contaminated the air of the ward. Taught by experience based on the above facts, Semmelweis declared that not particles from dead bodies alone, but any material in a state of decomposition proceeding from a living organism, even air contaminated from such sources, may generate symptoms of puerperal fever. Scrupulous attention to the use of disinfectants, combined with separation of patients affected with the disease, brought about the most encouraging results; in the second year of the experiment the death-rate fell to 1·27 per cent., which was even more favourable than the returns of the Clinique No. 2. By the light of his discovery Semmelweis was now in a position to solve all those problems which remained so long unexplained. In the Clinique No. 2 midwives only were employed to attend on patients; they had nothing to do with dissecting and post-mortem examinations; the patients therefore were not exposed to infection from those sources. Again, women who were admitted after their confinement was over were spared the examination, and so were those who suffered from premature labour, being cases not adapted for clinical instruction, and therefore did not share the fate of those who were delivered in the hospital, and during labour frequently examined and exposed to infection. The use of chlorine changed matters entirely. Skoda advised that Semmelweis and Lautner should perform experiments on newly delivered rabbits. The result showed that in these animals symptoms like those in the human subject were produced under exposure to cadaveric infection.

Semmelweis now thought that the time had arrived when his views should be made generally known. With this object he consulted first his old friends and well-wishers, especially Rokitsansky, Skoda, and a few of the rising physicians of Vienna, like Hebra and Helm. The arguments brought forward were quite convincing to all. Skoda declared "that there was not a shadow of a doubt that the truth will carry conviction to everybody's judgment."² Communications were made from several quarters to eminent gynæcologists abroad—to men like Dr. Michaelis of Kiel, to Levy of Copenhagen, to Hendrichs of Amsterdam, to Schmidt of Berlin, and to Simpson of Edinburgh. Dr. Arnett read a paper before the Académie de Médecine in Paris; and in England, as mentioned already, Dr. Routh gave a succinct account of his experiences in Vienna. Hebra called the special attention of the profession to the result of Semmelweis's researches in the *Zeitschrift* for December, 1847, and April, 1848, in which mention was made of the approval of the new treatment by Professors Michaelis and Tilanus, who considered the importance of this discovery to be equal to that of Jenner. Hebra was followed by Haller, senior physician and officiating director of the Vienna Hospital, in expounding Semmelweis's theory and experience. He read a paper before the Medical Society of Vienna on Feb. 23rd, 1849, in which he makes the following remarkable observations: "The importance of these experiences for the welfare of the maternity department, and for the hospitals in general, *but particularly for the surgical wards, is beyond calculation, and not merely worthy of consideration by all men of science, but worthy also of special appreciation by the Government*" (the italics are mine.) Haller's words, in alluding to antiseptic surgery, remained unheeded until several decades had passed, and Lister successfully brought into practice what Haller faintly foresaw would some day confer incalculable benefits on humanity.

(To be concluded.)

CASE OF ERYTHEMA NODOSUM OCCURRING WITH SUBACUTE ARTICULAR RHEUMATISM.

By R. GLASGOW PATTESON, B.A., M.B., B.CH., UNIV. DUB.

THE recent discussion at the Clinical Society as to the connexion between erythema nodosum and rheumatism was one of much interest and suggestiveness. Dr. Stephen Mackenzie, who has carefully investigated the subject, on that occasion adduced a large amount of evidence in favour of the relationship; but in only 17 out of 108 cases examined by him were symptoms of acute or subacute rheumatism present during the attack of erythema; and in only 2 out of these 17 cases did the symptoms of the two diseases appear concurrently. The following case may therefore prove of interest from its evident rarity.

B. M.—, a domestic servant, aged nineteen, first noticed pains in her ankles when she awoke on the morning of April 26th. She stated she was quite well on going to bed the previous night, and did not at first pay any attention to the pain, as she thought she had caught cold the week before by substituting a light dress for the heavier one she had been previously wearing. During the day the pains extended up her legs, on the front of which she now noticed some red and painful spots, excessively tender to the touch. The pains increased much in intensity, and the next day the knees became affected as well, so that she was hardly able to get through her work. On the 28th she was quite unfit for work, and when I saw her in the evening her condition was as follows. She complained of pains in the ankles, in the knees (especially the right), and in the wrists, all of which joints were red, swollen, and tender. There was some slight effusion into the right knee-joint. There was no gastric disturbance, no fever, and the pulse was strong and quiet. A well-marked eruption of erythema nodosum was present on both legs. On the front of the left leg about the junction of the upper and middle thirds of the tibia was a raised oval patch, tense and shining, of a vivid redness in

¹ *Ætiologie*, p. 53.

² *Zeitschrift der K. K. Gesellschaft der Aerzte in Wien*. Jahrgang vi., B. i., p. 107.

the central portion and fading away gradually in the surrounding skin. It was about $1\frac{1}{2}$ in. in length by $\frac{3}{4}$ in. in breadth, and its long axis lay parallel to the tibial crest. A somewhat smaller but exactly similar patch existed on the opposite leg about the middle of the tibial crest; and many smaller but less distinctly oval spots, presenting similar characteristics, were scattered over the anterior surfaces of both legs. They were very tender and painful, and both limbs felt hotter than normal, but there was no general elevation of the body temperature. The patient was a stout healthy girl, had never been previously ill, except when a child with measles, and there was no history, as far as she knew, of rheumatism in her family. She was ordered to stay in bed; the joints were wrapped in wool; and sodium salicylate was given in fifteen-grain doses every third hour.

April 29th.—The patient slept well, and felt better this morning, but still complained of pains shooting about the various larger joints. She was bathed in profuse perspiration, so that she had to be placed between blankets; but there was no fever, the temperature in the axilla being 98.6° F.; pulse 88; the heart sounds normal. No further spots were noticed on the legs, but a few patches of acne pustulosa and of tinea versicolor were observed on the chest. Evening temperature 99.4° ; pulse 90.

30th.—The pains have almost ceased, the eruption of erythema is less painful, and the bright redness is fading. The spots have now changed to a dark colour in the centre, with only a marginal zone of redness, but are still distinctly elevated. There was profuse perspiration during the night, but less during the day. The effusion which was present in the right knee-joint has been absorbed. Evening temperature 98.7° ; pulse 80.

May 1st.—The smaller patches on the legs have now subsided, and are only visible as slight discolourations under the skin; but the two larger ones on the crests of the tibia are still slightly raised, and have assumed a dark-greenish colour. The swellings of the joints have disappeared, and there is no pain in them either at rest or on movement. The profuse sweating has stopped. The salicylate was restricted to one dose (fifteen grains) night and morning. Heart normal; also the temperature.

May 2nd.—Sat up for a few hours yesterday evening, and feels no bad effects. The spots have now sunk to the level of the surrounding skin, but present a distinct yellowish discolouration. From this date she progressed satisfactorily for some days, but on the 7th a recurrence of the pains, accompanied with a fresh eruption of the erythema, occurred. The pains rapidly subsided under the influence of the salicylate combined with rest, and the spots of erythema gradually disappeared, passing through the same phases as in the first attack. There was no recurrence after this, and, except for slight pains felt in the ankles after any over-exertion, she was practically well. The heart was unaffected throughout both attacks. A short change to the country completed the cure.

As points of interest in the case, we may notice the concurrent appearance of the erythema and the articular rheumatism; the absence of any history of previous rheumatism on the part of the patient, or in her family (if reliable); and the rapid subsidence of the rheumatic symptoms. Whether this latter result is to be attributed to the rest in bed or to the sodium salicylate administered I will not undertake to say.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—The Quarterly Court of the above Society was held at 53, Berners-street, on July 14th, at 8 P.M. Dr. Iliff, vice-president, was in the chair. One member was elected, the resignations of two were accepted, four were reported as having ceased to be members, and the deaths of five were announced. Three fresh applications for grants were read from three widows, and assistance at the rate of £25, £35, and £50 per annum was given to them. The deaths of two widows were reported; one had been in receipt of £40 per annum since 1858, the other of £35 per annum since 1864. Grants amounting to £1353 were made to the sixty-two widows, the nine orphans on the books, and the three orphans on the Cope-land Fund. The expenses of the quarter were about £37. A legacy of £300 from the late Dr. Harvey Owen was reported by the treasurer.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collegeras habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Prooemium.

ST. THOMAS'S HOSPITAL.

TWO CASES OF FRACTURE OF THE BASE OF THE SKULL;
RECOVERY.

(Under the care of Sir W. MAC CORMAC.)

IN THE LANCET for Jan. 16th of this year, p. 105, we published notes of a case of fracture of the base of the skull with extensive fracture of the bones of the face, followed by paralysis of the external rectus and optic neuritis. The first of the following two cases may well be read in connexion with that, for in extent of injury received, subsequent development of symptoms, and result, there is great similarity between the two. The case which we now publish, however, was complicated by the presence of a discharge from the ear of old standing, and probably of fetid character, for it was not long before the hæmorrhage from the ear, which ensued on the fracture, gave way to a profuse and very offensive purulent discharge (a similar discharge flowed from the nose), giving cause to fear the onset of septic meningitis or of pyæmia, a fear which was not allayed by the inflammatory swelling of the face and the formation of points of suppuration in or near the fractured facial bones. That basal meningitis ensued would appear from the condition of the eyes, but that it was of septic character is disproved by the temperature record and the result. These, also with the fact that the suppuration was limited to the fractures of the facial bones, and the absence of constitutional symptoms, negative pyæmia. The second case is chiefly remarkable for the very large quantity of cerebro-spinal fluid which flowed from the ear, which commenced soon after the injury and continued for ten days. That it was cerebro-spinal fluid was proved by chemical examination, the large quantity collected making it easy to apply tests. From the account it would appear that the cerebral symptoms were comparatively slight, severe headache being the most marked. It would come under the heading of the first group of cases (as arranged by Hewett), in which watery discharge from the ear occurs, and indicates fracture through the internal auditory meatus. It is usually a grave symptom.

CASE I. *Fracture of the Base of the Skull, of the Bones of the Face, and Left Ulna; Suppuration at the points of fracture; Optic Neuritis; Recovery.*—G. D—, aged nine, a schoolboy, was admitted into Leopold ward on March 15th, 1885, at 5 P.M., having been knocked down and run over by a carriage and pair about three-quarters of an hour previously. At the same time his companion, who had likewise been run over by the same carriage, was admitted with fractured base, but only lived two hours. When seen, the boy was quite unconscious, bleeding profusely from the right ear and both nostrils. The pupils were contracted, the left being smaller than the right. The eyelids and the surrounding parts were bruised and swollen, and there was hæmorrhage under the left conjunctiva. The right mastoid process was bruised. There was fracture of the nasal bones, of the superior maxillæ with some separation, of the lower jaw in front of the left incisor tooth, the right half being displaced downwards. The left ulna was broken in the middle of the shaft, there being free movement, with crepitus and considerable bruising of the part. The temperature was 95° , and the patient was suffering from shock. He had marked paralysis of the left side of the face. The head was shaved and an ice-bag applied to it. Two grains of calomel were administered. Anterior and posterior splints were applied to the forearm.

March 16th.—The calomel had acted and the patient was better, answering "Yes" and "No" to questions, but was very irritable. Pulse 136; temperature still low (97°). The discharge from both the nose and ears was purulent and very offensive. On inquiry it was found that the boy had