1886 the first phalangeal joints became much enlarged. In the same year he was again in the hospital, this time for laryngeal catarrh, and whilst there noticed that lumps developed very rapidly—"in the course of a few hours"—over his chest. According to his own account he was then for the first time diagnosed as having leprosy, by a civilian doctor. He was discharged from the army in August, 1887, and since his discharge the swellings have become much more numerous. He has never noticed any anæsthetic patches. He says that the swellings "come and go," and he has noticed them develop, especially whenever he is constipated. Since leaving the army he has lost much flesh. For the last three weeks he has had a bad cough, and sweats much at night. He is subject to attacks of general pruritus, coming on about once a month, and lasting for two or three days. He complains of increasing weakness, but thinks that of late the leprosy has not increased, and considers that he has good general health.

Condition on admission.—Looks much older than he is—say fifty-five. Has a typically leonine aspect. The skin of the face is yellowish, shiny, and smooth. He has no moustache, whiskers, or eyebrows. There are a few hairs under the skin. The conjunctivæ are slightly yellow. There is much thickening of the subcutaneous tissue of the eyebrows, nose, cheeks, and ears. The lobes of the ears are enlarged, flabby, and pendant. There is hardly any bridge to the nose. The facial furrows are much deepened. The tongue shows three small patches near the tip.—Thorax: Skin smooth and yellowish. There are numerous discrete copper-coloured tubercles, situated in and just beneath the skin, scattered universally over the front of the trunk. There is a scab on an inflamed base on the right elbow, and a large red scaly patch resembling psoriasis over the left elbow.—Arms: Very numerous tubercles, varying in diameter from a pin's head to a fourpenny-piece, on the extensor surfaces of the upper arms, also several maculæ; these maculæ are of various shades of pigmentation—red, brown, black, and a few white. The skin over the backs of the hands and wrists is thickened, red, and in parts scaly. The first phalanges are enlarged, seemingly from skin-infiltration. The nails are all cracked and broken.—Abdomen shows numerous tubercles and maculæ.—Back: There are numerous tubercles and maculæ, especially over the buttocks. Some of the maculæ display a white centre, surrounded by a dark ring.—Legs: Tubercles are scattered all over the thighs. In each ham is the scar of an old ulcer. There are four ulcers over the ankles and lower part of the legs. The largest of these is about four inches long by two inches broad. They have a sodden, white, raised margin, are covered with feeble granulations, and exude much pus. The skin of the foot has a tendency to peel, and the nails are badly nourished.—There are two or three small anæsthetic patches on the extensor surfaces of the arms, one of which is not larger than a pea. Nothing abnormal was detected in the heart or abdominal viscera. A few doubtful clicks were heard at the apices of the lungs. The throat was examined with the laryngoscope, the mucous membrane of the aryteno-epiglottidean folds was thickened and tuberculated, and prevented any view being obtained of the vocal cords.

Course and treatment.—The man remained in the hospital until the beginning of January. During the whole of the time his temperature was very irregular, varying between 96.6° and 102.6°. Whenever the fever showed exacerbation, new tubercles appeared, principally on his thorax, back, and arms. The evening temperature was usually the highest, but occasionally the maximum point was reached about 3 P.M. Salicylate of soda was tried in simple doses three times a day, but the administration of this drug was promptly followed by the worst exacerbation of fever, and the most rapid development of tubercles that occurred during his whole stay in the hospital, and after a week's trial it was given up. He seemed to derive benefit from Chaulmoogra oil in doses of fifteen grains three times a day, and also from the outward application of equal parts of Gurjun oil and olive oil. Carbolic acid lotion, boracic acid, and iodoform were tried for the ulcers, of which the latter was by far the most successful, and when he left the ulcers were almost healed. He had a constant cough, due to laryngeal irritation, as nothing definite was ever heard in his lungs. His general health improved very greatly, and he was mainly instrumental in decorating the ward at Christmas. During his last six weeks the temperature was more regular, not rising above

100°; his urine was free from albumen. He went from St. George's to St. Thomas's, where he remained some months.

He presented himself for readmission at St. George's on May 29th, 1889. The leprosy had decidedly improved, there were fewer tubercles, and his aspect was much less leonine. But he was very low and ill, partly from starvation (as he was unable to live on his pension, and could get no work), but principally from phthisis. Both lungs were extensively diseased, and he was much emaciated. He was treated almost solely for the lung mischief, but after a temporary improvement he gradually got weaker, and died on July 13th, having developed a left pneumothorax a few days previously.

Remarks by Mr. LE CRONIER LANCASTER.—This case was a typical example of the tubercular variety of leprosy, and ran a characteristic course. The development of the tubercles during the febrile attacks was very well marked. The slight amount of anæsthesia was curious; he was not aware of it himself until it was demonstrated upon him. That there was, however, some interstitial neuritis is probable from the fact that the swollen ulnar nerve could be plainly felt behind each condyle. Dr. Sheridan Delépine, however, has various specimens of the tissues in preparation for microscopical examination. There is no doubt that his leprosy *per se* was considerably better when he died than on his first admission 11 months previously, and the improvement dated from the administration of the Chaulmoogra oil and the application of the Gurjun oil. Salicylate of soda, which has been much recommended for the reduction of the leprosy pyrexia, failed so signally that it was not considered advisable to give it an extended trial. His disease was not inherited, and he stated that though leprosy was frequent among the natives at Bellary, yet he knew of no other European having been attacked. I must thank Dr. Cavafy for his kind permission to publish the case.

CITY HOSPITAL (SOUTH), LIVERPOOL.

TWO CASES OF SCARLATINAL NEPHRITIS, FATAL FROM MENINGITIS; NECROPSY.

(Under the care of Dr. W. IRVINE.)

THE occurrence within a short space of time of two cases similar in many respects, and illustrative of a rare sequela of scarlet fever, makes them of sufficient interest for publication. How far the later symptoms were due to uræmia, and how far to meningitis, and the question of the pyæmic origin or otherwise of the meningitis, are not easily determinable. For the account of these cases we are indebted to Mr. C. Knox Bond, resident medical officer.

CASE 1. John F. C—, aged five years, was admitted to the hospital on the 3rd of June, 1889, suffering from scarlatinal nephritis. The parents stated that the child had had scarlet fever, with definite red rash, and sore throat followed by desquamation, five weeks previously. The attack was mild, and the boy had been up and about until five days previously to admission, when he had a fit, followed by vomiting frequently repeated during the next two days. He appeared ill, was breathing rapidly, expiration being attended by expulsive effort, the face pale, aspect dull and heavy. The skin was dry, presented no rash and very slight indication of desquamation on the lower extremities and the palms of the hands. No œdema beyond very slight puffiness on the dorsum of each foot, said to have been noticed previously to admission. Lungs: Resonance impaired over left chest, especially back; movement good; a few bronchitic sounds over left lung. The heart sounds were sharply accentuated at the base and apex. Pulse 140, hard. The urine contained a very slight shade of albumen, treated with picric acid; and gave no blueness with guaiacum and ether. The tongue was thickly coated along the dorsum, yellow; edges clean and moist. Temperature 103.4°. The child remained in much the same condition until June 9th, when the apex of the right lung became consolidated, slight left otorrhœa commenced, and diarrhœa supervened. On the night of the 10th he became very dull, with slight intervals of restlessness and delirium, and was very cold and collapsed, the temperature falling in a few hours from 102.8° to subnormal. This condition was attributed to the effect of the application of ice to the abdomen to check the diarrhœa; on discontinuing this treatment the temperature again rose and the collapse abated. The lung consolidation rapidly

spread downwards, until signs were present over the entire front and upper scapular region on the right side. The heart's action became very irregular and laboured; the pulse 128, and correspondingly irregular; the pupils were large, equal, and very mobile. The discharge from the ear had ceased. The child became more dull, and the evacuations were passed involuntarily. After 11 P.M. on the night of June 12th the temperature, previously normal for some thirty-six hours, commenced to rise, reaching a maximum of 105° 8' at 5 P.M. on the following day, and remained high till death took place at midnight. This sudden onset of fever was associated with vomiting, profuse sweats, free discharge from right and left ears, repeated convulsions, and coma, which preceded death.

Necropsy, thirty-five hours after death.—Thorax: There was slight excess of fluid in the pericardial sac and dilatation of the ventricles of the heart; no valve lesion. The right lung was adherent over the front, the adhesions soft and recent, the upper lobe solid, and in a condition of red hepatisation. On removing the skull-cap the membranes were found to be much congested, the dura mater slightly adherent here and there at small patches along the longitudinal sinus, where recent lymph had been thrown out, chiefly about the middle of the sinus. The brain substance generally was soft, swollen, and œdematous, and there was slight excess of fluid in the ventricles. No indication of extension of ear suppuration was observed about the temporal bone. No scattered abscesses elsewhere in the organs or other evidence of pyæmia. The kidneys presented the usual appearances in nephritis.

CASE 2.—Emily H.—, aged five years, was admitted to hospital on July 2nd, 1889, suffering from scarlatinal nephritis. The primary illness had been mild, the patient never having been kept in bed. A red rash was the only symptom noticed three weeks before admission. A younger child, a sister, had died convulsed at home a few days before this child was brought to the hospital. On admission, the child appeared ill, but was sensible, and could walk. She was desquamating about the hands and feet; the skin was dry. There were general anasarca, ascites, and lung œdema, with pleural dropsy. The heart-sounds were clear. The mother said she had had ear discharge, but none was then present. The tongue was clean, papillæ just red and prominent. Pulse 102; tension increased; regular; respiration 70, easy. Cough single, frequent. Temperature 101°. Urine scanty, showed slightest trace of albumen with picric acid; no blueness with guaiacum and ether. The child improved gradually under treatment, the dropsy almost entirely disappeared, the lung condition amended, the skin became moist, and the child less pale and lethargic, the pulse becoming softer and less frequent; vomiting, which was a rather troublesome symptom, ceased, and the temperature fell to normal. The improvement continued until the early morning of June 10th, when, after a fairly good night, the child was noticed to be not so well, having become very dull, breathing with effort and rapidly; was restless, grinding her teeth, biting her hands, screaming out at times, rolling her head about, and between 9 and 10 A.M. she became unconscious, remaining so until 1.30 A.M. on the following morning, when she died. The temperature commenced to rise after 7 A.M. from normal, reaching 101° 8' at 11 P.M. The pulse became very irregular and intermittent, hard, scarcely to be counted, at the wrist 100. Convulsions appeared impending several times, slight twitching taking place; baths were given frequently and free purgation. Nitro-glycerine relieved the vascular tension, and the child died without actual convulsion taking place. The eyes became fixed, wide, pupils dilated, and equal. There was no vomiting. At the necropsy held on the day following death, the appearances of the brain and membranes were almost identical with those seen in the previous case, the amount of lymph thrown out towards the middle of the longitudinal sinus being in excess of that then seen.

RABIES. — According to the *London Gazette*, the number of dogs in England reported during the week ending the 10th inst. as afflicted with rabies was 13 against 15 in the previous week. Of these, 9 were killed and 2 died. The remaining two cases existed in previous weeks, but were not reported until this week. Of the 13 diseased animals, 2 belonged to Hants, Kent, and Lancaster respectively, 3 to London, and 1 each to Kent, Middlesex (excluding London), Oxford, and York (West Riding).

Reviews and Notices of Books.

On Bronchial Asthma: its Pathology and Treatment.
By J. B. BERKART, M.D. Second Edition. London: J. & A. Churchill. 1889.

THE subject of asthma is a fertile field for hypothesis, and many have been the theories advanced to explain its paroxysmal character and the varied conditions which apparently favour its occurrence. Among them all that which has gained the widest acceptance, which not only harmonises with the clinical phenomena and morbid associations of the affection, but which seems to be fully confirmed by the results of treatment, is that of bronchial spasm. It would be idle to deny that this theory is free from objection on the physiological side, but that it is competent to account for the phenomena of the attack and to explain the action of remedies is certainly true. The great exponent of the doctrine in this country was the late Dr. Hyde Salter, whose work on asthma ranks amongst our medical classics. It is well worth taking down from the shelf, to re-peruse its vivid descriptions, before turning to the monograph by Dr. Berkart, of which the second edition is now before us. The reader will then be the better able to judge whether the facts and reasonings advanced by Dr. Berkart are sufficiently weighty to overturn the views held by his predecessor; and we may hope that Dr. Berkart's able and highly interesting essay will incite others to follow his example, and to study the phenomena of the disease untrammelled by preconceptions or prejudice.

There is much that is excellent in Dr. Berkart's volume. Nowhere, we think, will be found so elaborate and careful a study of the sputa of the asthmatic, a description which is enhanced by drawings of great beauty and delicacy. Dr. Berkart lays great stress upon the characters of the sputum, for they reveal much, he thinks, of the true nature of the affection. This he holds to be essentially inflammatory in nature, and he avers that the process invariably spreads from above downwards. There is, indeed, no question that in the majority of cases the bronchial "spasm" is preceded by symptoms of irritation of the nasopharynx. Violent sneezing is often a precursor, by years, of the onset of asthma, and many an attack is ushered in by the symptoms of nasal catarrh. Nevertheless, cases do occur where the dyspnoeal paroxysm arises suddenly, and without premonitory symptoms of any kind. Dr. Berkart's view is that the inflammatory process involves changes in the epithelial lining of the bronchi, accompanied by a croupous exudation, as evidenced in the casts and spirals which are expectorated during or at the close of an attack; and that the dyspnoeal paroxysm is owing to the displacement of plugs so formed, and their lodgment in other parts of the bronchial tract. This detachment of plugs—he applies the term "embolism" to their transference—and the consequent obstruction to which they give rise, account, he thinks, in great measure for the expiratory difficulty, although he is quite prepared to accept a certain amount of superadded spasm, "bronchial tenesmus," owing to the presence of these obstructions. The cessation of the paroxysm is due to the free secretion of thin fluid, and the dilatation of the bronchi, allowing of the escape of the plugs of mucus and epithelium. This ingenious doctrine is supported by the carefully described dissection of the lung of one case, where such a plug was found, together with secondary changes in the bronchioles and alveoli, and it is, moreover, applied to the circumstances of the attack. In order, however, to establish it the author is compelled to thrust aside as "romance" and "imagination" the greater portion of the exciting and predisposing causes hitherto alleged to exist. For him "hay asthma," in so far as it is due