to the infirmary within a few hours of the accident with a wound over the inner ankle running from the anterior border of the internal malleolus round the back of the heel to the outer border of the tendo Achillis; through the wound the astragalus was protruded. The internal lateral ligament was but slightly injured, and on this, as a hinge, the astragalus was turned with its upper surface downwards, having been completely torn away from the external lateral ligament; the outer articular surface was broken, but there was no fracture of the malleoli. The flexor longus pollicis tendon was torn from its muscle and had to be removed; the posterior tibial artery was torn, though not bleeding, but the nerve was not injured. After enlarging the wound, the astragalus was separated from its attachments and removed, and the wound was then well syringed with perchloride solution, a large drainage-tube being inserted. It was dressed antiseptically and put up on an anterior wire splint. The wound, which was in a very dirty condition when he was brought in, was evidently not fully asepticised, for it suppurated, and the matter collecting by the side of the tendo Achillis had to be let out by incision. He made a slow recovery, and was discharged on Feb. 5th with a limb which promised to become a very useful member.

CASE 4. Compound Fracture of Humerus, with Split Fracture into Elbow-joint; Recovery with freely movable joint.—A. B.—, aged ten, a schoolboy, was admitted on July 16th, 1885, six hours after being thrown down by a companion, when there was found to be a wound of $1\frac{1}{2}$ in. in front of the lower end of the humerus just above the flexure of the elbow, communicating with a very loose split fracture opening the elbow-joint, the muscles being much torn. The wound was syringed with perchloride lotion, and dressed antiseptically, a drainage-tube being inserted. The limb was placed on an internal rectangular splint. He was made an out-patient on Aug. 11th, with the wound almost healed, but with much callus around the seat of fracture, impeding the movements in the elbow. The splint was left off five weeks after the accident, and friction and passive movements employed. When seen in February, 1886, all the movements of the joint were very good. He had no pain, and the fracture was quite sound.

Remarks by Mr. MAYO ROBSON.—Before the introduction of antiseptic surgery such injuries would probably have required primary amputation; or even, if at considerable risk to life attempts had been made to save the limbs, supuration must have occurred in and around the articulations leading to ankylosis, if not necessitating secondary amputation. The chief difficulty is in rendering wounds of this nature aseptic, since the skin is as a rule greasy and dirty, and the muscles and bones are often covered with grit and foreign matters. To effect this the skin is well rubbed with turpentine, which removes the grease and renders it clean and aseptic; and after all foreign matters have been picked out, or if needful scrubbed away by means of a brush, the wound is very freely syringed out over and over again with perchloride lotion (1 in 2000) by means of a Higginson's syringe. A drainage-tube and sutures having been inserted if needful, the wound is covered with a single layer of gauze soaked with perchloride lotion, and over this dry dressings of salicylic wool or silk are applied, the chief guiding principles in the after-treatment being infrequent dressings and fixation of the limb until healing has taken place, after which friction and passive movements help to restore impaired functions.

TIMARU HOSPITAL, NEW ZEALAND.

TWO CASES OF COMPOUND DEPRESSED FRACTURE OF THE VAULT OF THE SKULL; TREPHINING; RECOVERY; REMARKS.

(Under the care of Mr. H. V. DREW.)

CASE 1.—Alex. D.—, aged forty-two, a farmer, was admitted on Feb. 15th, 1885. When seen, a few minutes after admission, he was sitting up in bed and quite sensible. He nodded and smiled when spoken to, and in answer to questions said that a heavy horse had reared, and in coming down had struck him on the head with one of his fore-feet, which stunned him for a few minutes, and when he tried to get up he found himself paralysed all down the right side. On removing the dressing from his head a pulsating area the size of half-a-crown was visible, and on examination under chloroform, which was kindly administered by Dr. Hogg, the bone was found to be sunk right into the brain,

the same having "welled up" over it. Not being able to remove the bone, Mr. Drew used a small trephine at the extreme margin of the fracture, which enabled him to remove all the fragments—also about half an ounce of brain matter, as near as could be judged, this being completely disorganised. All foreign matter, clots, &c., having been removed and the wound washed out gently with a 1 in 40 carbolic solution, the scalp was laid down without sutures of any sort, a piece of Lister's protective covering the wound; over this was placed a piece of lint wrung out in a 1 in 40 carbolic solution, and then a piece of iodoform wool, with one layer of bandage under the chin and over the head to keep things in their place. Irrigation with a 1 in 40 carbolic iced solution was resorted to, but this had to give way to rectified spirit lotion, as symptoms of carbolic poisoning began to manifest themselves. The patient did not vomit at all. His food consisted of iced milk and chicken broth, with bread later on, and the only medicine he had was an occasional dose of calomel. On the thirteenth day he could flex his previously paralysed leg; on the twenty-fifth day he could extend the same. On the twenty-seventh day he began to recover the use of his arm (flexion only), and on the thirtieth day he could extend the same, though he had not yet recovered the power of pronation or supination. On the thirty-second day he had a bilious attack, and his temperature rose to 101° F. and his pulse to 150, but fortunately by the use of calomel both were reduced in forty-eight hours to normal.

The patient during this attack never vomited in the ordinary acceptance of the word, for he has the power to cause his food to regurgitate at will; and by so doing he avoided the risk which forcible vomiting might have caused him to incur. At the end of eight weeks the patient had recovered all the movements of his arm and leg. The wound had long since healed, though a pulsating area about the size of half-a-crown is visible. The injury was seated over the ascending parietal convolution, and lobule of same (left) as near as could be judged. The wound was perfectly antiseptic, though Lister's dressing could not be accurately adhered to. The wound was dressed every day under a continuous dripping of 1 in 40 carbolic. No sutures were employed, accurate union was effected, and the wound was left alone. The temperature never rose above 99° F., except during the bilious attack. The recovery of flexion before extension of each limb is noteworthy, also the later return of the more complex movements. Slight bagging of the scalp at the back of the head was noticed, presumably due to the escape of subarachnoid fluid, but was soon completely absorbed. The pulse fluctuated between 50 and 90 (except during the bilious attack), and the greatest difficulty met with in conducting the case was the regulation of the bowels. In February last the patient was still well, and was doing hard work.

CASE 2.—John L.—, aged forty-five, nurseryman, was admitted on Jan. 2nd, 1886, suffering from the effects of a blow from a 16 lb. hammer, received at the Caledonian Sports. On admission he was found to be conscious and suffering somewhat from shock and a lacerated wound found over the right frontal bone, the greater part of the latter being depressed. The fracture was very extensive, and there was bleeding from the nose, the right eyelid being very tense from extravasation of blood. Dr. Hayes of Temaka was with Mr. Drew at the time, and kindly assisted; and as he agreed as to the advisability of trephining, the operation was at once proceeded with. A small piece was removed with the trephine, and then the large depressed part was raised, and, after some little difficulty, kept in position. The skull was found to be excessively thick (three-eighths of an inch). The scalp was laid down when the bleeding had ceased, and silver sutures were used to unite the incised portion of the wound, the posterior or lacerated part being left open and a small drainage-tube inserted. The wound was dressed as in Case 1, and the patient put upon a clean bed. Towards the end of the operation the patient vomited a large quantity of altered blood, and the vomiting of blood continued throughout the night in spite of sucking ice.

Next day the wound was dressed as before, and the tube cleaned and replaced; no depression was noticeable, and things looked well; pulse 60; temperature 98° F. No vomiting occurred after this. A little milk-and-water (iced) and a little thin gruel were taken. Evening temperature $99^{\circ}4'$. The patient remembered nothing about being brought in or about the operation, though he spoke quite rationally at the

time. He sees "double," and is completely deaf on the right side; has numbness of skin of forehead, and complete loss of sensation over the area of distribution of the infra-orbital nerve, also of the right lower part of face; his taste is also much affected. Mr. Drew therefore concluded that taken with the vomiting of blood that he had a fracture of the base, as well as the fracture described.

On the sixth day the sutures were completely removed, and on the seventh day the drainage-tube, which had been shortened from time to time. On the twenty-seventh day the patient was sitting up in bed, the wound having been healed for some days. The highest temperature was 99.8° F. on the seventh day, and has since been normal. Hearing has returned, taste and sensation of skin of face much improved, and vision is normal. Patient feels as well as before the accident, and there is no mental or physical defect. He left the hospital on Feb. 2nd, 1886, exactly one month after admission.

Remarks by Mr. DREW.—I attribute the successful results in these two cases, both of which were of extreme severity, and both only forty-two years of age, to the following causes: Symptoms were not waited for, but both patients were immediately trephined; depressed bone was known to exist, and though if left it *might not* cause symptoms, if elevated or removed it *could not*. The ordinary Listerian dressing was not used, as it was feared that the bandaging &c. would not conduce to coolness, and the pressure would have been injurious; but by applying the dressing as described in Case 1, and redressing every day without interfering with the wound, and under a constant dripping of weak carbolic lotion, the same principle was adhered to with precision. Very great care was observed with the food, very little being given for the first week; no friends were admitted for a fortnight, and the patients were kept perfectly quiet in a well-ventilated room and in a subdued light, and the bowels were carefully regulated every third day. The cold lotion undoubtedly retarded the healing process, but this was more than counterbalanced by the immunity from risk of inflammation of brain it ensured, and also the freedom from pain or even discomfort of the patient. I wish to acknowledge my obligation to Drs. Hayes, Hogg, MacIntyre, and Longrove for their kind assistance.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Obliterative Tracheitis and Bronchitis in Congenital Syphilis.—*Pathological Histology of Hydrophobia.*—*Granuloma Fungoides.*—*Hepatic Abscess secondary to Pelvic Inflammation.*—*Primary Cancer of Thyroid.*—*Double Intestinal Stricture.*—*Spinal Abscess, destroying Kidney and opening into Duodenum.*—*Psoas Abscess, with formation of New Bone in Sinus.*—*Tubercular Arteritis.*—*Malignant Growth of Lip, with Melanosis.*

AN ordinary meeting of this Society was held on Tuesday last, Dr. J. S. Bristowe, F.R.S., President, in the chair. The meeting began half an hour earlier than usual. As the executive are endeavouring to complete the work of the session, the next and last meeting is also to commence at 8 instead of 8.30 P.M.

Mr. R. W. PARKER showed specimens of a case of Obliterative Endo-tracheitis and Bronchitis. They were removed from the body of a boy aged fifteen years, the subject of congenital syphilis. He had first come under observation on account of endosteal nodes on both tibiae, and of a tracheal fistula dating back three or four years, when he was tracheotomised for syphilitic laryngitis by Mr. Elkington of Birmingham. He continued to wear a tube for many months; on its withdrawal the opening had remained patent. It was thought not improbable that the irritation of fine foreign matter (dust, &c.) entering the lungs through this fistula had first started the condition about to be described. Commencing about an inch above the bifurcation, the lumen of the trachea suddenly began to narrow in a more or less uniform manner; a little lower down this narrowing became less uniform but more marked, so that the lumen was reduced to about one-third of its normal size. The left bronchus was almost entirely occluded. The occluding new growth consisted of well-formed fibrous tissue sur-

rounding and separating the mucous glands, which appeared quite healthy. The changes in the trachea were strictly endo-tracheal; those in the bronchi were partly endo-bronchial and partly peri-bronchial, the latter, it was thought, being secondary to interstitial pneumonia set up by the retained secretions. Both lungs were in an advanced state of bronchiectasis. The extent of the occlusion of the lowest part of the trachea and of the primary bronchi was very remarkable, the available area for breathing purposes being little more than that of a large quill. The resemblance of this condition to endarteritis was remarked upon. In reply to Dr. Bristowe, Mr. Parker said that, so far as he knew tracheotomy did not lead to cirrhosis of the lung.

Dr. HALE WHITE showed a series of specimens illustrating the Pathological Histology of Hydrophobia from two men and one dog. The medulla oblongata was in a state of acute inflammation, for the most part limited to the floor of the fourth ventricle and the subjacent nerve-tissue for a depth of about one-third of the thickness of the medulla. It was most marked in the median line on either side of the posterior median fissure. The result of this inflammation was a general blurring of the nerve tissue, so that the normal arrangement of fibres and cells could not be made out; there were many small inflammatory cells in tissue, and under a high power of the microscope they could be seen in large numbers crowding through the walls of the vessels. The inflammatory exudation had a tendency to run in directions determined by the nerve fibres. The nerve cells were implicated, and in many places blurred and indistinct; the nuclei most affected were the vagal and hypoglossal. The dilatation of the minute vessels was extreme, and had in many cases led to their rupture; the hæmorrhages thus produced were all microscopic, and were most numerous immediately under the floor of the ventricle, so that blood could often be seen to be effused into the meshes of the pia mater, but in no place was this membrane itself ruptured. The same condition was observable in other parts of the brain, but to a much less degree, and it could be also seen in the cord to a slight extent. Thus, it will be gathered that the essential lesion in hydrophobia is an acute inflammation of the floor of the fourth ventricle, and that this spreads slightly upwards to the brain and downwards to the cord. In the salivary gland there was some blurring of the secretory epithelium, and a few leucocytes could be seen wandering about among the gland constituents. In one case there was an atrophic condition of the thyroid gland. The vagus and sympathetic nerves and every organ in the body were examined, but they were all found to be healthy with the exceptions just mentioned.

Dr. PAYNE showed drawings and microscopic specimens of Granuloma Fungoides from a man aged fifty-six. The cutaneous affection consisted of scattered, large, red, scaly patches, which became dark red and then brown, and looked like psoriasis or scaly eczema; but, in addition, there were, sometimes replacing the patches, tumours of hemispherical shape, from half a walnut to an orange in size. The man was born in the country, but had passed thirty years in London at a railway station. The diagnosis presented some difficulty, and leprosy was thought of. It was, however, like that described by Alibert as mycosis fungoides, and by others as lympho-sarcoma and general sarcomatosis. A case was recorded under the name of leprosy in the twentieth volume of the Transactions which Dr. Payne regarded as a granuloma fungoides. The internal organs were healthy. The tumours only invaded the skin, and consisted of an infiltration of small round cells, which had essentially the same structure as that of the scaly patches; there was also some evidence of a new formation of connective tissue without giant cells; the structure was not specially lymphatic, and the cells differed from those of sarcomata. Micrococci had been described by Auspitz of Vienna as a copious infiltration of the cells; but the evidence of their nature was not conclusive. Rindfleisch had discovered an undoubted streptococcus, but only within the vessels; these were certainly not present in Dr. Payne's specimens. The foreign observations being post-mortem specimens, the presence of micrococci could be easily accounted for.

Mr. F. S. EVE showed a specimen of Granuloma Fungoides of the Foot. It was limited to the skin and projected from the dorsal surface of the foot; a warty condition existed along the inner margin of the growth, and this papillary condition extended nearly up to the knee. The patient was a man aged fifty-three, a merchant, who had had cardiac disease and albuminuria for many years. There had been