

was, however, unable to answer their questions. Three weeks later he had a fifth fit. This lasted twenty minutes, during the whole of which he was quite unconscious. This was followed by many fits, varying in severity and separated by very variable intervals of time. The worst attack he had occurred while out walking six months ago, without any warning whatever. From 1.30 to 9 o'clock he was quite unconscious, and after recovering consciousness he suffered from severe frontal headache, sickness, and weakness for three or four days. After this he had at varying intervals several mild attacks, during all of which he was conscious.

A fortnight ago ten severe attacks occurred in the one night while he was in bed. He was semi-conscious during the fits, becoming quite conscious in the intervals. He had three attacks after these two, coming on at the same hour in the day. Before these the usual aura and twitchings were felt; he was conscious throughout. When about to have a fit the boy notices a twitching at the junction of the middle and lower thirds of the leg on its outer aspect, his foot and knee then jerk in a similar manner, which, he says, resembles ankle-clonus and knee-jerk. A pain then runs up the outer side of the leg and thigh, through the left side of the trunk into the left arm, from that into the left side of the face, and if the fit is a severe one it extends into the right arm. The twitching in the leg extends up the thigh into the left arm or left side of the face. If a severe fit, it extends to the other side of the body, and when it does so the lad loses consciousness. After the fit he feels ill and fit for nothing, and suffers from severe headache in the forehead and pain in and about the depressed area. For several days after the fit he is unable to walk properly owing to the weakness in the left leg, and in the same manner the left arm is so unsteady and irregular in its movements that he is unable to use it usefully. This, together with the pain in the head and a dull, stupid feeling, have prevented him following any occupation.

*Condition on admission (March 6th, 1890).*—He was a dark-complexioned, pale lad, whose speech was not affected, and who appeared to have moderate memory and mental power. On the right side of his head there was a groove about three inches and a quarter long, extending from an inch behind the coronal suture to about the same distance in front of the lambdoid suture. Its anterior extremity was placed vertically above the external meatus, and its lower limit reached to just below the temporal ridge. From this it extended downwards and backwards towards the external occipital protuberance. The floor of the depression did not appear to be more than a quarter of an inch below the general level of the scalp. The left arm was weaker than the right, its grasp being about two-thirds that of the right. The several manipulative movements of the left hand and fingers were performed with distinct clumsiness. This was most marked in the case of rapid movements. The movements of the right arm and hand were quite normal. The measurements of the circumference of the right arm and forearm each exceeded that of the left by a quarter of an inch. Besides this variation in circumference, there was a distinct difference in the firmness of the flexor supinator muscles in particular. There was no difference in the measurements or in the feel of the muscles of the leg. The patient states that he had never the same confidence in his left leg that he had in the right one, apart from the great weakness which was present in it for several days after a fit. By simply raising the left foot to a right angle, a very rapid clonus could be obtained. It could be stopped by the patient. By using more force a clonus could be produced in the right ankle. It was, however, of short duration—about twenty seconds,—and was not so quick as that on the left side. The knee reflexes were very much exaggerated. This was more marked on the left side, where a patellar clonus could be readily obtained. The plantar reflexes were very much exaggerated, especially on the left side. This was also the case with the abdominal reflexes, except the cremasteric, which were very slightly marked. This exaggeration on the left side was very conspicuous.

There was apparently nothing abnormal about the reflexes of the arms, nor was there any wasting or asymmetry of any portion of the facial muscles. The optic discs were both normal, and the pupils reacted readily to light and accommodation. There was no evidence of congenital syphilis. On March 9th the exaggeration in the reflexes,

though very marked, was not quite so excessive as it was when the boy was admitted. Dr. Laureston Shaw kindly saw the case with me, and after carefully examining him he confirmed me in my opinion as to the probable advantages that would follow removal of the depressed area of bone. On March 10th, the depressed area of bone having been exposed throughout its whole extent, it was seen to be abnormally vascular. By means of a gouge and a pair of Hoffman's forceps the bone which formed the floor of the depression, together with a portion of the surrounding margin of bone, were removed. The bone forming the depression was very thin and vascular, scarcely measuring a sixteenth of an inch; while the bone about the depression was of normal thickness. It seemed that the floor of the depression was not concave on its inner surface, but that it was flatter than normal, and therefore apparently encroached a very little upon the area of the intra-cranial cavity. The dura mater was quite normal in appearance, as also was the subjacent brain. The bone bled very freely, and on that account it was necessary to use a drainage-tube for twenty-four hours. The wound healed by primary union. On March 20th he had three fits, which he stated were less severe than before the operation. They were not followed by the same stupid feeling and by the headache and pain which before unfitted him for any occupation. On April 9th, after a long exciting day, he had a series of fits and was unconscious for several hours. Since that date he has had fits at intervals of a month. They are slight and cause him little inconvenience. He and his friends express themselves as much pleased with the results of the operation. I may say that since the operation he has quite lost the unsteadiness and clonus in his left leg, which gave him so much trouble, and the capacity of rapid movement of the fingers of the left hand has improved very considerably. The difference in the measurements of the forearms is also very much less than it was. He never suffers from headache nor has he any pain about the depressed area. He has also become much sharper and brighter, and can follow an occupation. I am in hopes that the fits, which are now comparatively slight and infrequent, may cease shortly.

St. Thomas's-street, S.E.

## Clinical Notes:

### MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

#### UNUSUAL CASES.

BY HENRY LEE,

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CASE 1.—During the last autumn I saw a lady at Constance who, ten years previously, had been frightfully burnt through the upsetting of a lamp. Among other injuries received the skin of nearly the whole front of the left leg had been destroyed. A large raw surface was left, which did not heal. After a time several skin grafts were tried. The majority of these failed, but at the time I saw this patient one of them had grown so as to unite the opposite edges of the natural skin. This was situated directly in front of the leg, and was the size of the palm of a child's hand. It was thick, and apparently well nourished, but rather paler than the natural skin. The point of interest in this case was that this skin graft, which did such good service, was apparently devoid of sensation. A prick with a needle could not be felt. The fact is thus demonstrated that animal tissues may live and grow independently of ordinary sensation, and of nervous supply. In the lower forms of animal life the nervous system is very simple, and is analogous to the sympathetic system in man. Structures supplied by the ganglionic system in man have not the sensation of the skin, or what is usually known as ordinary feeling. Nitric acid may be applied to the mucous membrane of the bowel without giving pain. We may therefore believe that lobsters, crabs, and oysters, being protected from injury in other ways, have not ordinary sensation such as is conveyed to our minds by impressions on the skin. In the above recorded case, from the tension

of the skin and from want of use, the left leg appeared to be about what might be supposed to be half its natural circumference. By the contraction in the process of cicatrization and by the assistance of smaller skin grafts, at the end of ten years the wound had entirely healed with the exception of two or three small fissures; these remained with rounded, thickened, and indurated edges. The right leg, which had been less severely injured, was also much diminished in size.

CASE 2.—A patient being treated for ascites in one of the medical wards of St. George's Hospital had an umbilical hernia. This when distended was the size of a small orange. The hernia was easily reduced and the sac left empty. Three hare-lip needles were introduced through the neck of the sac and a figure-of-8 ligature applied loosely over the extremities of each. After two or three days the needles were removed, and firm adhesion at the neck of the sac appeared to have taken place. The skin which had covered it became shrivelled, of dusky brown colour, and remained the size of a small nut. So far as could be known there was no return of the hernia. A drawing of the parts by Dr. Westmacott as they were left after the operation is preserved.

CASE 3.—A gentleman had been treated for some two years and a half for dysentery. As there was some irritation about the rectum, I examined it. A bone, which subsequently proved to be a fish-bone, about two inches and a half long, was found to be impacted across the bowel about two inches from its orifice. By means of a long pair of forceps one end of the bone was got into a speculum. The bone was then withdrawn without difficulty. The symptoms from which this patient had so long suffered immediately ceased.

#### PASTEUR'S PREVENTIVE TREATMENT FOR HYDROPHOBIA.

BY HY. TOMKINS, M.D., B.Sc.,  
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PERHAPS one of the most reasonable objections made to the treatment by Pasteur of persons bitten by rabid animals, or rather, one may say, to the results recorded by him of such treatment, has been the fact that in a considerable number of the cases treated, evidence that the animal by which the patient had been bitten was actually and undoubtedly rabid is not forthcoming, and opponents have not been slow to urge that it is highly probable in many instances patients have undergone treatment when the dog which had inflicted the bite was quite healthy, or, at least, not suffering from rabies. In the following record of three cases treated at the Pasteur Institute last year it is placed beyond all doubt that the animal, at the time of inflicting the injuries, was suffering from rabies. On Jan. 8th, 1890, a stray dog came into the borough of Leicester from the adjoining suburbs and on its way bit two school children, a boy and a girl, on the face and hands, the wounds upon each of the children's faces being of a very extensive, lacerated character. This occurred outside the borough boundaries, and almost at the same time it bit also a small terrier dog. Continuing its course into the town it bit a young man severely on the hand, and shortly after this it was killed. The patients were seen by medical men and the wounds cauterised, but not until after the lapse of some little time; in one case nearly an hour elapsed. I saw all the patients on the following day, and, with the assistance of Mr. Fraser, the veterinary inspector to the corporation, made a post-mortem examination of the dog. The pathological appearances to the naked eye were practically *nil*, but the stomach contained some pieces of straw and other debris. The cord and medulla were removed. On Saturday, the 11th, I took the three patients to Paris (taking with me the cord removed from the dog), and on Sunday morning they were seen by M. Pasteur, and treatment commenced in the usual manner. From the cord several rabbits were inoculated, and before the end of a week these succumbed to what M. Pasteur declared to be rabies. The man was kept under treatment fourteen days, but the two children, owing to the severity of the wounds, were kept for twenty-five days before being sent home. The small terrier bitten by the dog was kept by me under close observation shut up, away from all other animals, and on the fifteenth day from being bitten it began to

show signs of indisposition (having in the interval been apparently in good health), which soon declared itself as undoubtedly rabies, and the animal succumbed on the third day from the first onset of the symptoms. Being kept secluded and alone, it showed but few signs of excitement, but crawled about, refusing to eat or respond when called to, paralysis of the lower jaw and hind limbs soon supervening. It should be noted that the wound on its hind leg was but a small one, not larger than a threepenny-piece, and at the time of its death was healed.

Here, then, we have indisputable evidence that the animal which bit these three patients was suffering from rabies, and the probabilities are, seeing how easily the second dog was infected, that at least one or other of the three would have developed symptoms of hydrophobia if the treatment for prevention had not been adopted. As more than twelve months have now elapsed since the occurrence, and all of them remain in good health, we may conclude they have now quite escaped from any untoward consequences.

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#### NOTE ON TRAUMATIC CEPHALHYDROCELE.

BY R. CLEMENT LUCAS, B.S., F.R.C.S.,  
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IN THE LANCET of January 10th, under the title of "Traumatic Encephalo-meningocele," an interesting case is reported by Mr. H. Burton of a child who, after a severe injury to the head, developed a pulsating tumour of the scalp containing cerebro-spinal fluid. The writer, in his remarks, states that "it differs entirely from the traumatic meningocele described by Mr. Clement Lucas and Mr. Golding-Bird." So far from this being the case, it is precisely of the kind which falls within that category; and had the writer found the opportunity of referring to the original papers, I think he could not have failed to be struck with the resemblance. The only difference, indeed, lies in the fact that in his case the fracture was in the first place compound; but the primary union of the wound which took place allowed the fluid to accumulate beneath the scalp as if that covering had not been torn. Little was known of these rare and interesting tumours till the publication of my first case with a drawing in the Guy's Reports of 1876, and the pathological conditions requisite for the production of the tumour were not understood. Subsequent years placed two post-mortem examinations within my reach, which are related in the volumes of the Guy's Hospital Reports for 1878 and 1884, and I was able to show that these subcutaneous fluid tumours communicated directly with the ventricles of the brain, and I further ventured the statement, based upon the study of these and other cases, that they could only be developed in childhood. Mr. Golding-Bird, in reporting a case in the Guy's Hospital Reports for 1889, gives his own experience in support of my contention. Another very remarkable circumstance which often happens in these cases is a rapid absorption of the bone in the neighbourhood of the fracture, and as a consequence a permanent pulsating mass with heaped up and everted edges of bone may in some cases remain. Such conditions were found in cases reported by Mr. T. Smith, Mr. Godlee, and Mr. Silcock. The escape of the fluid from the ventricular cavity is apparently secondary, to an increased secretion resulting from inflammation of its lining membrane and absorption of the damaged brain tissue along the track of the injury, for the fluid is seldom noticed till some days after the accident. The term traumatic cephalhydrocele would seem preferable to traumatic encephalo-meningocele or meningocele, as the meninges and the brain are both perforated, and do not cover the cyst. As regards treatment, I am convinced that the less done in the way of active interference the better. Aspiration may be used for diagnostic purposes, but can be of little service to the patient, for the fluid invariably re-collects. Pressure during the inflammatory stage may lead to grave symptoms, as in the case detailed. The surgeon should bear in mind the very serious laceration that has taken place in the brain substance, and should ensure absolute quiet and brain rest for a lengthened period. In the