birth of her last child, she began to grow stout. She has been under my observation for the last twelve years, during which time the disease in the leg has developed, and steadily increased. When first seen in 1879 the left leg was slightly larger than the right, but there existed at that time no indication of the elephantiasis. The patient states she had white swelling of the leg affected after her tenth confinement twenty-three years ago; she was confined to the house for three months from this cause. What relation there was between this illness and the present condition I am not prepared to state; the interval between the confinement referred to and the onset of the present condition, about twelve years, does not favour the connection. The present condition began with slight constitutional disturbance; enlargement of the foot and leg became general; some patches of eczema were troublesome for several years, the leg gradually taking on the appearance it now presents. This is well shown in the accompanying illustration.

The following are the dimensions of the legs in circumference:

4 inches below knee, sound leg,	16 inches;	left leg,	27 inches
Middle of calf	16½ "	" "	23½ "
Ankle	10½ "	" "	19 "
Instep	9 "	" "	10½ "

On the front of the leg and over the lower two-thirds the skin presents a tuberculated, horny, and pigmented appearance. Just below the popliteal space a deep sulcus extends about two-thirds round the leg; several other depressions are to be seen lower down, more particularly on the inner side. The ankle is well worthy of attention, the hypertrophied leg overhanging the foot, and appearing even larger than it is from the depression in front of the ankles; the dorsum of the foot is also much hypertrophied, and on this surface are several areas of congested skin from varicose veins. The outer side of the leg is much infiltrated.

Digestive system normal. Nervous system: has headache and neuralgia at times. Patellar reflex absent. Respiratory system normal except shortness of breath on exertion; this is no doubt due to obesity. Circulatory system: heart sounds clear: there is probably some fatty degeneration of the heart, and no doubt the arteries of the affected limb are enlarged. Urine, clear acid, specific gravity 1016; no albumen.

Treatment.—The patient refuses operative measures. An elastic bandage is at times worn.

HYDATID OF LIVER: ABDOMINAL SECTION, INCISION, AND DRAINAGE.

By THOMAS EASTES, M.D.LOND., F.R.C.S.,
Folkestone.

E. P., aged 56, widow, was first seen by me in June, 1889, for an abdominal tumour about the size of two closed fists. It was almost median, chiefly below the umbilicus, only slightly movable from side to side, felt globular, and seemed to extend deeply towards the spine. It could not be connected clearly with any of the viscera, and seemed to be surrounded by a zone of resonance, but was itself dull. It continually increased until September 24th, 1889, when an exploratory incision was made, and, after pressing aside liver, bowel, and omentum, a small piece of hydatid cyst wall was uncovered, the cyst was aspirated, and a pint and a quarter of clear hydatid fluid was drawn off. The cyst wall was then incised, sewn to the edges of the peritoneum, and a glass drain introduced. A few small vesicles came out with the fluid. Sixteen days after the operation about two square feet of hydatid membrane were washed out by syringing. Drainage was stopped about six weeks after the operation, and the patient made a perfect recovery. The treatment of living hydatid cysts is as yet far from perfect. Some are cured by being aspirated, only a small portion of the contents needing removal, but some refill, and some suppurate after aspiration.

Incision and emptying the cyst seem the most satisfactory treatment, but I can only find one case recorded where the cyst was closed again at the operation instead of being drained, and that was a case of Mr. Knowsley Thornton's,¹

where the cavity was sponged out with tincture of iodine, and closed with the same sutures as the abdominal incision. Dr. Verco, of North Adelaide, has recommended removing the whole of the membranes at the same operation; another writer deprecates that, and apparently with good reason, as being liable to cause uncontrollable hæmorrhage, referring to a case of Dr. Bright's, in which the cyst ruptured through the abdominal wall spontaneously, and some of the membranes were removed on the second day after rupture; but next day some more presenting at the aperture resisted removal, and hæmorrhage into the cyst from a hepatic vein commenced, and was fatal within thirty-six hours.²

It is certain, from the one case already mentioned, that if the cyst be in the abdominal cavity, and the wall fairly thin, and not too rigid so that the general abdominal tension will close it, the cavity may be cleansed by an antiseptic and then closed; but I would suggest that it should simply be sponged out very gently, or, if in a suitable position, be first washed out with clean warm water as the peritoneal cavity is treated, and then gently sponged dry and closed without being drained, taking the precaution to keep the opening of the cyst and that of the abdominal cavity in close apposition by closing both with the same sutures in case of possible suppuration, until further experience has shown that to be unnecessary. Even if suppuration supervened, a drainage tube could then be easily inserted; and, if it did not, several weeks of drainage would be saved, three weeks being apparently the shortest time required hitherto, and as many months not being sufficient in protracted cases.

A CASE OF TRAUMATIC CEREBRAL ABSCESS: TREPHINING: FREE DISCHARGE OF CEREBRO-SPINAL FLUID: RECOVERY.

By F. A. SOUTHAM, M.B.Oxon., F.R.C.S.,
Surgeon to the Manchester Royal Infirmary.

On June 8th, 1890, Dr. Watson, of Ardwick, asked me to see in consultation a boy, aged 13, who, six days previously, while at play, had struck his forehead against the end of a sharp bolt projecting from a door, a slight wound being produced about two inches above the orbit on the left side. He walked home after the accident, which was not considered serious, as it was not followed by any symptoms for several days, except that it was noticed that he was unusually dull and heavy. On the morning of the sixth day, when he was first seen by Dr. Watson, his temperature was 101.5°; he was somewhat drowsy, and there was a slight discharge of pus from the wound. The same evening when I examined him, the temperature had fallen to 100°, the pulse was 60, intermitting every four or five beats; he was quite conscious, speech was perfect, and there were no brain symptoms. On exploring the wound with a probe, it passed through a small opening in the frontal bone into the cavity of the cranium; on withdrawing the probe, a few drops of pus oozed from the wound, evidently coming from the interior of the skull. As it was clear that there had been a punctured fracture of the frontal bone, followed by intracranial suppuration, it was resolved to trephine at the seat of injury.

The operation was performed early the following morning. After raising a semicircular skin flap and removing a circle of bone at the site of fracture, along with numerous fragments of the inner table, which was extensively splintered, there was a free discharge of pus through a laceration in the dura mater. On introducing the finger through the trephine opening, it passed into a large irregular cavity in the frontal lobe. This was syringed out with boric acid lotion, a quantity of broken down brain substance coming away. A drainage tube was left in the wound, its end reaching well into the abscess cavity. For the first four days after the operation there was a profuse discharge of pus from the wound, which was syringed out daily with boric lotion. On the morning of the fifth day, it was found that during the night the dressings and pillow on which the boy lay had become saturated with a clear watery fluid. This continued to discharge very freely

¹ BRITISH MEDICAL JOURNAL, 1886, vol. ii, p. 901.

² Bright. "Abdominal Tumours." *New Sydenham Society*, p. 51.

for four days, soaking through pads of wood wool and towels placed beneath the patient's head. It then gradually diminished in quantity and after the twelfth day entirely ceased. The purulent discharge then recurred, necessitating the retention of the drainage tube for several weeks, for Dr. Watson found that if any accumulation of pus took place, the pulse, which after the operation rose to about 100, at once became slow and very intermittent. After the removal of the tube, the wound quickly healed without any tendency to the formation of a hernia cerebri. At the present time, ten months after the operation, the boy is in the enjoyment of perfect health; there is no impairment whatever of the mental faculties, and the seat of the operation is marked by a cicatrix and a gap in the bone, through which the pulsation of the brain can be plainly felt.

The most interesting feature in the case is the discharge of cerebro-spinal fluid, which appeared on the fifth day after the operation, and after continuing for a week, then entirely ceased. It probably came, not from the subarachnoid space, but from the lateral ventricle with which the abscess cavity must have communicated, for when the wound was exposed, the fluid could be seen to well up through the drainage tube, evidently coming from the interior of the brain at a depth from the surface. As healing took place and the abscess contracted, the communication became closed and the escape of fluid then ceased.

A discharge of cerebro-spinal fluid from the vault of the skull after compound fracture or after trephining for any cause is of rare occurrence, and of twenty-four cases in which I have trephined the skull (in eighteen for compound fracture), this is the only instance in which I have observed it.

In the article on Injuries of the Head, in Holmes's *System of Surgery*, Sir Prescott Hewett quotes ten cases where it was met with, and in three of these the fluid was believed to escape from the lateral ventricle; in one of the latter which proved fatal this opinion was verified, for after death a minute communication with the ventricle was found to be present.

In the same article attention is directed to the fact that in cases of traumatic intracranial inflammation large quantities of serous fluid are sometimes effused into the ventricles. The case above recorded would support this view, for the amount of fluid which escaped from the wound must have been greatly in excess of that normally secreted by the lining membrane of the ventricles. The lateral ventricle becoming distended with fluid, its wall probably gave way, and a communication was thus formed between it and the abscess cavity in the frontal lobe.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

NOTE ON THE NERVE SUPPLY OF THE BLADDER AND ANUS.

DR. GOWERS, in his *Diseases of the Nervous System*, writes concerning the rectum and bladder and the connections of them with the spinal cord, "The centres for these are in the lumbar enlargement, but we do not know their exact position." In view of this condition of our knowledge in the case of man, some interest may attach to a determination of those spinal roots which contain efferent fibres for the bladder and anus in the monkey—an animal differing less from man in its anatomy than do the types more usually employed in the laboratory.

In rhesus and bonnet monkeys the stimulation (the animal being of course deeply anaesthetised), by weak induction shocks, of the peripheral ends of the roots of the first, second, third, and fourth, and of the seventh, eighth, ninth, and tenth post-thoracic spinal nerves, produces contraction of the bladder, most marked in the case of the second, third, eighth, and ninth roots. On one occasion only in my experiments has an unmistakable contraction been registered on stimulating the sixth, and on no occasion on stimulating the fifth post-thoracic root.

As to the anus, in the rhesus and bonnet, smart contraction

of that orifice is brought about by stimulating the distal ends of the roots of the seventh, eighth, and ninth post-thoracic spinal nerves, and not by stimulation, so far as I have seen, of any other roots.

In the female the round ligament replies by extremely sharp and striking contraction to stimulation of the distal ends of the twelfth thoracic, and the first, second, and third post-thoracic, nerve roots; the contractions produced by the second and third post-thoracic roots respectively are greater than those produced through the two higher roots. In the male the vas deferens contracts much in the same way as the round ligament in reply to stimulation of the same above-mentioned roots.

C. S. SHERRINGTON, M.A. M.B., etc.

CASE OF LIVER HYDATIDS, WITH JAUNDICE; INCISION; RECOVERY.

T. D., aged 32, a shunter, was admitted into the Cancer Hospital in November, 1889. He had been a hard drinker; had received a blow on the side nine months previously; a tumour, however, had existed for five years. A huge seemingly solid mass, evidently connected with the liver, descended on the right side almost to the iliac fossa; in the middle line, to the level of the umbilicus, where the circumference was 31½ inches; 4 inches above this the girth was 34 inches. Jaundice of a greenish hue had been present four weeks. There was no pain, and no tenderness on pressure. No fluctuation could be detected. The prominence above the umbilicus gradually became more marked, and concurrently the jaundice disappeared. After six weeks distinct fluctuation was felt. On January 25th, 1890, the aspirator was employed, and 42 ounces of clear fluid, containing abundant scolices and hooklets, drawn off. The cyst promptly refilled, and on February 15th a median incision, 4 inches long, was made above the umbilicus. Around the opening the hepatic peritoneum was stitched to the parietal; there were already firm adhesions to the left of the middle line. The wound was plugged with strips of lint soaked in glycerine. Eight days later the cyst was incised, and a glass drainage tube inserted. Convalescence was subsequently retarded by an attack of pneumonia at the right base. The cyst, however, eventually cicatrised from the bottom, and the man was discharged well in May, 1890.

Gloucester Place, W.

HERBERT SNOW.

CASE OF DIPHTHERIA OF THE VULVA.

DIPHTHERIA of the vulva, occurring as a primary affection, appears to be sufficiently rare to justify a record of the case.

On December 15th last I was called to see a young lady, aged 12, whom I found to be suffering from headache and general *malaise*. The forenoon temperature was 102°, and the pulse 136. The second morning the temperature was 103°, and it rose the same afternoon to 105°. There was no sore throat, nor apparently any other local affection to account for this high fever, nor did the history seem to point to any of the eruptive fevers as imminent. On questioning the patient's sister I was told that the only complaint the patient had made was of a soreness about the external genitals, and, on examination, I found both labia majora swollen and painful, and a slight mucous discharge from the vulva. I was naturally in doubt as to the cause and character of vulvitis in such a young person, accompanied, as it was, by high fever and prostration.

On the morning of the third day the temperature was 103.6°; on separating the labia three distinct ash-coloured membranous patches were seen on the mucous surface of the labia, two on one side and one on the other. I concluded that the case was a genuine primary diphtheria of the vulva, and began a local antiseptic treatment of frequent irrigation of warm creoline solution, and dusting with boracic acid powder. On removal with forceps of the largest patch on the fourth day, the base bled profusely. The other patches separated naturally about the sixth day. There was no re-formation of membrane, and the ulcers healed slowly.

The fever declined gradually, and on the twelfth day both morning and evening temperatures were normal, but a slight over-exertion during the third week sent the temperature up