course. As an anonymous writer happily puts it in a late number of the *Medical and Surgical Review* (January 1877, p. 19): "There is no treatment of phthisis; there is a great variety of treatment, as there is a great variety of temperament, for those that suffer from phthisis." It would be idle to do more than suggest, as I have done throughout my remarks here and elsewhere on the natural history of this disease, the limits of prognosis in any individual case. Unhappily, those limits are often narrowed by the carelessness of the patient, who is blinded to his danger, or by the obstinacy of friends who are unwilling to believe the truth. And in this particular alone perhaps some of us may liken ourselves to that illustrious physician who is described by Tacitus* as "non quidem regere valetudines Principis solitus, consilii tamen copiam præbere".

CASE OF HYDATID CYST OF THE LIVER, CURED BY A SINGLE ASPIRATION:

WITHDRAWAL OF EIGHT PINTS AND A HALF OF PUS.†

By J. B. BRADBURY, M.D., F.R.C.P.,
Physician to Addenbrooke's Hospital, Cambridge: etc.

On September 29th, 1876, I was asked to see, in consultation with Mr. Parkinson of Melbourn, a married man, aged 42, living at Barrington. The man was exceedingly ill, suffering from enlargement of the liver, and it was feared that he could not live many days. The history of the case was as follows. Five or six months previously to my seeing him he had had pain at intervals in the abdomen along the region of the transverse colon, which was not severe enough to prevent his working. The pain passed away "all at once" for some time. Nine weeks before I saw him, he caught cold and had headache. He remembered shivering and cringing over a large fire. From this he somewhat recovered, but about a fortnight afterwards he felt considerable pain in his chest and body, and observed his body swollen. He became very weak and lost flesh considerably. The pain increased, and, at one time, he had slight jaundice, with œdema of the legs. He never vomited.

On carefully examining the case, Mr. Parkinson and myself found a smooth globular tense swelling occupying the epigastric and hypochondriac regions, and encroaching on the umbilical and right lumbar regions. A feeling of fluctuation was perceived over the swelling. There was no redness of the skin, and not much pain on palpation; but, on placing the hand over the swelling, a friction-fremitus could be felt. There were no irregularities noticed on the surface of the swelling. The percussion dullness extended from the right nipple to the level of the umbilicus in a vertical line. The upper line of dullness extended nearly horizontally round the right side, being rather higher in front than behind. The lower line in front was convex downwards, the dullness extending lower on the right side than on the left. The lower edge of the liver was much thickened. There was bulging of the lower ribs on the right side, producing decided asymmetry. On the right side, there was good vesicular breathing above the line of dullness, which posteriorly extended downwards from the middle of the scapula. Over the dull region there was bronchial breathing and ægophony. The spleen was not enlarged. The urine was non-albuminous. The temperature was 99.2 degs. Fahr.

The man's aspect was worn; his features being drawn. His face was very pallid. He was very much emaciated.

The patient not being well off, I suggested, with Mr. Parkinson's concurrence, that he should be removed to the hospital for the purpose of introducing an aspirator into the liver. This was done on October 1st by Dr. Humphry, and eight pints and a half of pus were withdrawn, a large needle being used. About three ounces of the fluid were much clearer than the rest, which was thick and flocculent, so as at times to block up temporarily the instrument. The pus contained hooklets and shreds of hydatid membrane.

Careful notes were taken of the progress of the case from day to day after the operation, but with these I will not weary you. Suffice it to say, that the patient's progress was in most respects satisfactory. No eruption of urticaria and no sickness followed the aspiration, and there was but little abdominal tenderness. As is usual after tapping a hydatid tumour of the liver, the swelling returned after a few days, but again gradually subsided. The only features in the case which for a time gave one anxiety were the occasional elevations of temperature and the abnormal percussion dullness persisting on the right side of the thorax. In regard to the temperature, it was for some time

subject to somewhat regular variations, an increase taking place about every fifth day, and an almost normal standard being restored during the intervals (yet not quite normal, even then the evening temperature reaching 99 degs. Fahr.) Five such periodical rises were observed.

On November 8th, the man was made an out-patient, but I kept him under observation for some months, during the whole of which time he was taking cod-liver oil and quinine. When I last saw him, about the end of March, he was perfectly well—indeed, in better health than he had been for years, and I could detect nothing abnormal either in his abdomen or thorax.

Formerly, I should, in a case of *suppurating* hydatid cyst, have recommended the insertion of a large trocar and a drainage-tube; indeed, some of my earlier cases were treated in this way. More extended experience, however, has taught me that it is much better to use the aspirator, and if one aspiration be not sufficient, there is not the least objection to the operation being several times repeated. Fortunately, in the case I have brought before you, only one insertion of the needle was required.

REPORT ON A CASE OF UNILATERAL CONVULSIONS AND HEMIPLEGIA DEPENDING UPON A LESION OF CERTAIN CEREBRAL CONVOLUTIONS.

By BYROM BRAMWELL, M.D.,
Physician and Pathologist to the Newcastle-upon-Tyne Infirmary; Joint-Lecturer on Clinical Medicine and Pathology in the University of Durham College of Medicine.

At the present time, when the localisation of the functions of the brain is exciting so much attention, it is of great importance that all cases of disease which tend to elucidate the subject should be recorded. Such cases of disease are of comparatively rare occurrence, and as Dr. Hughlings Jackson has well remarked, they are the only experiments which we can observe in man. This must be my apology for bringing before your notice to-day the following notes of a case which was sent under my care by my friend Mr. Wear, Surgeon to the Newcastle-upon-Tyne Dispensary.

Mary C., aged 37, hawker, married, was admitted to the Newcastle Infirmary on May 23rd, 1875, suffering from convulsions and right-sided hemiplegia. The people who brought her to the hospital stated that she had been convulsed more or less constantly since May 10th; that previously to this date she had enjoyed excellent health, but that she had received some years ago a severe blow on the left side of the head.

Her condition was noted on May 25th to be as follows. She was a stout muscular woman, and looked much older than her years. She lay on her right side. The face was pale; the right eyelid was partly closed; the eyeballs were turned upwards, and to the left; the pupils were equal, moderately contracted, and sensible to light. There was total paralysis of the right arm and leg; partial paralysis of the muscles of the right side of the face and cheek. She was unable to protrude the tongue, which was swollen, and abraded on its right side and at the tip; the result of contact against the teeth in the convulsions presently to be described. Deglutition was natural. The patient was conscious, and understood most things that were said to her. There was no true aphasia. Speech was thick and difficult to understand, owing to the paralysis of the muscles of articulation. She could localise impressions, though not perfectly. Muscular sensibility and contractility were natural. The *tache cérébrale* was slightly marked. A depression of the size of a threepenny-piece was to be felt two inches above the left ear. Pressure and galvanism over this spot did not seem to aggravate the convulsions. Every few minutes she was seized with a convulsion. The fits were of three kinds, and may, for the sake of description, be called *slight*, *moderate*, and *general*.

Different muscles were affected in each form. The sequence of the spasm was always the same.

In the *first or slight convulsion*, the muscles of the face and neck were alone affected, and that in the following manner. Both eyes were first firmly closed, and the right corner of the mouth drawn downwards in tonic spasm, the platysma being rigid. The eyes were next partly opened. The head and eyeballs were then slowly turned to the right side. Clonic spasms now occurred in the eyelids (the left being only slightly affected), in the muscles of the tongue, the right side of the face and neck (chiefly the platysma). After a short interval, the clonic spasms became less frequent, the head and eyeballs were turned to the middle line, the eyelids were widely dilated, and the countenance presented an animated appearance. The eyeballs

* *Annals*, lib. vi, c. 50.

† Prepared to be read before the Cambridgeshire and Huntingdonshire Branch.

were finally rotated upwards and to the left, the eyelids closed, and the patient apparently falls asleep.

In the *second variety, the convulsion commenced as before. After the head had been rotated to the right*, and as the clonic spasms were commencing, the fingers of the right hand were drawn into the palm, the hand was then flexed on the wrist; the forearm was next bent to a right angle and lay across the chest, the muscles of the right leg at the same time became rigid, and the foot strongly inverted. Clonic spasms occurred in the muscles of the arm and forearm, the flexors being chiefly affected. A few spasmodic twitchings were also to be observed in the leg and thigh, chiefly in the extensors. There was never any flexion at the hips or knee.

In the *third variety the convulsion became general. The fit commenced as before, and passed through the various stages enumerated above.* After flexion of the right forearm the arm was slowly raised at the shoulder until it was at a right angle with the body; the tonic spasm at the same time passed to the muscles of the left arm and leg. The fingers of the left hand were drawn into the palm, the hand was flexed at the wrist, the forearm at the arm; the arm was then raised and brought over to the right side so that the hand was made to approach the forehead; the left leg was at the same time flexed on the abdomen, and slightly adducted; the knee was bent, the toes were spread out, and the foot flexed at the ankle-joint. The tonic spasm soon passed off; clonic spasms of the muscles of the body generally occurred, the patient foamed at the mouth, and made a quackling noise. As the clonic spasm came on, the left arm was abducted, thrown backwards at a right angle with the body, so that the under surface of the arm, forearm, and hand, were uppermost.

In the general convulsions, the muscles of the right side of the body were much more powerfully contracted than those of the left. The body tended to turn over towards the right side.

The slight fits occurred every few minutes; the intermediate form frequently; the general convulsions only occasionally. (She had eight during the first twenty-four hours after admission.)

The sequence of the spasm never varied from that described.

It was impossible to ascertain whether the patient was conscious during the slight fit. She certainly was immediately afterwards.

She slept well, frequently yawned, and occasionally ground her teeth.

On ophthalmoscopic examination, the disc was seen to be large and pale, the vessels of medium size; the arteries could be readily distinguished from the veins. The rest of the fundus was of a deep cherry-red colour. The condition of the fundus in both eyes was the same.

The temperature in the right axilla was 100 deg. Fahr.; left 99.6 deg. Fahr. Radial pulse 120; respirations 24. The heart, kidneys, and other organs were, so far as could be ascertained, quite normal. The appetite was very good.

The diagnosis was—acute cerebral softening, depending either upon an embolism of the middle cerebral artery, or upon some irritation below the depressed portion of the skull.

The treatment consisted in the application of cold to the head, the administration of a purgative on her admission, followed by full doses of bromide of potassium, beef-tea, milk, eggs, etc., *ad libitum*.

May 27th. She had slept a great deal. The convulsions were not so frequent, and were much less severe. She was sensible on most points, but persisted in saying she was fifteen years of age. Temperature—right axilla, 99.2 deg.; left, 98 deg.: right hand, 98.2 deg.; left, 95.8 deg.: right ear, 98.2 deg.; left, 97 deg. The temperature in the axilla immediately after a general convulsion was one degree higher than before the fit.

May 28th. She had been very much better; was quite sensible last night, talked and laughed, protruded the tongue beyond the teeth, but never moved the right arm or leg. She had had no general convulsions since yesterday. The other conditions were the same. My surgical colleague, Dr. Arnison, saw the case with me. The question of trephining was considered. It was deemed expedient, as there was some improvement, to wait a few days and to continue the same treatment.

May 30th. She died somewhat suddenly at 9 A.M. this morning.

The previous history of the case was ascertained from her husband to be as follows. She was always very healthy and strong, and worked hard as a hawker until her present illness commenced. Eight years ago she received a severe blow on the left side of the head; the skull was fractured. She was laid up for a month at that time. Three years ago, she had five convulsions on one day. The right side of the body only was affected. These fits were brought on by a fright. For the last three years she complained of numbness in the forefinger of the right hand, and could not use her needle so well as she used to do. On May 10th, she went to bed very drunk. The next day she fre-

quently vomited, and said her head was giddy. On May 12th, she took a fit, and continued to be convulsed until her admission to the infirmary. The right arm and leg became paralysed a week after the fits attacked her. She never at any time complained of pain in her head. Her eyesight was hardly so good as it used to be. She generally got drunk every week.

The *post mortem* examination was made eight hours after death. Rigor mortis was present in the right arm and leg. Immediately below the left parietal eminence, there was a depression of the size of a threepenny-piece; a large white cicatrix ran across the scalp at this point. The scalp was adherent over the depression. The skull-cap having been removed, the dura mater was found adherent to the bone along the line of the vertex, and at a part corresponding to the external depression; the bone had been absorbed at this point. The resulting aperture was bridged across by dense fibrous membrane. A sharp lancet-shaped spiculum, or rather exostosis, of bone, about a quarter of an inch in length, projected from the inner table of the skull close to the aperture. The dura mater was not adherent to the subjacent structures. The arachnoid was in places white and milky. There was a small quantity of subarachnoid fluid. The vessels of the pia mater were slightly congested. At a part corresponding to the position of the projecting exostosis, was a well-marked depression on the surface of the cerebrum. Its exact position was an inch and a quarter above the fissure of Sylvius and just behind the fissure of Rolando. The exact position is marked in Fig. 1. The depression was triangular in

Fig. 1.—Outline of Left Hemisphere of Human Brain. S, S. Fissure of Sylvius. R, R. Fissure of Rolando. The circle O represents the position of the lesion in the case of M. C.

form, an inch in length, and half an inch in breadth. The arachnoid and pia mater were adherent round the margins of the depression. The brain-substance was exposed at the lower and posterior part of the depression; it was of a greenish-yellow colour. There was no great amount of vascularity round the part. The ventricles contained a small amount of fluid. The other parts of the encephalon were normal.

My friend Dr. Herbert Major very kindly examined the brain and sent me the following report.

On cutting through the brain-substance at the site of the lesion, the following abnormalities are apparent to the naked eye (the brain having been partially hardened in spirit). The grey cortex is abnormally thin, not more than one-third or so of its usual thickness. (Alteration in colour, etc., could not be estimated, owing to the action of the spirit.) Passing downwards from this atrophied portion of the cortex is a pale, almost white, tract. Seen on section, it is somewhat triangular in form, the base being the diseased cortex, and extended downwards into the white matter for about two-thirds of an inch, tapering rapidly to a point. This tract, besides being paler in colour than the surrounding tissue, appears to be closer and denser, while, at the same time, it presents numerous small holes. It is quite evident that this pale tract is formed by an abnormal state of the white matter. In other parts, so far as could be observed, the cerebrum presents nothing abnormal, with respect either to the white or grey matter, or the ganglia at the base.

Microscopical Examination.—On making a section through the cortex at the seat of the lesion, together with the subjacent white matter, absence of a portion of the cortex is again detected. The two outer layers are usually intact, but those situated deeper are altered or destroyed. The new elements of the two outer layers are not greatly altered; in a few instances, the nerve-corpuscles present a condition of granular degeneration, but not to any great extent. Passing downwards from the second layer, the cortex is seen to be greatly changed, the nerve-corpuscles are nearly absent, and their place is taken by large numbers of connective tissue corpuscles and fibres; and of the same structure is the white tract before described. The fibres of connective tissue corpuscles are observed: the majority are circular in form, present two or three granules, and are scattered in an irregular manner

or collected into groups. The other form consists of long spindle-shaped bodies placed closely side by side, and forms fibro-cellular bands very similar to the structure of the spindle-celled sarcoma or recurrent fibroid tumour. The nerve-fibres are atrophied and destroyed. The vessels of small size and capillaries are very few in number, but in all cases their walls are greatly thickened by proliferation of the nuclei, and their course is tortuous and irregular.

It will thus be seen that at the site of the lesion in the left hemisphere of the brain there is a wasted and atrophied state of the cortical substance, with destruction of some of the layers, while the subjacent white substance is altered and transformed into a dense fibroid structure in which the nerve-elements are no longer seen.

Remarks.—It will be perceived from the foregoing description—

1. That the lesion was very well defined and of limited extent ;
2. That the convulsions were of a constant character, and that the sequence of the spasm was always the same.

It may therefore, I think, be reasonably concluded—

1. That the motor centres for the muscles which were affected in the slight form of fits are situate in and about the seat of the lesion ;
2. That, in the more general convulsions, the irritation which originated in and about the lesion spread to surrounding and more distant (convolutions) parts.

This localisation is confirmed by Ferrier's experiments. He has shown (*Proceedings of Royal Society*, No. 161, 1875) that in the case of monkeys, on irritation of the lower termination of the ascending parietal convolution and the region of the inferior termination of the intraparietal sulcus (Circle 1, Fig. ii), there is retraction of the angle of

Fig. 2.—Left Hemisphere of Monkey's Brain, after Ferrier. S, S. Fissure of Sylvius. R, R. Fissure of Rolando. Circle (1). Centre for Platysma. Circle (2). Centre for Hand and Carpus. Circle (3). Centre for Eyeballs.

the mouth and of the platysma on the opposite side. In one experiment, the application of the electrodes to this point gave rise to spasms of a choreic or epileptiform character, beginning in the left angle of the mouth, then affecting the left hand and arm, and lastly the left leg and tail.

On irritation of the angular gyrus (Circle 2, Fig. ii), he found the eyes are turned upwards and to the right ; that on longer stimulation the head is rotated to the right side ; that the ascending parietal convolution (Circle 3, Fig. ii) is the centre for the fingers and the carpus.

On comparing the position of these centres in the monkey's brain with the position of the lesion in the human brain (Fig i), it will at once be seen how closely the two correspond. If we suppose the irritation to have been chiefly manifested at the periphery of the lesion, the results in many particulars are identical.

The case also strongly confirms Dr. Hughlings Jackson's views on epilepsy, viz., that it consists of a discharging lesion of the grey matter of the cerebral convolutions.

Other points of interest are the following :—

1. The powerful influence of bromide of potassium in controlling the convulsions. The general irritation of the brain, as manifested in the general convulsions, was completely allayed by the drug.
2. The long period of time (eight years) which elapsed between the receipt of the injury and death.
3. The fact that rigor mortis was present eight hours after death on the right, but not on the left side.
4. The difference in temperature of the two sides, and the fact that the temperature rose 1 deg. Fahr. during a general convulsion. The paralysis was evidently epileptic.

I regret that the operation of trephining was not performed, but it must be remembered that the patient was apparently improving. The exact cause of death, in the absence of a complete *post mortem* examination, could not be ascertained.

In conclusion, I must express my thanks to my friend Dr. Major for his careful examination and interesting report on the condition of the brain ; also to my friend Mr. Wear, for recommending the case to my care.

CLINICAL MEMORANDA.

A CASE OF IMPERFORATE HYMEN : CONFINED SECRETION ENTIRELY FLUID.

A FEW months ago, I was asked by a neighbouring medical man to visit with him a case of imperforate hymen ; and I have his permission for publishing the following facts, thinking they may be of some interest to the readers of the JOURNAL.

E. N., a fine well-developed girl, aged 15, had never menstruated, although for the past two years the usual symptoms had been present regularly without any flux occurring. Latterly, she had experienced so much pain and discomfort in the back and thighs with a sense of fulness in the vagina, that her mother, becoming anxious, consulted my friend, who at once discovered the nature of the case. On examination, we found the membrane was entire and much thickened ; and, on proceeding to give relief in the usual way, a sudden and violent gush of fluid, like porter and water, took place, flying up to the ceiling and against the opposite wall ; rather more than two quarts of this fluid was collected. The patient made a good and rapid recovery, and the menses have since occurred without further trouble.

The chief point in this case was the fluid nature of the retained matter, as in two or three similar cases, as also in works commenting on this subject, we have found the confined secretion to be of a treacly consistency.

T. WELLS HUBBARD.

CHRONIC POISONING BY SULPHATE OF COPPER.

POISONING by the salts of copper are very rare. The following cases are of interest, from the persistent vomiting extending over ten weeks in one case, and also from throwing some light on the symptoms likely to be met with in poisoning by the improper use of cupric salts as colouring in articles of diet.

On May 24th, 1877, I was requested to see E. H., aged 8, and A. H., aged 6, whom I found in bed, each with raised temperature, coated tongue, no rash visible, with vomiting at frequent intervals ; the latter seemed to be the milk unchanged given as food. On inquiry into the previous history of the cases, I found that on the afternoon of Whit-Monday (May 21st), the children had visited a relative at his farm, a little distance from the town. Left to their own enjoyment, they regaled themselves with unripe fruit in the garden, and afterwards, finding some wheat in a spare room, also partook of this. They were both shortly afterwards seized with vomiting. As this seemed to be the unripe-fruit and wheat, the mother felt no cause for alarm ; but, as they still continued ill, and the vomiting remained, she thought it better for me to see them. With the above symptoms, I was somewhat puzzled to account for the obstinate vomiting, the food being regurgitated back as soon as taken, and never after they came under my care, of a blue or green colour ; but, on further investigation, I found that the corn they had eaten was part of the prepared wheat remaining of the "spring-sowing", and that the preparation consisted of a soaking in a strong solution of sulphate of copper.

They were given drop-doses of the wine of ipecacuanha with lime-water and mucilaginous drinks, under which treatment the elder child was in a few days convalescent. The younger became very prostrate ; the temperature still raised (102 deg. Fahr.) ; the bowels exceedingly constipated ; vomiting daily ; although other remedies were tried. I could not detect any lesion of lung or intestine. This continued for about ten days, when her health began to improve, and she was ordered milk and lime-water, beef-tea, wine, with carriage exercise. Her friends about this time removed from the neighbourhood, and I did not see her again until July 7th. She had become much emaciated, and was ordered cod-liver oil and nourishing food. I find she became much worse on the 27th, and died on July 30th in a convulsion. No *post mortem* examination was made.

J. FLETCHER HORNE, F.R.C.S.Ed., Barnsley.

RUPTURE OF KIDNEY : RECOVERY.

As the following case is one of not very frequent occurrence, I think it may prove interesting.

D. M., aged 56, of temperate habits, whilst unroofing a stable on July 23rd, was precipitated to the ground, a distance of seven feet, by the giving way of a beam upon which he was standing. He was much shaken, but did not think there was anything amiss with him. He helped to clear away the rubbish that fell with him, and then walked home, a distance of about a mile and a half. He then went to bed, but sent for no medical man, as he thought there was nothing