clonic and tonic spasms of the limb and trunk muscles; there is salivation, the urine is often passed, cries are frequent, and finally a state of unconsciousness may supervene; there is a succession of fits. These toxic effects sufficiently resemble those seen in epilepsy to suggest a toxic origin in some cases of the latter, and to indicate the value of absinthe in the study of the seat of origin of the epileptic fit.

METHODS OF PROCEDURE.

To try to arrive at the part played by the various divisions of the central nervous system in the production of the fit, the following methods of analysis have been so far adopted, namely:

1. Removal of one hemisphere. 2. Removal of both hemispheres. 3. Removal of whole cerebellum or of one lobe and the opposite half of the cerebrum. 4. Removal of one hemisphere, combined with hemisection of the lower cervical spinal cord; (a) on the opposite side, and (b) on the same side as the lesion, and *vice versa*. 5. Division of the spinal cord.

The absinthe excitation in each group was made immediately after the operation, and also in all cases where possible after complete recovery from the shock—that is, on the following day, or at some subsequent date. The following are the results obtained in the cat.

I.—REMOVAL OF ONE HEMISPHERE.

SERIES A (1 to 11).—Absinthe excitation immediately after the operation. Results: General diminution of the intensity and duration of the fits. In a few cases the fits are unilateral, but in the majority the fit is bilateral. The fit on the injured side commences slightly after that on the sound side (not constant); the contractions are, as a rule, less powerful and fewer in number; there is a tendency to tonus rather than clonus. Preceding the death of the animal bilateral spasms (asphyxial spasms), accompanied with elevation of the tail and discharge of urine, are very frequent. The characteristic fits pass insensibly into the spasms, and, as they do so, the movements upon both sides tend to become more equal, or even to become more accentuated, upon the side of the lesion. The reflex excitability is greatly increased.

SERIES B (1 to 10).—In this series the left hemisphere was removed some days or weeks previous to absinthe excitation. The results are for the most part similar to those in the preceding group; the fits are more vigorous and simultaneous, and in many cases are equal on both sides. In these animals there was rapid recovery after the operation, and "paresis" was only represented by a very slight awkwardness of motion. The intensity of the fits was in proportion to the recovery of action of the muscles of the weak side.

II.—REMOVAL OF BOTH HEMISPHERES.

(a) Removal of both hemispheres and immediate absinthe excitation (Series 1 to 8). This produces complete arrest or prevention of the fits in the arms and legs. The face movements may be present. Reflex excitability and respiration is increased. There are bilateral asphyxial spasms. (b) Removal of both hemispheres, and absinthe excitation on the second day. In one well-marked case there were bilateral, powerful, slow, clonic spasms. (c) Removal of left hemisphere with subsequent removal of the right hemisphere and absinthe excitation (Series 1 to 7). This produces arrest of the typical tonic and clonic fits. A small tonic contraction may be seen on both sides; in one case this was limited to the side first operated upon.

III.—REMOVAL OF THE CEREBELLUM.

(a) Complete removal of the cerebellum and immediate absinthe excitation has been followed by typical fits. (b) (Series 1 to 8) When the left hemisphere and the right lobe of the cerebellum are removed at the one operation and absinthe is immediately given, there is marked unilaterality of the fits, clonus and tonus on the left side, and usually tonus with very slight clonus upon the right side. When the hemisphere is removed subsequent to the right lobe of the cerebellum there is marked unilaterality, strong clonic contractions on the left side, and slight tonus on the right side. The removal of the lobe of the cerebellum produces one-sided weakness. This agrees with Russell's observation in the dog.

IV.—REMOVAL OF ONE HEMISPHERE COMBINED WITH HEMISECTION OF THE CORD.

When hemisection is made in the cervical region subsequent to removal of the left hemisphere, there is complete arrest of the fits on the side corresponding to the hemisection, whether this be the right or the left side.

V.—SECTION OF THE CORD.

Hemisections in the cervical region are followed by complete paralysis of the corresponding side; the paralysis, however, tends to become less, but is always, as far as observations go, much more marked than in the case of ablation of a hemisphere. In the same way the fit is at first unilateral; but later, and apparently depending upon the degree of recovery, there may be slight tonic and clonic manifestations upon the side of lesion. Complete division of the cervical spinal cord prevents the fits in the limb muscles, but there are clonic and tonic spasms of the face and shoulder muscles.

CONCLUSIONS.

In drawing conclusions from these experiments it must be remembered that there are not yet sufficient data to say what share the cerebellum may take in the production of the clonic spasms. Fits may occur in the absence of the cerebellum, but removal of one lobe of the cerebellum, coupled with that of the opposite cerebral hemisphere, tends to pro-

duce unilaterality. The question arises, therefore, concerning the auxiliary action of the cerebellum, and the experiments are not sufficient as yet to throw light on this point. That the cerebellum should exercise some influence seems probable from the symptoms which we know follow removal of portions of the cerebellum. The experiments show that one hemisphere, with an intact cerebellum, is capable of discharging impulses to both halves of the body, and they tend to show that one half of the cord can conduct to both sides of the body. They show that the rhythmic clonic fits are not obtained where the hemispheres are absent, the cerebellum remaining intact. They show that the impulses may descend through other channels than the pyramidal tracts; this is shown by the fact that, after the removal of one hemisphere, the corresponding pyramid degenerates and atrophies, yet fits can be obtained on that side by absinthe, which are, however, immediately arrested by hemisection of the cord. The experiments further show that absinthe has an action upon the whole of the central nervous system.

CASE OF EPILEPTIFORM TRIGEMINAL NEURALGIA TREATED BY HORSLEY'S OPERATION FOR NEURECTOMY OF THE INFERIOR DIVISION OF THE FIFTH NERVE.

By A. W. MAYO ROBSON, F.R.C.S.,

Professor of Surgery in the Victoria University, Hon. Surgeon
Leeds General Infirmary.

THE following case, reported by my house-surgeon, Mr. Walter Mayo, is of interest because of its being one of the earliest cases in which the inferior division of the fifth nerve has been excised by the operation suggested and put into practice by Mr. Victor Horsley:

W. B., aged 60, a publican, residing near Huddersfield, stated that he had always been a healthy man, and had led a fairly steady life. Fifteen years ago he began to suffer from severe agonising paroxysms of pain shooting down the right side of his face in the course of the inferior dental nerve. The paroxysms only lasted about half a minute, but recurred generally about every half hour or at longer or shorter periods, and were brought on by eating or, at times, even by talking. He had his teeth removed on the advice of his doctor, and took various medicines at the hands of several medical men, but never got any real relief. Seven years ago he was admitted into the Leeds Infirmary, under the care of Mr. Mayo Robson, who divided the inferior dental nerve from the inside of the mouth, which operation completely relieved him for two years. The attacks then recurred after exposure to cold, and soon became as severe as before. In April, 1887, he was readmitted into the infirmary, when Mr. Robson trephined the lower jaw opposite the last molar tooth, and removed half an inch of the right inferior dental nerve, giving complete relief for four years, or until eight months ago, when the attacks returned after exposure to cold and damp.

He was readmitted, January 26th, 1892, suffering from severe paroxysms of pain in the right side of the face, not only shooting down in the course of the inferior dental nerve, but radiating all over the right half of the face. They lasted about twenty seconds, occurred on an average every quarter of an hour, and were brought on by eating and talking.

On admission, the patient was a stout, well-nourished man, with eczema over his face and scalp. He looked fairly well, except when the attacks were on, although he said he had not slept long continuously for months. His tongue was coated but not more on the right than on the left. There was neither oedema nor tenderness on the right side of the face.

After the skin had been got into a more healthy condition and thoroughly aseptised, on February 4th, A. C. E. being the anæsthetic, Mr. Robson performed Horsley's operation for the relief of trigeminal neuralgia. An incision was made a little above the upper border of the zygoma, extending for-

wards for about an inch and a-half, another downwards from this behind the ascending ramus of the jaw, and another from the angle of the jaw along the lower border for about an inch. The flap thus marked out was reflected with the sub-jacent fat; the branches of the seventh nerve and the parotid duct were exposed, and the interval between them defined. The fascia was then divided, the gland pushed aside, and the masseter muscle exposed. The fibres of the masseter were divided transversely, so far as they were in the way, and retracted. The periosteum was then raised from the subjacent bone, the sigmoid notch and its boundaries well defined, and all bleeding stopped. A $\frac{1}{2}$ inch trephine was used, and a piece of bone taken out of the jaw just below the notch, so as to deepen it; a second piece was then removed, and then a third, and on it was found the groove for the entrance of the inferior dental nerve. On sponging out the cavity and getting the wound as dry as possible, the nerve could be seen lying at the bottom.

An attempt was made to ligature the internal maxillary artery, but, on account of its great depth, this was found impracticable, hence pressure forceps were applied and left on. It was not necessary to divide any extensive portion of the internal pterygoid muscle. The nerve was grasped with a pair of pressure forceps, and drawn downwards, when a piece $\frac{3}{8}$ inch in length was removed from just beyond the foramen ovale. The wound was well washed out with hot lotion, "1 in 4,000 perchloride of mercury solution," stitched up with silkworm gut above and below, and left open in the middle for the forceps. Stitches were inserted into the middle of the incision, but were left untied until the clips could be removed. The wound was dressed with cyanide gauze and salufer wool. The pressure forceps were removed the next day, when the spare sutures were drawn up and knotted. The stitches were removed on the 10th, and the patient returned home on the 27th quite well, having had no return of pain since the operation, the parts supplied by the inferior division of the fifth nerve being devoid of sensation.

REMARKS.—The operation is somewhat difficult on account of the depth of the wound and the proximity of the internal maxillary vessels, which are troublesome to ligature in a deep wound with little space for manipulation. On this account I should in future certainly reserve the operation for those cases in which the more simple division of the nerve at the usual sites had failed. It remains to be seen if the relief is permanent, as the first operation relieved for two years and the second for four. Should the pain return, the question of attacking the nerve within the skull, or of extirpating the Gasserian ganglion will have to be considered.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

EMPHYEMA AS A SEQUEL TO INFLUENZA.

J. C., aged 49, had a slight attack of influenza, from which he recovered after five days' rest in bed. He resumed his work in his usual good health. About a week afterwards, while retiring to rest, he was seized with sharp pains under the left breast, shooting back to the lower angle of the scapula. The temperature was 102.6°; the breathing was of necessity shallow; friction sounds and fine crepitations were heard in the regions affected with pain. Opium and diaphoretics were given, and hot poultices applied. On the seventh day physical signs of effusion were manifest. On the tenth day there was a slight rise in temperature, breathing was hurried, and pulse quick.

I told the patient an operation was necessary, but I had to wait two days for the consent of relatives. By this time the patient's condition was urgent in the extreme; breathing was laboured, the pulse weak and thready; the patient was delirious.

Under these conditions I performed the following operation without the aid of an anæsthetic: I made a free incision between the ninth and tenth ribs, $1\frac{1}{2}$ inch below and a little in front of the angle of the scapula, and introduced a large

drainage tube, as recommended by Mr. E. B. Baxter. Forty ounces of fetid pus came away, after which the air was freely drawn through the tube during inspiration, and expelled during expiration, showing there was an extensive communication with bronchial tubes. The tube was kept in ten days, and then replaced by two smaller ones. Patient was soon able to go to Brighton for three weeks. On his return I removed the small tubes, and allowed the wound to heal. Patient has been at work for some months now, and has never complained of the slightest inconvenience.

The success of the case appears to me to be due: (1) to free drainage; (2) to the low position of the incision; (3) to the comparatively early date of operation.

P. F. O'HAGAN, L.R.C.S.E., L.R.C.P.E.,
L.F.P.S.Glasg.

Croydon.

CONGENITAL DISLOCATION OF KNEE-JOINT.

I HAVE had a case of the above deformity under treatment, and I think it of sufficiently rare occurrence to be worth recording. The confinement was quite normal. On making traction the dislocation was at once reduced with perfect ease, but immediately resumed its former position on releasing the limb. The head of the tibia was displaced forwards. The subsequent treatment consisted in keeping the dislocation reduced by means of splints. After three weeks there was no return of the deformity. The child is now six months old and has a normal limb.

East Acton, W.

GARBY SIMPSON, M.R.C.S.

ATROPHY OF PROSTATE AFTER CASTRATION.

THE following may be of interest in connection with Professor White's recent address.

A man, aged 65, had for months attended the extern department of the Belfast Royal Hospital, while I was Resident Surgeon there in 1887, for retention of urine due to enlarged prostate. He developed a nodule in the right testicle, for which he was admitted and castrated by Mr. Fegan.

After his discharge he did not visit the extern department for three months, as he had no urinary trouble, and came then only to report himself. The left testicle was small and probably useless, as he had been impotent since the removal of the right.

I made a rectal examination to detect any recurrence of the tumour in the vasa or vesiculæ seminales, but found none. I was much struck by a marked diminution in the size of the prostate, which accounted for the relief of his urinary trouble.

The discussion of the analogy of the uterus and prostate at that time led me to plan an instrument after the Apostoli line of treatment, but my removal to this country, where prostatic diseases (and old men) are rare, prevented my ever giving it a trial.

Probably its use would fall as far short of expectation as the Apostoli treatment of uterine "fibroids" has done.

Cachar, E. Bengal.

ARTHUR POWELL, B.A., M.Ch.

REPORTS

ON

MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

SOMERSET AND BATH COUNTY ASYLUM, WELLS.

A CASE OF GENERAL PARALYSIS OF THE INSANE AT THE TIME
OF PUBERTY.

(By HUBERT C. BRISTOWE, M.D.Lond., Assistant Medical
Officer.)

THROUGH the kindness of Dr. Wade I am permitted to publish the following case, which may be interesting as adding another to Dr. Wigglesworth's list of cases of general paralysis of the insane at the time of puberty. The child is still alive and a patient in the Somerset and Bath County Asylum. There is in this case, as in Dr. Wigglesworth's two cases, a distinct history of trauma, but one which cannot so