where the faculties are sharpened and the impressions vivid, not to those where the symptoms of the early stage of the disorder are very urgent: these have no recollection of what has happened until the acute attack has passed off. In dementia the memory is very treacherous, particularly as to recent occurrences, but some retain a lively recollection of bye-gone days; frequently during the acute stage of mania, and as fatuity advances, they are forgetful of their daily wants, forgetful of the common decencies of life, and sink into a state of utter helplessness.

[To be continued.]

Observations on Convulsions. By ROBERT BOYD, M. D., F. R. C. P. London; Physician to the Somerset County Asylum.

The term spasm was applied by Dr. Cullen, to a state of muscular contraction more violent in degree than is usual in health. Where the contraction is succeeded by relaxation, and immediately repeated without the concurrence of the will, or from natural causes, he applies the term *convulsion*. Dr. Copland, in his Dictionary, has given a fuller definition, to distinguish convulsions from allied and specific diseases, as tetanus, &c. Andral's definition is similar to Copland's, with this addition, that there is or is not loss of consciousness. When there is loss of consciousness the disease is termed eclampsia, always without foaming at the mouth; by which eclampsia is distinguished from epilepsy.

Examples of these three different forms or degrees, as far as the motions are concerned, but with more or less loss of consciousness in all, have recently come under my observation amongst the male patients in this institution. The first two cases, in which there was loss of consciousness, were attended merely with spasm.

Case 1. A carpenter, aged 62, married; health feeble. For two years before his admission, he was reported as being subject to epileptic fits, and as having for the last two weeks been considered dangerous to himself and others, in a state of mania. Since his admission to the asylum,

https://doi.org/10.1192/bjp.2.15.25 Published online by Cambridge University Press

he has been been very quiet and regularly at work at his trade, except for a few days when he had œdema of the feet and legs, which improved after taking diuretics; urine free from albumen. On two occasions he has been suddenly seized with spasm, when he caught hold of the board on which he was at work, and it could not easily be got from his grasp; he lost consciousness for a few moments, his eyes became fixed, and turned upwards, and he would probably have fallen, had he not been supported. It is three months since the last attack. He is now quite rational, and will soon be discharged on probation.

Case 2. A soldier, aged 64, reported as being subject to paroxysms of melancholia at considerable intervals with suicidal tendency; ordinarily tranquil, and very industrious. There was no report of any tendency to epilepsy in his case; he says he never had fits. He is in indifferent health, and has had slight symptoms of scurvy, which shewed itself chiefly in one leg. He also employs himself in the carpenter's shop, and has had four seizures of spasm with loss of consciousness for about two minutes. The skin on the front of his neck becomes red, and continues so whilst the attack lasts. There seems to be a partial suspension of respiration. The neck is rather rigid, and eye fixed; pulse about 72. On coming to himself, he spits out a little to clear his voice, answers sharply, quite unlike his usual tone, and entirely forgets what he has just been doing, but perhaps returns to what he had done two days previously. In about five minutes consciouness returns. He then goes on with his work seemingly quite unconscious of what has happened, and if questioned denies that he has had any fit.

The next is an example of loss of consciousness, attended with convulsions merely of the muscles of the neck and face.

Case 3. A man who worked in an iron foundry, aged 43; imbecile, and reported as being subject to epileptic fits from childhood, which, just previous to his admission, had become very frequent, sometimes three or four fits in the twenty-four hours. He was nearly nine months a patient in the asylum before his death, and in that time had nine fits. He died from pneumonia succeeding severe diarrhœa. In his fits he became unconscious, but never fell down; he cried out with a subdued scream, and the muscles of the face and neck only became convulsed. Consciousness returned gradually in about two or three minutes. His head was unusually small,

https://doi.org/10.1192/bjp.2.15.25 Published online by Cambridge University Press

and on the *post mortem* examination the cerebral hemispheres were found to be unequal in size.

The following is an example of convulsions occurring in a case of general paralysis combined with dementia.

Case 4. A maltster, aged 46; married; of powerful frame; height, 5 feet 10½ inches; weight, 186 pounds. It was reported that twelve months before his admission, two sacks of barley, weighing four cwt., fell on his back and injured him. He was in hospital for eight week on account of the injury. He was in the habit of drinking six pints of beer daily when at work. The circumstance of his being obliged to give up his employment during the last six months seemed to have preyed upon his mind; he became changed in his habits, and soon began to display the characteristic symptoms of general paralysis.

Two days after his admission he had a severe attack of convulsions, in which the right side was most drawn, pupils contracted, full compressible pulse (120), breathing easy, no frothing at the mouth. With intervals of only a few minutes the convulsions returned six times in the same afternoon; he was unconscious. The second day after this attack he became very violent, and broke several squares of glass; the second day after that he had convulsions five times; and this second attack was similar in every respect to the first as above mentioned. It is three months since this occurred, and he was never at any period of his life subject to fits of any kind. He has been in a quiescent state ever since the attack. The treatment pursued in his case was, blistering the nape, and giving him the "liquor hydrargyri bichloridi," two drachms twice daily, which he continues to take regularly, and is gradually improving.

The following case resembled epilepsy in every respect, but there has been no recurrence of the attack.

Case 5. A laborer, aged 54. Has been eleven years an inmate of lunatic asylums from recurrent mania: never had epilepsy. About three months ago had three fits on the same day, with short intervals between, attended with violent convulsions of the whole of the right side, and froth mingled with blood oozing from the mouth. He was in feeble bodily health at the time, recovering from erysipelas of the head, and was also in a state of maniacal excitement.

The last case to be here mentioned is one of irregular and involuntary convulsive twitchings of the muscles of the face and limbs (chorea), occurring at long and uncertain intervals.

Case 6. A man, aged 47, imbecile, three years in the

https://doi.org/10.1192/bjp.2.15.25 Published online by Cambridge University Press

asylum; has been always subject to chorea, principally affecting the muscles of the face and arms; and the convulsive movements have continued sometimes for three or four days, during the whole of which time he had to lie on beds placed on the floor, as he was unable to stand or lie in a bedstead without injuring himself: he never loses his consciousness in these attacks. Various remedies have been tried in this case, and latterly tincture of sumbul has been given as an antispasmodic, with decided advantage: the fits have been much less severe.

The foregoing cases shew that convulsions, in various forms, are not uncommon amongst the insane, who as far as we know may be laboring under *functional* disease of the brain. Convulsions have also been observed amongst patients affected with general paralysis, in whom, an examination after death generally revealed inflammation of the spinal cord. According to Copland, convulsions as well as epilepsy are frequent complications of every form of insanity, and are considered very unfavorable.

We also find that convulsions attend almost every variety of *organic* disease of the brain. In the writings of Bonetus, (*Anatom.*, 1700, tom. 1, sect. xiii.) a case is mentioned where there was putrid and fœtid discharge from the nostrils. Another, where there was serum in cerebrum and spinal canal. Another, where serum was formed in the cerebral venticles. Another, from fracture of the skull. Another, from effusion of urine, &c. Hippocrates asserted that convulsions were brought on either from repletion or inanition. Galen also considered these two the chief causes, but added a third, irritation, which is by some referred to repletion, and for this state blisters were considered the fitting remedy.

The brain requires a certain quantity of blood for its nutrition and the proper exercise of its functions, and if there be a sudden increase or diminution in this quantity, convulsions will be the result.

Hoffman says that the membranes of the spinal cord are affected in convulsions.

Morgagni (*Seats and Causes of Disorders*, letter x.) treats of convulsions, and amongst other causes, mentions disease of the kidneys. Boerhave mentions, that in man in the greatest debility, spasms and convulsions are wont to precede death, and in animals, from fatal hæmorrhage, and from over dose of some vegetable poisons. I have observed convulsions in adults attend cancer of the brain (*Edinburgh Medical and Surgical Journal*, No. 172). Also within a short period I observed

https://doi.org/10.1192/bjp.2.15.25 Published online by Cambridge University Press

convulsions in two aged females with granular disease of the kidneys; and convulsions occurred seven hours before death, in one male adult with enlarged kidneys and heart, dropsy, and enlargement of the brain.

Copland mentions an epidemic of convulsions that occurred in the West of Scotland in 1742, from hearing addresses directed to the imagination and passions of their hearers by the followers of Whitfield. Another epidemic in Cornwall, in 1813-14, from similar causes, is described by Mr. Cornish.

Puerperal convulsions occur during the latter months of pregnancy and parturition.

It has been observed that in females of a nervous constitution, and in children under eight, convulsions occur at the outbreak or commencement of several of the acute distempers; and according to my observations, were the immediate forerunners of death, in young infants suffering from the eruptive fevers, complicated with pneumonia. *Edinburgh Medical and Surgical Journal*, No. 156.

Strong emotions in infancy, as fright, anger, &c. are predisposing causes. The children of epileptic persons often die in convulsions, and the records of lunatic asylums shew that those of their children who survive, often become epileptics and insane. In six infants who died from convulsions, four males and two females, whom I examined, within a short period, two males and two females were from one to four weeks old, and two males were eight and eleven months respectively. In one male infant the convulsions lasted five days, in the other males the convulsions were of shorter duration, In one female a week old, the convulsions continued nearly from birth, in the other female infant, convulsions continued for ten days. *Head*, in three males and one female, the cerebral vessels were congested with blood. In one male the brain was unusually large. In one female the brain was in a normal state. *Chest*: the lungs were congested with blood, or inflamed, "hepatized," in all the six infants. In one male the "foramen ovale" of the heart, and the "ductus arteriosus" were open. *Abdomen:* in one male, the viscera were unusually pale; in one male, the mesenteric glands were enlarged. Children born with large heads, strumous habits, fine white skin, the muscular system little developed, and subject to diarrhœa, are prone to convulsions; they have also succeeded an eruption on the head, and frequently occur during dentition. Valsalva observed, that the external figure of the cerebrum which follows the figure of the skull, when it is not

https://doi.org/10.1192/bjp.2.15.25 Published online by Cambridge University Press

natural, may indicate something entirely foreign to the intentions of nature, which renders it prone to diseases.

Convulsions may terminate in some of the diseases of the brain, or in death, and death may occur either by the brain, the lungs, or heart, as shewn in the foregoing cases. Andral found in fatal cases of convulsions, frequently lesions of the brain, varying in extent from simple hyperemia even to extensive softenings; but in many instances, no lesion was discovered; and such cases he sets down to irritation.

The symptoms of convulsions may occur during the course of any other disease, or in a state of perfect health, and leave not a trace behind. They consist of various movements, bending of fingers and toes, shaking of the head, convulsive motions of the eyes, which are sometimes turned upwards, and at others inwards or outwards, contortions of the face, contractions of abdominal and thoracic muscles, and spasm of the diaphragm, producing hiccup, the tongue is sometimes protruded, at others retracted. The involuntary muscles, as the heart, are seized with palpitation, and the peristaltic actions increased in the intestines. Sometimes there is vomiting and involuntary dejections.

The convulsions are either general, which is rare; or partial, which is common.

Irregular muscular motions are not the only symptoms; there is also incomplete, and sometimes complete loss of consciousness.

The muscles after violent convulsions often become painful, ecchymosis is sometimes produced, or even dislocations, rupture of tendons, and even sometimes fractures.

The duration is variable.

There is a tendency to recurrence. The recurrence of convulsions has been known to have ceased after vaccination.

As to the *treatment*, no uniform plan can be adopted, it must entirely be regulated and guided by the causes.

The diet and regimen ought to be carefully attended to. In infants and young children crying should be prevented, if possible, as it often brings back the seizures. When the bowels have been sufficiently evacuated, the "hydrargyrum cum creta" is recommended. Bloodletting and evacuants in cases depending on plethora, and the very opposite treatment in cases depending on anemia. Narcotics are sometimes indicated, also ammonia, ether, tincture of castor, or tincture of sumbul, are very useful; quinine in some cases, also nitrate of bismuth, and oxyde of zinc. Purgatives are also

https://doi.org/10.1192/bjp.2.15.25 Published online by Cambridge University Press

indicated, and oil of turpentine, particularly if worms are supposed to exist.

Warm or vapour baths, or fomentations in cases of a suppressed eruption, may be found beneficial. Blisters and sinapisms as counter irritants are often applicable.

The Military Lunatic Hospital. By C. LOCKHART ROBERTSON, M.B., F. R. C. P. Edin.; sometime Assistant-Physician to the Military Lunatic Hospital at Yarmouth; Honorary Secretary to the Association of Medical Officers of Hospitals and Asylums for the Insane.

In a former number of this Journal (No. 11) attention was drawn in a leading article to the breaking up of the Military Lunatic Hospital at Yarmouth, Norfolk, and in the next number I was led to make one or two remarks on the question, actuated by a natural sympathy with the present sad state of my former patients.

The interest thus excited in their favor led to a question in the House of Commons on the 20th July, 1855, which is thus reported in the *Times* of the 21st.

"*Military Lunatics.*

"Mr. MOODY inquired of the Under Secretary for War "whether any alteration had taken place in the treatment "of military lunatics at Fort Pitt, since the last Report of "the Commissioners in Lunacy upon it; also what pro- "vision was made for military lunatics generally; and "what appropriation had been made of the £60,000, voted "a few years since, for the erection of a military lunatic "asylum?

"Mr. PEEL said, when military lunatics arrived at Chat- "ham they were detained there, pending an inquiry as to "whether they were fit to be sent to their respective homes, "or to the military asylum. During the period of their "detention at Chatham, the accommodation provided for "them was at present very imperfect, but the Com- "missioners in Lunacy having reported the circumstance, "it had been determined to erect a separate house for the "temporary reception of the soldiers. Plans had been "obtained, and instructions had been given to the Board of "Ordnance to proceed at once with the works. He was not

https://doi.org/10.1192/bjp.2.15.25 Published online by Cambridge University Press