two months the wound had cicatrised, and the patient retained a useful arm.

CASE 2. *Treated by antiseptics.*—This case occurred in South Australia, in the year 1873, at the Moonta copper mines, to which place I had, in the meantime, removed, and where accidents were of daily occurrence. In the Australian colonies, from the excessive heat during the summer months, compound fractures are more dangerous to life, and more liable to perverted action of the capillary system than in this country. The patient was a boy, aged fifteen years, employed during the night shift about the crushing machine. Dr. Bull, who acted as one of the mine surgeons, was called during the night when the accident happened, and superintended his removal home; I was sent for in the morning to assist him at the amputation. On examining the injury I objected *in toto* to removing the arm, and related my experience of the first case, and pointed out the similarity of the two cases; the doctor, however, would not consent to delay the operation, and withdrew entirely from the case, burdening me with the whole responsibility. Nothing daunted, I proceeded to dissect out all the loose fragments of bone from the lacerated tissue, I then thoroughly swabbed out the entire joint with pure carbolic acid, inserting the antiseptic into every crevice that I could find, then brought the wound together and covered the whole with lint saturated with carbolic oil (1 to 15), supporting the limb with a figure-of-8 bandage. I now placed the arm at right angles on a pillow. The patient was very comfortable, and complained little of the dressing. The carbolic oil was continued without interruption throughout the whole treatment; and although suppuration took place to a certain extent, no untoward accident occurred. After the first week I had an annular splint made of perforated zinc, with a movable joint, which enabled the patient to exercise his arm, which was done gently and diligently, with the result of a very useful joint, having considerable flexibility, and strong enough for the boy in three months after the accident to return to his employment.

These cases are, I think, sufficient proof that in compound comminuted fracture of the elbow-joint—and I might even now include all other joints—Nature has a wonderful restorative power, and they certainly show that surgeons are often too ready to condemn a limb. Even although the elbow should remain stiff and motionless, if the hand could be preserved entire, this would be infinitely preferable to taking away the limb.

Strone, Argyleshire.

CONVULSION COMMENCING IN THE FACE AND HAND FROM THE INFLUENCE OF NITROUS OXIDE GAS.

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THE examination of the muscular system as an index to the condition of the brain is one of the principal means at our disposal for studying the nerve centres. It is well, then, as a method of scientific inquiry, to examine the physiological brain under unusual circumstances, such as the coma produced by anaesthetics. The following case is interesting from this point of view.

A gentleman in good health, about thirty years of age, required to have a large molar tooth removed, and at the request of the dentist I administered nitrous oxide gas. No difficulty occurred in producing anaesthesia; the patient respired the gas freely and easily; he became pale, then slightly cyanotic, and then, desiring full anaesthesia for a difficult operation, he was allowed to take one more full respiration of the gas. Carefully observing the patient all the time, and feeling his left pulse while viewing the face, I now noted distinct twitching of the right angle of the mouth (zygomatic upward twitching), and this was immediately followed by twitching of the right hand; first the thumb twitched mainly in the direction of flexion, and when it was semiflexed the fingers began to fold over it. Anaesthesia was now very complete, the gas was discontinued, the molar was removed by the dentist, and the patient recovered consciousness quickly, and, as is usual after the administration of gas, felt completely well.

This gentleman was in good health, had not suffered from any brain disturbance, and there was no reason to suspect brain disease. Had such a local convulsion commenced in a patient with the signs of brain disease, one would have suspected a local lesion of the left hemisphere, or described the attacks as Jacksonian epilepsy. In this experiment the two hemispheres did not act equally; it is probable that the gas acted equally upon both hemispheres; if this be so, the two hemispheres cannot have been alike. Possibly there was some local difference in the two sides of the brain, but still it was consistent with health, and we should not have suspected any such difference but for the experiment with the gas.

For the purpose of examining the normal functions of the brain, it is *prima facie* more satisfactory to observe healthy brains rather than those diseased. A brain may be said to be healthy when it is able to discharge its social duties or functions without producing a state of over-work, irritability, spasm, weakness, &c.—in short, without the signs of any abnormal or pathological results. In most clinical investigations of the brain we seek knowledge by observing what muscles are affected with palsy or spasm, and at the post-mortem record the area of brain disease corresponding. In this kind of observation the inference is drawn from the comparison of the abnormal nerve-muscular conditions with those corresponding to the normal brain; in a case of hemiplegia, the healthy and the abnormal sides can be compared, and thus information is gained respecting brain functions. In such observations, by selecting cases where certain muscles are paralysed, &c., we may find what local brain areas of lesion correspond. Now, I would argue that we may look to physiological conditions of man, and selecting cases where certain local nerve-muscular signs are observed, we must conclude that a local change has occurred in some nerve-centres, producing the nerve-muscular signs observed. I would further maintain that the observations of a healthy brain under such circumstances as called forth the exercise of or the temporary abeyance of the function of certain parts, are as scientifically admissible as evidence of local brain function as investigations in pathology. The same principle is, in fact, involved in both kinds of investigations—viz., the observation of local muscular phenomena which we believe to depend upon local brain change. When a general condition—e.g., sleep, uræmia, or the “typhoid condition”—chloroform, alcohol, or other drug produces special local muscular change, it must depend upon conditions in the corresponding nerve centres, and there must be such corresponding centres, whether pathology and anatomy can demonstrate their locality or not.

Harley-street.

A CASE OF POISONING BY ACONITE LINIMENT.

By CECIL A. CORKE, F.F.P.S. GLAS., L.R.C.P. E., &c.

A YOUNG woman suffering from suppression of the menses together with hysteria and mental depression developed a suicidal tendency, getting up at night and wandering about in such a manner as to lead her friends to keep a strict watch over her. In spite, however, of every care taken, she, on Jan. 13th, possessed herself of a bottle of liniment and drank some of the contents; the exact quantity was uncertain, but as well as could be estimated about two fluid drachms. The liniment was a mixture of equal parts of lin. aconiti (P.B.) and lin. saponis co., which had been prescribed for her mother some months previously. Directly it was known that she had taken poison, a mustard emetic was administered, and I was sent for. The mustard produced vomiting, but not to such an extent as to empty the stomach, the vomited matter smelling very strongly of the liniment. The patient, who at no time will give much information, and when ill generally states she is quite well, said she felt no inconvenience, and was quite well. An emetic of sulphate of zinc was prescribed immediately, but only taken on being threatened with the stomach-pump. The patient, who appeared somewhat frightened, but not then under the influence of the poison, suddenly became very giddy and faint, and the skin bedewed with a cold perspiration. Much pain at the stomach was complained of, and earnest entreaties were made by her that we would let her alone. The pupils