

only rousing on being spoken to sharply or loudly. So far as could be learned he had never completely lost consciousness. There was complete paralysis of the left arm. The left leg and face retained power of movement.

The diagnosis of compound depressed fracture of motor area having been made, preparations were made to raise the depressed bone. Guarding the actual wound with a compress soaked in 1.20 ac. carbolic, the whole scalp was shaved and disinfected in the usual way.

Operation: A crescentic incision, convexity upwards, with a radius of one and a half inches, was made so as to include the wound, and the scalp over the whole of the depressed area was raised.

The depression was found to be oval in shape and about one and a half inches in its longest diameter. It was outlined at its margin almost all around by a fissured fracture of the outer table, and from this fissure numerous lines radiated to the centre, which was about half an inch below the general surface of the skull. There was a small amount of brain substance oozing from the centre of the depression. One of the small triangular pieces of bone was removed, and through the opening thus produced remaining fragments were sprung back to their normal level. The fragment first removed was then replaced. The whole wound was then closed by horsehair sutures, a small drain of iodoform gauze being placed in the original wound.

The temperature the next morning rose to 102½ and pulse to 124. By night the register was 101½ and 114. Next morning 99 and 94. The subsequent history showed rapid recovery. The wound healed throughout by first intention, but the paralysis of the arm was recovered from very slowly. In about one month however, all the motions were recovered except extension of the wrist and of thumb and fingers, and these motions are still

imperfect, though gaining slowly. The flexors of the hand are also weak. At present he is not able to extend the wrist while the fingers are flexed, and to extend the fingers while the wrist remains flexed; but not to perform both movements at once. The reason for this apparently is that the extensors are incapable of successfully overcoming the tonic contractions of the flexors, while the latter are put upon the stretch by extending both the wrist and fingers. The treatment has consisted in exercises, in voluntary movements, massage, electricity and the functions are still slowly improving. It is evident that the portion of the cortex that was destroyed is the area which normally presses over the movements of extension of the wrist and fingers. Horsley and others have shown that while there are certain well-defined areas which control certain movements, there are frequently outlying areas which seem to have a subsidiary influence, and may become functionally in the event of destruction of the main centres. In this case it is to be hoped that these subsidiary centres may prove adequate to the performance of the duties thrust upon them by the destruction of the main centres. This patient has youth in his favor, and it is certain that the powers of adaptability are greater in immature than in fully matured brains.

In the meantime it is important to maintain the nutrition of the nerves and muscles by electricity and massage.

It was Hippocrates who said that no injury of the head is too trivial to be despised, nor too serious to be despaired of. Injuries to the brain produced by heavy blows or falls upon a broad surface are apt to be productive of a certain amount of bruising and laceration at the seat of injury, together with a greater amount of injury of the cortex at a point diametrically opposite. The explanation is that the blow starts a wave of the semi-fluid brain tissue which breaks