

There seems to me to be little doubt, however, that the track of the wound, after piercing the left lower lid, extended from a point, midway between the outer and inner angles across the floor of the orbit, injured and possibly destroyed the optic nerves, caused protrusion of the ball, passed through the roof of the orbit close to the sphenoidal fissure, and entered the brain at a point in the frontal lobe, at its base, close to the fissure of Sylvius. With the exception of the monobrachial spasm, one could hardly further localize the injury. To suppose that the point of entry was through the sphenoidal foramen would be to admit injuries to the middle cerebral arteries and other structures at the base of the brain, inconsistent with the course which the injuries effect subsequently pursued. As Gowers points out violence to the cerebral substance in the region of a motor centre will produce symptoms which are usually referable to lesions of the centres themselves. That the child died of septic meningitis appears to me to be also probable.

The question that naturally arises in a serious brain-wound of this sort is, "Will any operative procedure be of use?" When Dr. Proudfoot first saw the case with me I urged the propriety of treating this injury as I would have done any other deep puncture. Here we had a penetrating wound of the orbit involving the brain, and my idea was to remove the useless eyeball, and to attempt to set up at once direct drainage from the deeper parts of the wound after it has been thoroughly cleansed and injected with a fairly strong antiseptic solution. I would then have dressed it after the strictest antiseptic style and waited results. The parents, however, refused to permit this, and Dr. Proudfoot was not, I think, very enthusiastically in favor of the scheme. And yet, while I am not given to talk about what might have been, I am now, knowing the results which followed the wound, perfectly satisfied that such a course would, under the circumstances, not only have been justifiable, but that in the light of recent knowledge have been the proper course to pursue. As in other situations, the dangers of deeply penetrating wounds are sepsis and inflammation. Here we had a case where the patient lived nearly three weeks after the injury, so that death was not caused by the first and direct shock, but probably by the train of evils brought on by septic material conveyed into the brain and along the whole track of the wound, causing inflammation of the meninges, and possibly of the nervous matter itself. Septic absorption soon took place, the pro-

ducts of the inflammatory process were unable to find vent, and, further absorption occurring, death was of course inevitable. That the plan of ample and direct drainage with antiseptic dressings in brain injuries is crowned with success in apparently hopeless cases, and that recovery would not otherwise have taken place seems, to me to have been amply illustrated in recent years. This disregard of the *noli me tangere* rule which has so long obtained with most of the internal organs, is now affecting the chief nervous centres, and no one can place limits upon the extent to which it may yet be carried.

As the subject is one of great interest to me, I should like to make a part of the paper the test for remarks which will bring out a discussion of these recent advances in cerebral surgery, and, if you will permit me, I will say something about them. Of course, as everybody knows, bold and successful deeds in brain surgery were not unknown to the older surgeons; but they were, when they occurred, classical exceptions to the rule that such treatment of the cerebral structures was in the nature of things fatal. From the time when Dupuytren plunged his knife into the brain and opened a cerebral abscess, giving relief to the symptoms and leading to the ultimate recovery of the patient, many surgeons have successfully imitated him. So, too, do we find many cases of severe brain lesions doing well under the older surgeons; but there are just two factors in these cases which make the chief differences between the older procedures and the surgery of the present day—1st, more accurate diagnosis, and, 2ndly, antisepticism. A better definition of the situation, extent and character of a cerebral wound abscess, tumor (whatever it may be), is possible in our time, chiefly because of the works of men like Prevost, Brown-Sequard, Hughlings Jackson, Gowers and others.

All observers agree as to the special value of the antiseptic method in dealing with lesions of the brain. Packard says that wounds of the brain heal readily when secondary inflammation does not set in; and in speaking of their treatment, places great stress upon the employment of antiseptic dressings. Hughes-Bennett's celebrated case of brain tumor, reported in the *British Medical Journal*, for May, 1885, would have done better, said the operator, Mr. Rickman Godlee, if stricter antiseptic measures had been preserved. In a very clearly written article upon trephining (see *Annals of Anatomy and Surgery*, No. 3, Vol.