

believed that by working in this way and preparing antitoxin as above described, the satisfactory treatment of malignant disease may be ultimately reached.

### Cerebral Tumors Successfully Removed by Operation.

Geo. E. Williamson (*Brit. Med. Jour.*, November 26th, 1898) reports two cases of cerebral tumors successfully removed.

CASE I.—Male, aged 34. Morning headache of two years' duration; vertigo. History of a fall followed by unconsciousness lasting for three days; paralysis of left arm and paresis of left leg; disappearance and reappearance with subsequent persistence of the paralysis; sensation of pins and needles in left hand and of hot water running down left arm. Double optic neuritis is well marked, but the sight notwithstanding is good. The knee-jerk is exaggerated, and there is well-marked ankle clonus in the left leg.

April 20th, 1897, he complained of feeling drowsy and of severe pain in the head. Shortly afterwards he vomited. At noon he had a fit. The left arm and leg and left side of the face were convulsed. He did not lose consciousness during the fit, which lasted about three minutes. There was well marked analgesia and anesthesia of the left hand and forearm.

Operation May 14th, 1897. A large flap, convex upwards, and consisting of the whole thickness of the scalp, was turned down at the right side of the head. The skull was trephined over the Rolandic area, and the hole enlarged with cutting forceps. When the dura mater was divided a tumor was at once seen on the surface of the brain. It was cut out with the handle of a scalpel, and was half the size of a tangerine orange. The cavity in the brain was lightly filled with gauze, and the scalp sutured without replacing any bone. The gauze was removed on the second day. Microscopic examination showed the tumor to be a small round-celled sarcoma. Shortly after recovering from the anesthetic he could move his left arm and leg almost as well as ever, but it was six days before the paralysis disappeared from the face. Patient made an uninterrupted recovery. February, 1898, patient followed his usual occupation. November, 1898, patient has remained pretty well since February. The swelling over site of trephine opening has increased and is harder than at first. Although patient's general condition is good, there is apparently local recurrence.

CASE II.—Female, aged 23. History—vomiting, headache and a fit followed by paralysis of right arm and paresis of right leg. In March, 1894, the patient began to suffer from frontal headache and vomiting. Sickness was pronounced in the morning, but gradually disappeared during the day, although the head-