issue by a less thorough removal. Not uncommonly the scoop or curette may answer for the purpose of removing any remaining portions of the tumor after the main part has been removed.

Even in cases in which the tumor is too large to be removed with safety, a partial removal often gives very great relief, especially to the intolerable headache and other similar distressing symptons, and this partial removal may be attempted not only once, but, as the author has done it in one case, three times, and each time with great relief.

Should it be impossible to remove any of the tumor, the mere removal of the bone over the tumor will often give very great relief.

Sometimes the dura is involved in the tumor, and must therefore be sacrificed. The danger of fungus cerebri is relatively small when the dura is closed after being opened, and especially if the brain substance itself has not been interfered with. In such cases, as Dr. Keen suggested a few years ago, the dura may be replaced by a bit of the pericranium. A piece of this, a little larger than is sufficient to make good the lost piece of dura, is cut entirely loose from the under surface of the flap of scalp, and is sewed in place by a few interrupted sutures. In doing so, while not sure that it is needful, he has always, on theoretical grounds, however, turned the pericranium upside down, so that the osteogenetic surface should be external. If, then, any bone is developed from this osteogenetic surface, it grows away from the brain instead of into it.

Excepting cases of abscess, gunshot wounds, intracranial hemorrhage, and cysts, it is the author's rule at present not to drain. Occasionally, on account of hemorrhage, it will be necessary to leave some iodoform gauze protruding from the wound, and this acts as a drain. In such cases, however, he always inserts a stich in the scalp at the time of operation, so that as soon as the gauze is removed, the wound may be entirely closed, or, should there be any need for drainage for twenty-four or forty-eight hours after removal of the gauze, he inserts a small bit of gauze to keep open only the skin wound, and the stitch is tied as soon as the need has passed. If no drain be employed, very frequently by the second or third day the flap will bulge considerably by reason of the accumulation of wound fluids under the scalp. If this is the case, and all the more if it is attended with headache or other pressure symptoms, he either inserts a pair of forceps between two of the sutures, and thus give exit to the wound fluids, or sometimes cut a stitch for the purpose of gaining sufficient room for the evacuation of the fluid.

A month or more after the patient has entirely recovered from the operation, the question of closing the opening in the skull will naturally arise. Until this closure is effected (and sometimes it is best never to close it) he always directs the patient to wear a skull-cap, on the inside of which is sewn a bit of tin a little larger than the opening, the sewing being made possible by first covering the tin with some silk.

Sometimes the opening in the skull can be closed immediately, and this is best done by replacing the bone in bulk. In about fifteen cases, Dr. Keen replaced a button of bone an inch and a half in diameter and the entire thickness of the skull, and in not a single case has the button ost its vitality. If this is to be done, however, the button of bone must