OBSERVATIONS UPON THE MANAGEMENT OF ORBITO-CRANIAL WOUNDS

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Penetrating cranial injuries encountered during war were frequently found to involve the fronto-orbital area of the skull. Among a group of 300 cases of compound fracture of the skull, there were 40 in which the orbit and brain were simultaneously injured. In 20 of these, one or both globes were anatomically damaged, producing blindness and requiring enucleation. Out of the experience in dealing with this type of wound at a General Hospital in the Theater of Operation, certain principles of procedure emerged pertaining to policies in management. These are briefly reviewed and illustrated.

MATERIAL

Two classifications were made of the 40 cases under consideration. Group I, numbering 20 patients, presented severe, destructive, anatomic injury to one or both globes in addition to the skull and brain injury. Group II, also 20 in number, comprised wounds which involved the orbit and brain with varying degrees of physiologic injury to the contents of the orbit.

In Group I, there were 16 cases with unilateral and 4 patients with bilateral globe destruction. One of these patients presented an associated transection of the cervical portion of the spinal cord. In 4 cases, the primary operation was performed at the 36th General Hospital. Five patients (31 per cent) required secondary debridement of the wounds due to incomplete primary operations in forward installations. Brain abscess occurred in 3 of the 5 patients. A frontal osteoplastic craniotomy flap was performed in 5 patients to debride adequately the brain and orbital injury. Massive wounds with extensive bone and soft tissue loss occurred in 5 cases.

Of the cases in Group II, 5 patients had primary debridement operations performed at the 36th General Hospital. Three patients (20 per cent) treated at Evacuation Hospitals, required secondary debridements, brain abscess being present in 2. Seven patients had total blindness of one eye; 8 had normal vision in the affected eye; 5 had vision which varied from light to finger perception.

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NEUROSURGICAL CONSIDERATIONS

General. The aim in the efficient care of this class of wounds would appear to be the achievement of primary wound healing following thorough debridement; the preservation of vision; the prevention of scar contracture; and the construction of the wound to permit the greatest conservation of tissue for subsequent reconstructive surgical procedures. This aim requires that the operative and postoperative care of the wound and the orbital contents be performed under as ideal conditions as possible. These conditions are present within a general hospital center. Five of the 16 cases (31 per cent) in Group I of both globe and brain injury required redebridement of the wounds, accountable mainly by the press of circumstances and the lack of time factors present in evacuation and field units. Survey of the patients with this type of wound indicated that they were safely transportable before operation in the great majority of instances. There is no contraindication to delay in operation upon the brain in the interest of the most adequate debridement. Similarly, enucleation of the globe may be reasonably delayed. Evacuation of the patient with this type of wound permits the forward surgeon to devote his time to the more urgent types of intracranial injuries.

The majority of the fronto-orbital wounds were observed to be satis-