

## CRANIOFACIAL "COUP DE SABRE" INJURY—A CASE REPORT

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### SUMMARY

*A case of extensive craniofacial injury sustained in a road traffic accident is described, in which the face was nearly bivalved. Immediate resuscitation and reconstruction was done with a good result.*

Extensive craniofacial injury is quite common in present day civilian life due to high speed vehicular injury.

Face is an unprotected area and there is a very high incidence of its injury in vehicular accident (Braunstein, 1957). Many of these patients with extensive craniofacial injury have concomitant multisystem injury and derangement.

### Case Report

J. D., a twenty-six years old male patient was brought to our casualty after being involved in a road traffic accident about 3 hours prior to admission. He was a security guard travelling on a motorbike, when he collided head on with a truck.

On admission he was in gross respiratory distress. His blood pressure was unrecordable. He had very poor respiratory effort and laboured respiration due to aspiration of blood and secretions. He had evidence of severe head injury and was in grade-III coma. His face looked as if it had been cut from right side of nose below the eye ball ('Coup de Sabre') injury. He also had multiple lacerations over the body.

On admission, his airway was cleared by endotracheal intubation and suction and ventilatory assistance was given. He was rapidly transfused blood and fluids to combat shock. As soon as his blood pressure and respiration

stabilised he was transferred to operation theatre for definitive repair.

The injury had opened up the face in 'Coup de Sabre' fashion below the right eye ball and right side of nose (Fig. 1). His whole right side of the face seemed to be hanging, based on right superficial temporal artery as a big fragmented osteomyocutaneous flap. He had multiple fractures of the body of the mandible. Right condyle of the mandible was avulsed from its joint. The temporalis muscle was avulsed from its origin but was intact at its insertion. Zygoma was fractured into multiple fragments and there was avulsion injury of right lower lid. There was a midline fracture and diastasis of the palate. The maxilla was fractured at multiple sites. The malar half of right maxilla was with the facial flap leaving maxillary sinus open. Orbital floor was fractured.

At operation tracheostomy was performed first. This was followed by a thorough debridement and irrigation of soft tissues. Haemostasis was secured. Following this, repair of bony fragments was undertaken. None of the bony fragments were discarded but were fixed with 'Prolene' suture after drilling holes in them. About thirty such fragments were thus united. Bony palate was fixed by wires and overlying mucoperiosteum was closed. Intermaxillary fixation was performed and the right zygomaxillary complex was suspended to the frontal



Fig. I. Pre-operative view of the patient, showing "Coup de Sabre" injury. Intact temporal artery is seen. Tracheostomy has been performed.



Fig. II. Showing features after immediate post-operative period.



Fig. III. Patient after first operation.

bone. The eyelid and other lacerations were repaired. Bilateral burr holes of the skull were performed to rule out extradural haematomas. Computerised tomogram of the brain performed on the next day showed no intracranial mass lesion (facilities for C. T. were not available during night).

Post-operatively patient was kept on ventilator for three weeks during which time he gradually recovered from pulmonary edema and infection. He also had C.S.F. otorrhea, which stopped on its own. A gastrostomy was performed for feeding. His intermaxillary wires were removed after six weeks and tracheostomy stoma closed. His consciousness gradually improved after passing through a violent hyperactive stage. His repair of lower eyelid gave way during the post-operative period and he developed ectropion. Patient was discharged after seven weeks of initial hospitalisation. He was readmitted thrice each time at about an interval of three months each for removal of sequestered bone pieces and for correction of ectropion.

Presently after a follow-up period of about

one year, the patient is fully rehabilitated in his social life with reasonable cosmetic appearance. He still has enophthalmos of the right eye and needs reconstruction of the orbital floor.

### Discussion

Even severe craniofacial trauma can be successfully resuscitated and salvaged. The key to the successful reconstruction of severe facial trauma lies in proper fixation of bony fragment, adequate debridement and soft tissue repair. 'Prolene' sutures were used to fix small bony fragments because it can be handled easily, has great tensile strength and is entirely non-reactive.

The management of associated cranial injury and respiratory complications are equally important and this requires cooperation of neurosurgeons as well as anaesthetists.

Immediate repair of the facial injuries was undertaken. This prevents unnecessary wound infection, blood loss and helps in nursing. However, there is an opinion contrary to this immediate repair (Tajima, 1978).

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