A Review of Mandibular Fractures in a Craniomaxillofacial Trauma Centre

A G Tay,* V K L Yeow,** B K Tan,*** K Sng,**** M H S Huang,† M L Foo,**

Abstract

This report is a retrospective review of 74 cases of mandibular fractures managed in a craniomaxillofacial trauma centre between January 1994 and May 1998. Demographic data revealed that 85% of the patient population were male, with a mean age of 27.5 years. The commonest causes of injury were motor vehicle accidents (48.6%), followed by assault (16.2%) and accidental falls (17.6%).

In 25 patients (33.8%) the fractures were single. Of these, fractures of the condylar region were the most common (8 patients). The remaining patients sustained fractures in two or more anatomic sites. There were other associated facial fractures in 45.9% of patients. Trauma to other systems was present in 37.8%, with orthopaedic and neurosurgical injuries being the most common.

Surgical management in the form of open reduction and internal fixation was carried out in 61 patients (82.4%). Maxillo-mandibular fixation was used as an adjunct to maintain occlusion and bony reduction in unstable and comminuted fractures (15 patients, 20.3%), and as the primary mode of treatment in patients with stable, undisplaced fractures, particularly condylar fractures, in which the pretraumatic occlusal relationship was not disrupted (9 patients, 12.2%). A successful outcome was defined as a stable and healed fracture, with restoration of functional occlusion, facial symmetry and facial aesthetics. Complications observed included temporomandibular joint dysfunction (10.8%), malocclusion (9.5%), infection (8.1%), implant exposure (5.4%), and non-union or delayed union (4.1%).

Key words: Internal fixation, Malocclusion, Maxillo-mandibular fixation, Polytrauma, Temporomandibular joint