Prevalence and management of zygomatic fractures in a Malaysian population


Abstract: A total of 282 cases of zygomatic fracture treated at the Department of Oral and Maxillofacial Surgery, Faculty of Dentistry between 1977 and 1996 were reviewed. Slightly more than 41% of the patients were Chinese, 30% Malay, 26% Indian and 3% other races. Patients' age ranged from 6 to 59 years. The mean age was 28 years old. The majority of patients were male, with a male to female ratio of 6:1. The highest incidence of fracture was in the 20-29 years age group (50% of all patients). Sixty percent of the patients sustained zygomatic fracture alone. The remaining had associated fractures of the maxilla (17%), mandible (12%), orbital rim and frontal bone (7%), nasal bone (3%) and other non-maxillofacial bone (2%). More than half of the patients (58%) were treated by simple elevation via the Gillies temporal approach alone that did not require additional fixation.

Introduction

The zygomatic complex is a key component of structural facial skeleton and aesthetics because it constitutes the prominence of the “cheekbone”.1,2 It is also commonly injured during facial trauma because of this prominent position.2,3 Zygomatic complex constitute either the most commonly3,4,5,6 or the second most commonly4 fractured facial bone. Isolated zygomatic arch fractures represent about 40% of facial fractures.4 Studies done in Kuala Lumpur in the late seventies5 and early eighties10,11 suggested that the zygoma was the second most commonly fractured facial bone in Malaysia.

Restoration of function and appearance is the basic aim of treatment for zygomatic fractures. Surgical management included fracture manipulation without fixation, percutaneous pinning, and open reduction and internal fixation (ORIF) either with wires, miniplates or a combination of the two modalities.12 For a long time, manipulation without fixation i.e. elevation of the fractured zygomatic complex was the recommended treatment.12 Interosseous wire fixation became the method of choice to achieve stability of the reduced fragments in the mid-20th century. There is a general trend nowadays towards open reduction and internal rigid fixation under direct vision with mini-plates.1,12

Material and Method

A retrospective survey was undertaken of all patients presenting with fracture of the zygoma under the care of the Department of Oral and Maxillofacial Surgery, Faculty of Dentistry, University of Malaya during the period from 1977 to 1996. Data for each patient were obtained from the trauma book and operation theatre log-book maintained at this department. The trauma book is a log-book in which entries were made of patients presenting with maxillofacial injuries, be it soft and/or hard tissue involvement.

Data collected were categorised into:
1. Patients' demographics data such as age, sex and race
2. Types of injury the patient sustained
3. Type of treatment.

Only descriptive statistic was employed in this study.