

C
617.6
AMA

EPIDEMIOLOGY AND TREATMENT NEEDS OF
MAXILLO-FACIAL FRACTURES IN SRI LANKA

BY

NIHAL ASOKA de SILVA AMARATUNGA

A thesis submitted to the University of
Peradeniya in accordance with the requirements
for the degree of Doctor of Philosophy in the
Faculty of Dental Sciences.

May 1991

PERMANENT REFERENCE
FOR USE IN THE
LIBRARY ONLY

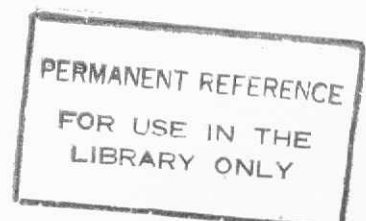
439044 0



ABSTRACT

This study was undertaken with the main objective of developing appropriate treatment policies and techniques for maxillofacial fractures (MFF) in Sri Lanka. All patients with MFF admitted to General Hospital, Kandy (GHK) during the period from January 1970 till June 1989 were investigated to determine the epidemiology of MFF in Sri Lanka. Out of these patients the group that was treated by the author (Group A) was further studied regarding clinical aspects, treatment needs and complications. The feasibility of using a new method of treatment of FM consisting of one week of intermaxillary fixation (IMF) followed by 4 weeks of arch bar fixation as a substitute for 3 - 4 weeks of IMF was tested using matched groups.

It was found that the incidence of MFF had increased significantly after 1977 due to the socio-economic changes that took place during this period in Sri Lanka. A rapid increase of MFF due to road traffic accidents (RTA) correlated strongly with the increase in the number of motor vehicles. Incidence of MFF caused by assault too rose during this period. The rise in the frequency of MFF was seen mainly among young adult males while the frequencies among children and the elderly remained largely unaltered.



Mandibular Fractures were much more common than fractures of the middle third of the facial skeleton (FMS) throughout the study period although the frequency of the latter increased after 1977. Condylar fractures were the commonest FM and next were angle and body fractures in the order of frequency. Fractures of the zygoma (ZF) were much more frequent than LeFort fractures. There was a relation between cause and site of fracture with falls and assaults causing FM and ZF while LeFort fractures were caused by RTA.

As the majority of patients were young adults who had healthy teeth in sufficient numbers simple wiring techniques were possible in the treatment of a large number of FM. Trans-osseous wiring (TW) was done in the case of unstable fractures at the angle only. Edentulous FM required acrylic Gunning type splints and childrens' FM were treated with reusable lower acrylic splints. Condylar fractures were treated by conservative non-invasive techniques. As most of these procedures were closed reduction and indirect skeletal fixations a large number of FM could be treated under local anaesthesia. Thus simple and inexpensive methods were employed which could be considered as suitable for developing countries.

A majority of ZF required only elevation but the numbers needing TW and other surgical interventions increased after 1977 indicating that the severity of these injuries has risen. LeFort I and II fractures could be treated by inconspicuous internal suspension whereas LeFort III type required external suspension methods. A majority of FMS were treated under general anaesthesia.

The disadvantages of IMF were found to be difficulty in feeding and speech, general weakness of body and loss of weight resulting in an unnecessary delay in returning to employment. A reduction in maximal mouth opening was also detected.

The finding that teeth in the line of FM could be retained could have special significance in the use of simple wiring techniques and arch bar fixations. The observation that antibiotic prophylaxis was not necessary for MFF which are not extra-orally compound also could be of relevance.

The study revealed that the period of IMF required for healing of FM is related to the age of the patient and is significantly less than what was prescribed by earlier authors. The new method of treatment of FM consisting of one week of IMF followed by 4 weeks of arch bar fixation was found

to be satisfactory with regards to healing and also in eliminating the disadvantages of prolonged IMF while retaining its advantages such as correction of the occlusion. Thus it was found that the alternatives to IMF need not be the various bone plating techniques which may be too expensive in the context of a free health service.

PERMANENT REFERENCE
FOR USE IN THE
LIBRARY ONLY