Pediatric Mandible Fractures
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ABSTRACT

Introduction

Fractures of the mandible in the pediatric population remain concerning given the low rate of the pediatric population in comparison to the adult population. Therefore, treatment of mandible fractures in the pediatric population presents a challenge. This study provides an analysis of children with mandible fractures and evaluates the impact of fracture type, location, and treatment on outcomes.

Methods

This retrospective study reviewed cases of pediatric mandible fractures, age 17 years or younger, from 1987 to 2000. Data were collected from the Mayo Clinic's records and included gender, age, ethnicity, etiology of fracture, location of fracture, treatment, and complications. A total of 121 patients were identified, with 92 (76.0%) male and 29 (24.0%) female patients.

Results

Among the 121 patients identified, 92 (76.0%) were male and 29 (24.0%) were female (Table 1). The most common cause of injury was automobile accidents (35, 28.9%), sports related injuries (15, 12.4%), and assault (12, 9.9%). A majority of all injuries (66, 55.5%) involved motor vehicles (automobiles, ATV's, snowmobiles, motorcycles, bicycles, and pedestrian-vehicle accidents). Analysis revealed a seasonal peak of mandible fractures in the spring and summer, from April to August, and a decline in the winter months. Of all known mechanisms of injury, the most common location of the fractures were subcondylar (35, 28.9%), angle (34, 16.1%), and body (26, 12.3%). Treatment of fractures in this study included maxillary-mandibular fixation (42, 34.7%), open reduction internal fixation with mini-plates plus mandibular-maxillary fixation (42, 34.7%), open reduction internal fixation with mini-plates alone (6, 5.0%), observation (6, 5.0%), and open reduction internal fixation with wiring alone (1, 0.8%). Only 11 complications noted, including persistent trismus (1), non-union requiring bone graft (1), scar revision (1), wound dehiscence (1), and transient facial nerve weakness after a paresthesia appeared.

Conclusions

Pediatric mandible fractures can be successfully treated with maxillary-mandibular fixation alone or in conjunction with internal fixation. Treatment options for pediatric mandible fractures include open reduction internal fixation with mini-plates, observation, and non-operative treatment. Despite advancements in surgical fixation technology, this technology was not utilized at this institution during the time period.

References


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