

Review of 10 Years Through 2014 and 2024, for Mandibular Fractures: A Retrospective Study

Özgür Türkan, Sevil Kahraman, Arzum Yılmaz

Department of Oral and Maxillofacial Surgery, Gazi University Faculty of Dentistry, Ankara, Türkiye

Abstract

BACKGROUND/AIMS: Mandibular fractures are a common type of maxillofacial fracture. Clinical symptoms of mandibular fractures include pain, swelling, difficulty chewing, and malocclusion. Collecting long-term epidemiological data on mandibular fractures can provide essential information for developing and evaluating preventive measures to reduce the incidence of these facial injuries.

MATERIALS AND METHODS: Ethical approval for the study was obtained prior to data collection. Patient information was retrieved from hospital records, radiological images, official reports, and the institutional information management system. Data from a single tertiary care center were reviewed, including demographic characteristics, fracture sites, and treatment methods for mandibular fractures in 185 patients treated between February 2014 and February 2024. Only patients with complete clinical and radiographic documentation were included, and the data were independently assessed by two researchers to ensure accuracy and consistency.

RESULTS: Among the 185 patients examined, fractures were most frequently observed in the 20-29 age group. Assault was identified as the leading cause of mandibular fractures in men, while falls were the most common cause in women. The incidence of fractures increased during the summer months. The mean number of fractures per person was 1.34. The region most frequently associated with mandibular fractures was the angle of the mandible.

CONCLUSION: Mandibular fractures commonly occur in young males. Properly planned treatments for these fractures yield high success rates. The findings of this study provide insights to surgeons, physicians, and health policymakers on addressing mandibular fractures.

Keywords: Etiology, mandibular fractures, retrospective studies

INTRODUCTION

The mandible, which is U-shaped, is the largest bone in the facial skeleton.¹ It is the only facial bone capable of movement through a joint and is particularly prone to trauma due to its protruding structure. Its functions include speech, mastication, and swallowing, all of which can be disrupted by mandibular fractures.

Mandibular fractures account for between 18.0% and 72.9% of all facial fractures.² This wide range is attributable to regional, demographic, and etiological differences among studies. Mandibular fractures occur after

blunt or penetrating trauma. In addition, weakness in the mandible caused by tooth extraction, tumor, or cyst can cause pathological fractures. Although the etiologies are difficult to classify, the most common causes of fractures are assaults, falls, sports injuries, motor vehicle accidents (MVAs), and pathological conditions. Among these, the factors most responsible for fracture formation are MVAs, assaults, and falls.³⁻⁶

Across demographic studies, men consistently sustain mandibular fractures more frequently than women.⁶⁻⁸ The most affected age group

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ORCID IDs of the authors: Ö.T. 0000-0003-0328-0258; S.K. 0000-0003-3573-1068; A.Y. 0000-0002-5850-1591.



Corresponding author: Özgür Türkan
E-mail: ozgurturkan1994@gmail.com
ORCID ID: orcid.org/0000-0003-0328-0258

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