

**Profile of Maxillary Fracture Patients in RSUD Dr. Soetomo during the period of
2018 - 2020**



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To fulfill the obligation of Research Methodology Module

Faculty of Medicine Airlangga University

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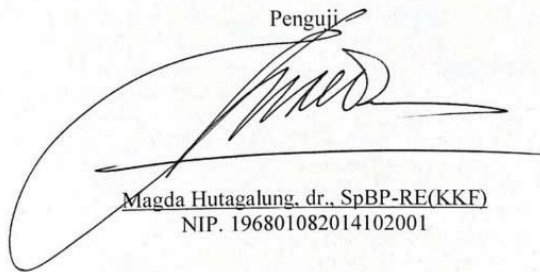
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SUMMARY

The maxilla is an important bone of the midface, in which the position of the bone provides structural support of the viscerocranium and the unique appearance which supports facial aesthetics making the maxilla an integral functional and cosmetic cornerstone of the midfacial unit.

Surabaya is an increasingly urban city in Indonesia of which the number of vehicles are many and the rapid motorization of the citizens leads to the increase of incidence rate for motor vehicular accidents which contributes a large portion of maxillofacial injuries in the region. The gradual increase in the amount of maxillofacial injuries in Surabaya creates an urgency to provide accurate and effective treatments for the corresponding injuries. RSUD Dr. Soetomo being the leading healthcare provider in East Java treats the majority of cases of maxillary fractures.

This study is a retrospective study which extracts information regarding the profile and management of maxillary fractures from medical records of patients from RSUD Dr. Soetomo during the period of 2018 until 2020, gathering data such as age, gender, maxillary fracture sites, types of treatment, and treatment outcomes.

Data gathered from RSUD Dr. Soetomo Hospital medical records and surgery reports from 2018 until 2020 yields 144 samples of maxillary fracture cases, the majority of them being adults with an age range of 18 to 64 years old (92.36%) and male gender (78.47%). Most of the cases are diagnosed as Le Fort 3 type of maxillary fracture classification (47.22%) with smaller numbers in other Le Fort classifications. Treatment of these cases are done with an operative approach in which the preferred treatment is by open reduction internal fixation (ORIF) miniplating (81.25%), with the average length of stay in the hospital of 12.56 days. Post treatment malocclusion rarely occurs, with only a single case out of the 144. Infections and exposed plates are similarly seldom found, recorded occurrences being only 4 cases out of 144.

Seeing the close correlations of vehicular accidents to maxillary fractures, it is recommended to increase awareness on vehicular safety and traffic laws of the area.

Furthermore, quick and accurate diagnosis as well as treatment for maxillary fracture is of paramount importance since the maxilla is a functionally and aesthetically important facial feature. The data gained from this study can supplement on providing a general overview on conditions of patients undergoing treatment for maxillary fracture and could potentially be used to aid further research on the topic.

ABSTRACT

Background: *The maxilla is an important bone of the midface, it is an integral functional and cosmetic cornerstone of the midfacial unit. Surabaya is a city in Indonesia with rising numbers of vehicular accidents, in which contributes a large portion towards maxillofacial injuries in the region. RSUD Dr. Soetomo being the leading healthcare provider in East Java treats the majority of cases of maxillary fractures.*

Objectives: *To analyze the profiles of patients of RSUD Dr. Soetomo who underwent treatment for maxillary fractures, gathering data such as age, gender, maxillary fracture sites, types of treatment, treatment outcomes,*

Methods: *This research is a retrospective research which extracts information regarding the profile, management and treatment of maxillary fractures from medical records of patients from RSUD Dr. Soetomo during the period of 2018 until 2020.*

Result: *Data gathered from RSUD Dr. Soetomo Hospital medical records and surgery reports from 2018 until 2020 yields 144 samples of maxillary fracture cases, the majority of them being adults with an age range of 18 to 64 years old (92.36%) and male gender (78.47%). Most of the cases are diagnosed as Le Fort 3 type of maxillary fracture (47.22%) with smaller numbers diagnosed as other Le Fort classifications. Treatment of these cases are done with an operative approach in which the preferred treatment is by ORIF miniplating (81.25%), with the average length of stay of 12.56 days. Post treatment malocclusion very rarely occurs, with only a single case out of the 144. Infections and exposed plates are similarly seldom found, recorded occurrences being only 4 cases out of 144.*

Conclusion: *Data variables of age, gender, maxillary fracture sites, types of treatment, and treatment outcomes from the profiles of patients of RSUD Dr. Soetomo who underwent treatment for maxillary fractures has been extracted and summarized in this study.*

Keywords: *Maxillary Fracture, Le Fort Fractures, RSUD Dr. Soetomo*

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LIST OF ABBREVIATIONS

LF	: Le Fort
RSUD	: <i>Rumah Sakit Umum Daerah</i> (Regional Public Hospital)
ALOS	: Average Length of Stay
LPM	: Lateral Pterygoid Muscle
MMA	: Medial Meningeal Artery
AMA	: Accessory Meningeal Artery
EAM	: External Auditory Meatus
MA	: Maxillary Artery
ION	: Infraorbital
PSA	: Posterior Superior Alveolar
MSA	: Middle Superior Alveolar
ASA	: Anterior Superior Alveolar
PN	: Palatine
NPN	: Nasopalatine
LLSAN	: Levator Labii Superioris Alaeque Nasi
LLS	: Levator Labii Superioris
LAO	: Levator Anguli Oris
MVA	: Motor Vehicular Accidents
RTA	: Road Traffic Accidents
CSF	: Cerebral Spinal Fluid
CT	: Computed Tomography

MRI	: Magnetic Resonance Imaging
ZMC	: Zygomaticomaxillary Complex
ORIF	: Open Reduction Internal Fixation