

Study of faciomaxillary injuries in females

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INTRODUCTION

Facial trauma in women is complex with physical, psychosocial, and cultural influences impacting clinical presentations(1). Although multifactorial, assaults and falls are principally reported as the main causes(2). Over the past 3–4 decades etiology of maxillofacial trauma has been changing and continues to do so . For instance, Motor vehicle accidents (MVA) are more common in developing countries, where as assault and other causes have outnumbered MVA in developed countries(3,4) . Study of facio maxillary trauma help in assessing proficiency of road safety measures, women protection acts and access to treatment.

This Retrospective study was carried out to evaluate incidence, etiology, mode of injury, facial fracture patterns and their management.

Aims and Objectives

- 1- incidence of faciomaxillary injuries in females
- 2- Etiology- Accidents, fall, assault etc.,
- 3- Common sites of fractures
- 4- Management of fractures

Exclusion criteria

Children excluded

Pathological fractures

Materials and methods

A Retrospective study conducted from June 2020 to June 2023 at the Plastic surgery department, Thanjavur medical college and hospital.

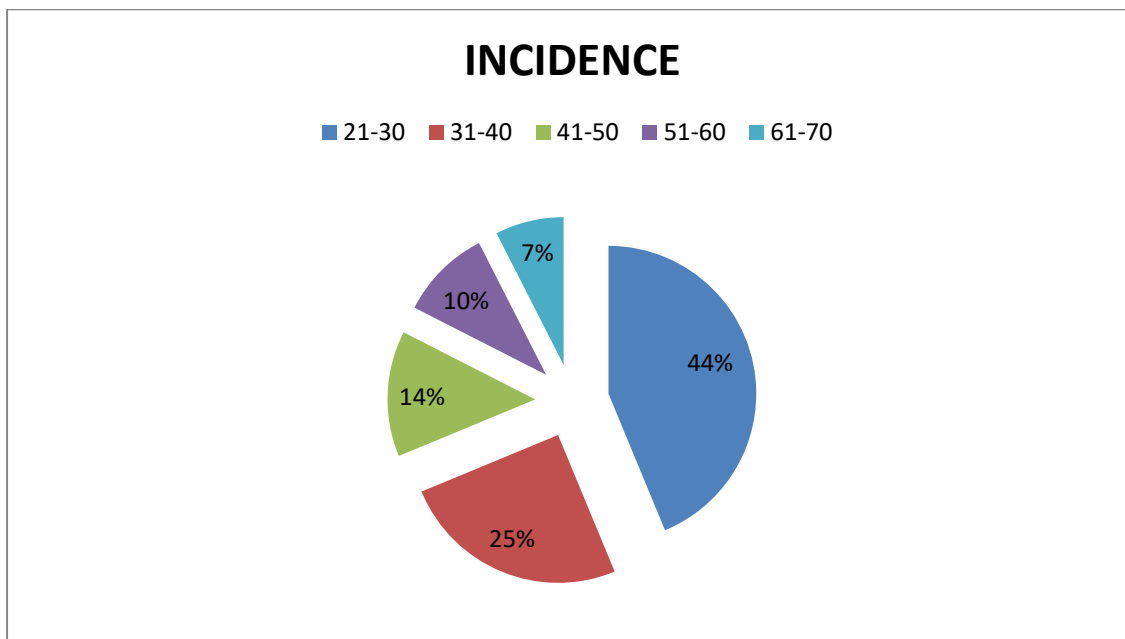
All maxillofacial fractures in women that attended or were referred to the unit were included in this study.

RESULTS

During the period of June 2022 to June 2023 at the Plastic surgery department, Thanjavur medical college and hospital total of 80 female patients with facio maxillary injuries were brought to department.

1) Incidence – Age wise Distribution of Fractures

Age	Incidence
21-30	35
31-40	20
41-50	11
51-60	8
61-70	6



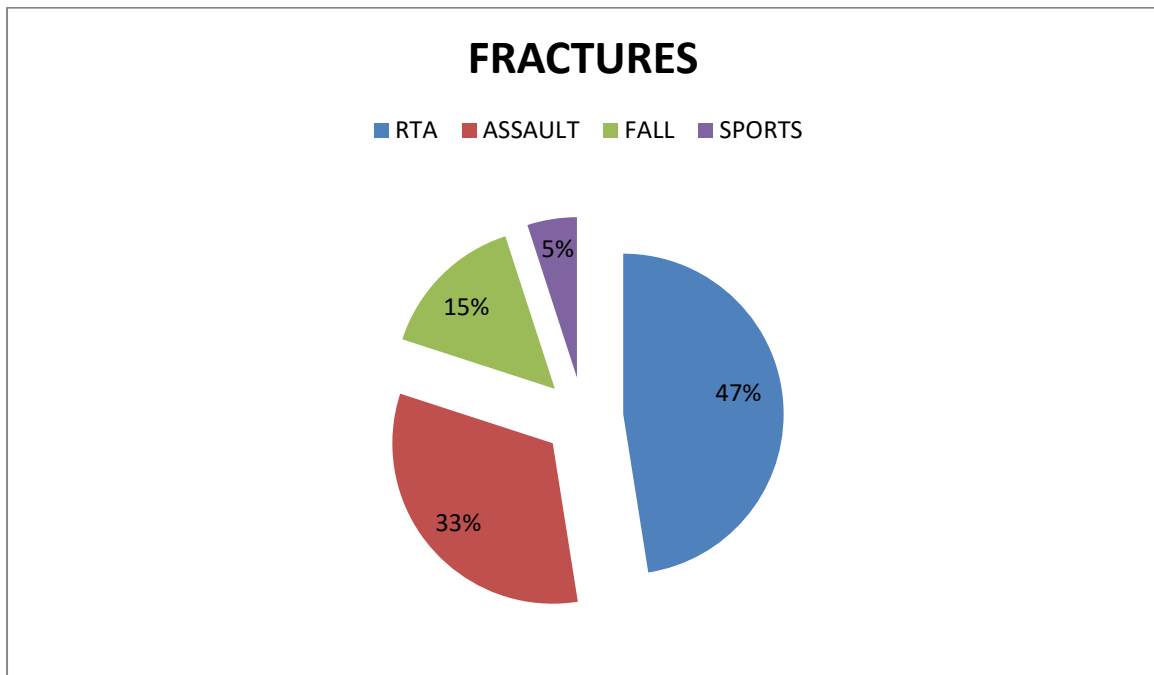
Distribution of no of fractures according to site in various age groups

Fracture type	age					Total
	21-30	31-40	41-50	51-60	61-70	
Symphysis	6	0	0	0	0	6
Para symphysis	11	4	0	0	0	15
Body	0	3	2	0	0	5
Angle	4	0	2	0	0	6
Ramus	0	0	1	0	0	1
Condyle	0	4	0	2	1	7
ZMC	5	8	0	1	2	16
Lefort 1	0	1	0	0	0	1
Lefort II	3	0	0	1	0	4
Lefort III	0	0	0	0	0	0
Palate	0	0	2	4	2	8
Nasal	6	0	4	0	1	11

2) Etiology

Fractures were classified according to etiologic factors, of which RTA injuries were highest (47%), followed by assault(33%), fall, and least frequent were due to sports.

Etiology	No. of Fractures
RTA	38
ASSAULT	26
FALL	12
SPORTS	4



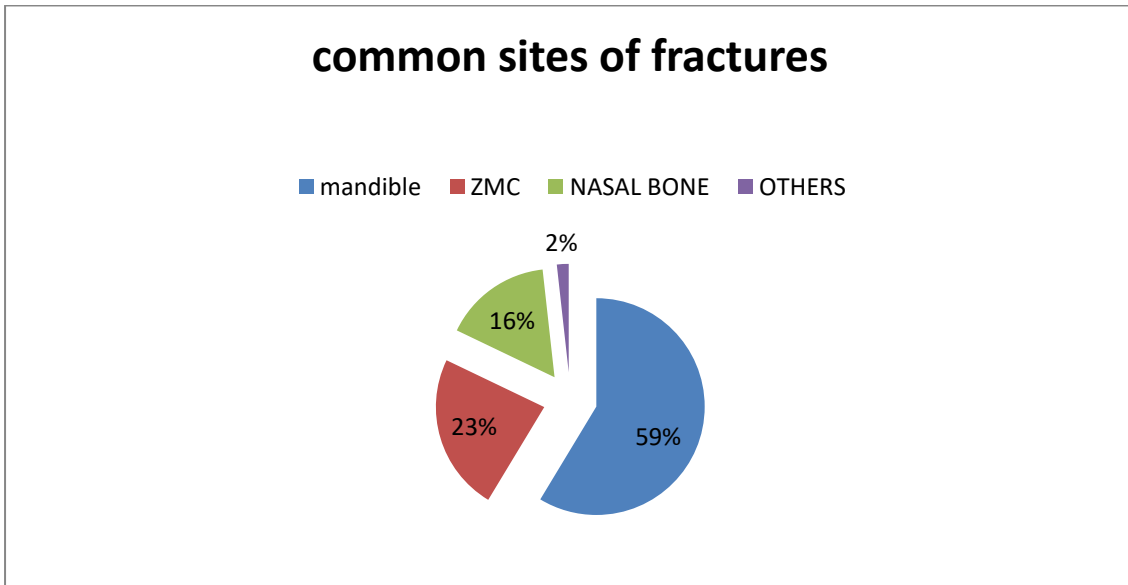
Fracture type in different etiology

Etiology				
Fracture type	RTA	Assault	Falls	Sports
Symphysis	4	0	2	0
Parasymphysis	11	2	1	1
Body	0	3	2	0
Angle	4	1	0	1
Ramus	0	0	1	0
Condyle	6	1	0	0
Palate	0	4	4	0
ZMC	7	8	0	1
Lefort I	0	0	0	1

Lefort II	2	2	0	0
Lefort III	0	0	0	0
Nasal	4	5	2	0

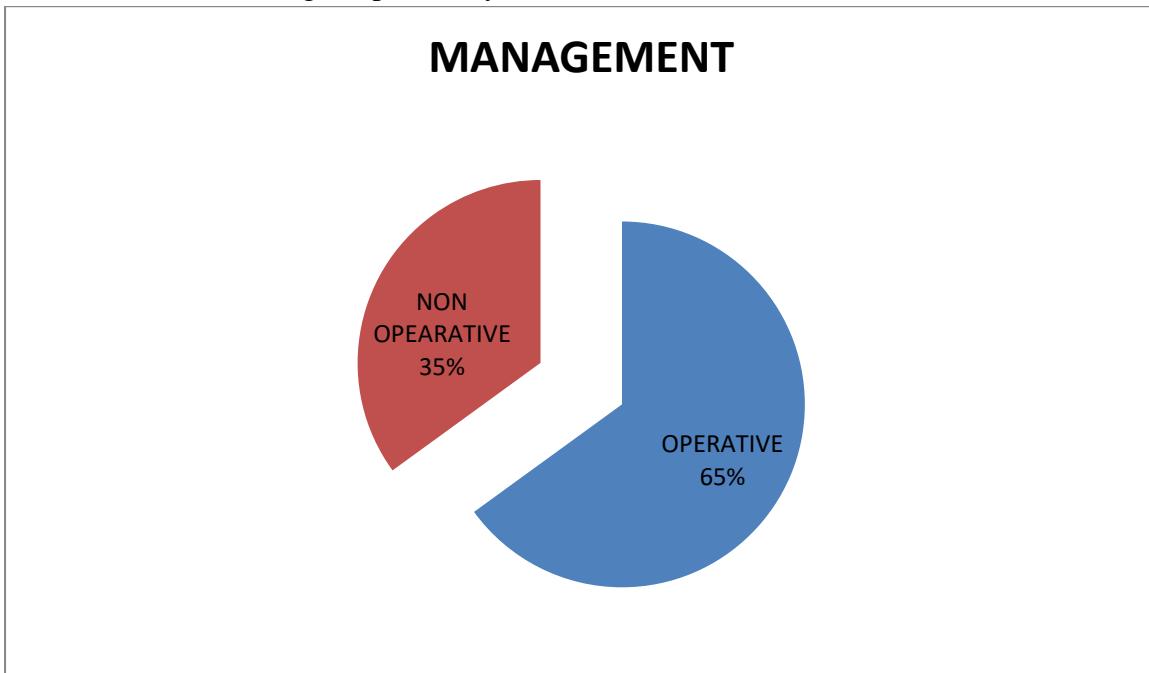
3)Common sites of fractures

Of all facial bones, mandibular fractures were highest (59 %) followed by zygomatic bone Fractures(23%)



MANAGEMENT OF FRACTURES

Most of fractures managed operatively.



DISCUSSION

Most common cause of death in first 40 years is trauma. Around 20 million people injured due to road traffic accidents(5).

Faciomaxillary injuries are more common because of its its more prominent position(6).

There has been change in trend of faciomaxillary injuries in past two decades(6). Aim of this study is to understand incidence, etiology etc., related to faciomaxillary injuries in females, Which helps in implementing safety measures, resource allocation etc.,(7).

In present life style, women are actively working in every field, more exposed to external environment prone to accidents, violence. In recent studies there has been decrease in incidence of RTA. Faciomaxillary injuries associated with significant morbidity and disfigurement(8&9).

Anatomical differences-

Male skulls are usually larger than female skulls. Female skulls have a rounded forehead, while male skulls have a sloping, less rounded forehead(10).

Female skulls have a smooth supraorbital ridge, while male skulls have a protruding supraorbital ridge, Female skulls have round eye sockets, while male skulls have little anterior projection. Male skulls have a more angled and larger jaw(11).

Age related changes-

Bone formation is more prominent in young age, balanced in adults, but bone resorption is more prominent in the elderly, which makes elders more prone to fractures with trivial trauma like self fall(12).

In present study conducted at plastic surgery dept. Thanjavur medical college. we observed faciomaxillary injuries are more common in 20-30 years which correlates with increase in working women and also productive age group.

Most common cause is RTA Which accounts for 47% .even though there is decline in incidence of RTA still it is most common cause, may be due to false statement of violence as accident, fall. Accidents can be decreased by educating people and strictly following traffic rules.

Allocating medical resources at accident prone regions can save lives.

Second most common cause is assault 33% which is mostly related to inter domestic violence by partner and conflicts with neighbours, can be decreased by psychological counseling for personality changes and immediate support for victims of domestic violence by police dept.

Of all facial bones, mandibular fractures were highest (59 %) followed by zygomatic bone Fractures(23%) which were most common in younger age.



FIG 1 & 2- ORIF done for ramus and parasymphysis fracture.



FIG 3- Zygoma elevation done for right zmc fracture



FIG-4 closed reduction done for bilateral nasal bone fracture

65% Of fractures managed operatively like ORIF, zygoma elevation, closed reduction.

Operative intervention is mostly preferred in Young and middle age.



FIG 5&6 –un displaced mandible and maxillary fractures treated with arch bar & IMF in elderly.

Conservative management mostly observed in elderly considering comorbidities.

CONCLUSION

This Retrospective study shows that mandibular region is most prone area .Most common age group is 21-35 & most common cause is RTA followed by assault.

Change in patterns of facio maxillary injuries can be identified by epidemiological study of facio maxillary injuries , which helps in employing a updated risk profile assessment for women who present with facial trauma in their trauma service.

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