



## Surgery

## PRIMARY RECONSTRUCTION AND MANAGEMENT IN HUMAN BITE INJURIES OF FACE

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**ABSTRACT** **BACKGROUND** Our hospital, a tertiary referral centre caters to the patients from length and breadth of Tamilnadu, adjacent Pondicherry, Telangana and Andhra Pradesh. Majority of the population under the study are from rural areas. Lack of awareness and financial issues (from the patient's point of view) resulted in delay in presentation making early reconstruction a difficult proposition. In this paper we have carved out a midpath solution for these issues and planned for primary reconstruction to reduce the long term morbidity.

**KEYWORDS :** Human bites; local regional tissues ; flaps; primary reconstruction

### INTRODUCTION

Human bite injuries are common since historic ages till today both in love and war. Whether they are erotic bites or ferocious ones or fight bites, most commonly involved areas are the head and neck regions and the next one in line to follow is the upper limb, especially the fist.

### MATERIALS AND METHODS

**STUDY PERIOD- MAY 2014- JUNE 2017**

### DEMOGRAPHY;

This is a prospective study conducted in two tertiary level hospitals over a period of three years, one of which is an institute. This also caters to rural population from other parts of Tamilnadu and neighbouring states. The study involved 28 cases.

The patients were grouped into cases covering four groups:-

1. Nose
2. Upper lips, lower lips & both lips
3. Ear
4. Cheeks and lips

A four- score scale was used to assess the patients post-operatively:-

1. Functionality especially in lips and nose
2. Disfigurement
  - Scar and quality
  - Appearance of tissues replaced
3. Job fitment and resumption of jobs.
4. Depression and other psychological problems

In some of these cases pre-operative moulage was used to quantify the loss especially in nose injuries. Assessment of the local wounds, availability of the skin, and general condition of the patient at the time of admission was done. Tetanus prophylaxis was given. HepB vaccination was given in high risk individuals.

### RESULTS

In our series of 28 human bite injuries, the majority of them were from rural areas. Most of them were due to trivial fights. Among the organs involved in head and neck region are;

- Nose-60%
- Lips; Upper and lower- 25%
- Ear-10%
- Cheeks-5%

Most of the people reported to our AE Ward with a time delay due to medico-legal issues and lack of awareness of the dangers including severe infective sequelae, the average time delay being 4-20 hours. In all these cases majority of them were between 18 and 45 years. Majority of them were due to alcohol fuelled aggression. Injuries could be either a minor simple tooth pressing injuries over the face or direct occlusive human bites whereas in hands, tooth punch injuries are common. 23 were males and five of them were females. Five patients required local wound care alone. There were no self-inflicted injuries. The poly-microbial nature of these wounds and the time delay

in presentation (probably) accounted for the morbidity.

### BACTERIOLOGY AND ANTIBIOTICS

Most of these infections were due to Staphylococcus, Streptococcus and other anaerobes as similar to other series. In our series, there were no HIV positive individuals, of course salivary transmission may render them ineffective. But transmission for HBE risk cannot be excluded. There are reports of transmission of HIV in other series. But there were no HepB cases in our follow up.

The commonest antibiotic we preferred based on different studies is Co-Amoxycyclav (Augmentin) as a routine prophylaxis. However in delayed presentation with associated symptoms and signs of inflammation around bite zone and fever, wound swab for culture and sensitivity was also done in our institution. Anaerobic antibiotic cover with Metronidazole was given.

### TYPES OF RECONSTRUCTION

- Primary
- Delayed Primary
- Touch up procedure





Conflicts of interest- There were no conflicts of interest.

I hereby extend my gratitude to all the patients who consented themselves for documenting their photographs.

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In our series, we have done primary reconstruction in 22 cases from 4-16 hours after injury and for the remaining 6 patients, we planned delayed primary reconstruction. Primary reconstruction was done in clean cases after thorough wound debridement.

Majority of these cases were done under regional blocks while some of them were supported with iv sedation or general anaesthesia.

Reconstruction was primarily done using local tissues or locoregional tissues. Majority of them were single staged. With distant tissues there was a second stage. Nasal reconstruction was done with forehead flap and conchal cartilage in majority of the cases and nasolabial flap in few cases. In lip injuries majority of them underwent wedge excision, advancement and closure. In few cases Megregors fan flap was used. Either of the lips were used as donor sites.

Our follow up on an average was from three months to two and half years. Some of the patients received additional touch up or soft procedures like chemical peel, laser etc for rejuvenation. These procedures were done for making them socially acceptable.

**CONCLUSION**

- Human bites are commonly due to interpersonal enmities, alcohol fuelled aggression or quarrels.
- Nose is commonly involved, followed by lips and ears.
- The average time delay in primary reconstruction varies from 4-16 hours.
- Polymicrobial infections are common more so in diabetic patients.
- Primary reconstruction reduces the morbidity and disfigurement.

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