

# Surgical Approach of Impalement Injuries to the Soft Palate- A Case Report

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**Abstract:** Self mutilating habits also known as masochistic/ sadomasochistic habits are those in which the patient enjoys deliberately damaging themselves. The common traumatic lesions in the oral cavity may be chemical, thermal, physical in nature. The physical one is more severe, widespread and can involve the deeper tissues thus tends to be more resistant to conventional forms of treatment. This paper presents a case of impalement injury to the soft palate in a 4 year old boy and its management.

**Keywords:** Laceration of soft palate, Impalement injury.

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## 1. INTRODUCTION

Impalement injuries can occur due to accidental, iatrogenic and factitious traumas. These injuries are relatively common in children and have an estimated annual incidence of 1-2% of all pediatric traumas<sup>1</sup>.

The most common objects causing impalement injuries are sticks, pencils, toothbrushes, toys, eating utensils etc. It may also occur due to tooth extraction, nail biting, tongue mutilation, sucking digits or sucking variety of foreign objects like eyeglass, earpieces, knives and dental floss etc. These injuries most commonly affect children aged 6 years or lesser because they often walk about sucking or holding objects in their mouth.<sup>2</sup>

The lesion due to injury may persist longer and may recur more frequently than the expectation of the clinician. These types of cases are found commonly among the children with emotional disturbances. Thus careful diagnosis and adequate treatment are important.<sup>3</sup>

However, due to the paucity of such events there is no evidence base or clear, accepted consensus on a particular management protocol for these injuries.<sup>4</sup> The present article describes the case of a 4 year old child, with impalement injury in the soft palate, managed by surgical approach.

## 2. CASE REPORT

A 4 year old male patient reported with chief complaint of injury to the soft palate. History revealed that the child was playing with a neem stick which injured the soft palate by accidental fall. The child was taken to the private hospital, where the patient was prescribed analgesic syrup and given tetanus toxin injection and referred to dental hospital. The patient had difficulty in swallowing but did appear neurologically intact. Medical and familial history are non-contributory.

Extraoral assessment revealed an alert boy with straight profile, competent lip and symmetrical face with normal TMJ movements.

Intraoral examination revealed deep laceration in the middle part of the soft palate approximately 1×1.5cm in size. There were no signs of similar injuries intraorally and palpation revealed no foreign body impalement.



**Fig.1: Impalement injury in the palatal mucosa**

A decision was taken to treat the child under General anesthesia. The procedure and the risk of General anesthesia were explained to his parents and informed oral and written consent were obtained.



**Fig.2: Approximation of mucosal tear**



**Fig.3: Suture placement in the soft palate**

The wound was debrided, cleaned with betadine antiseptic solution and the mucosal tear was in need for approximation of the tissue ends by 4-0 vicryl suture placement. After discharging the patient was given antibiotic and analgesic for five days. Parent was instructed to closely observe the child for symptoms like irritability, vomiting, headache, blurred vision, convulsions etc. for next 3 days. The patient was reviewed periodically and the mucosal defect in the soft palate healed well with no inadvertent postoperative symptoms.

### 3. DISCUSSION

Self-inflicted oral injuries in children may occur as a result of accidental trauma, premedicated infliction, or chronic habits such as finger nail biting, digit sucking or sucking on objects such as pen, pencil, tooth picks, or pacifiers. Most case reports suggested that the method of producing injury is either by picking or scratching of the soft tissues.<sup>5</sup>

Etiology may be either organic or functional. Among the functional etiology, one type has a greater psychogenic component and child may revert to various self injurious habits as a form of stress release. These self-mutilation injuries among children is quite a frequent phenomenon yet it is less commonly realized because children tend to admit their injurious habits only when they are caught practicing them. That is why many of the self-inflicted lesions go undiagnosed or incorrectly diagnosed.<sup>6,7</sup>

An awareness regarding the incidence of such condition is a must among the dentists so that they can approach the problem in a much practical way. The etiology should be given utmost importance and the requisition of a through history can never be sidelined. The case discussed here yet again brings the importance of a comprehensive history which is beneficial to reveal the relevant information regarding the etiology.<sup>8</sup>

The first attempt should be directed towards cause determination which could broadly be differentiated into two factors either dental or emotional. If the injury occurs as a result of some local dental factor it could be rectified early. However if some emotional factor is involved it should be tackled accordingly and the family should be educated, counseled and referred to some professional counseling agencies.<sup>9</sup> Tension, conflicts, peer group pressure, means of an escape from reality are the documented reasons of self mutilation. The case described here showed those extremes of behavior where the patient has injured himself with sharp foreign body resulting in ulceration of soft palate.<sup>10,11</sup>

Impalement injuries of the oral cavity are most common at a mean age of 4 years with a strong male predominance of upto 3:1. Management of impalement injuries in children includes complete examination to note signs or symptoms of the following

- Airway obstructions
- Uncontrolled hemorrhage
- Acute infection(eg- pyrexia, nausea, swelling of the cervical soft tissues)
- Neurological changes.
- Gross mucosal tears which maybe in need for suturing.<sup>12</sup>

A thorough medical history, followed by careful clinical and radiographic examination is indispensable. This, coupled with a sound knowledge of surgical anatomy, pathology and microbiology, will allow the clinician to accurately assess the injuries and the inherent potential risks.<sup>13</sup>

### 4. CONCLUSION

A thorough clinical examination and post trauma monitoring is essential even with apparently minor laceration on the depth of penetration and it's effect on the deeper tissues are difficult to assess clinically. Patient compliance, regular dental follow-ups and psychological support maybe useful in stabilizing the destructive element in these patients.

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