

Management of upper lip complex laceration due to industrial trauma in a 30 year old male

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Abstract

Speech articulation, tactile sensation and food consumption are coordinated by highly visible facial structures such as lips. Injury to this anatomical region is one of the commonest occurrence in the oral and maxillofacial emergency. Cosmetic deformation can occur due to its prominence. Patient satisfaction and cosmetic output are obtained by decreasing infection and careful surgical repair pertaining to location and nature of injury. In this scientific article, we highlight a case of complex upper lip laceration due to industrial trauma in a 30 year old male.

Introduction

Anatomically, skin, muscle and oral mucosa forms the three major layers. Region between the upper lip and the nose is formed by philtrum, a vertical groove. Upper and lower lip join at the lateral borders of the oral cavity known as commissures. The white border between the lip and the surrounding skin, vermilion, is the major area of focus. Infraorbital nerve innervates the upper lip and lower eyelid on either sides whereas the mental nerve innervates lower lip, chin and gingiva.^(1,2,3) In this scientific article we highlight a case of upper lip laceration in a 30 year old male due to industrial trauma.

Case Report

A 30 years old male presented to the Department of Faciomaxillary Surgery and Dentistry with bleeding from upper lip due to trauma. The patient was conscious, oriented and afebrile. Vitals stable. Mouth opening satisfactory. Lateral temporomandibular joint movements satisfactory. Occlusion stable. Clinical examination revealed 1.5 cm x 1.0cm laceration in upper lip.(Fig. 1) Status of tetanus was evaluated. Personal protective equipment (PPE) included face shield, gloves and gown. The armamentarium for anesthesia included topical anesthetic, lidocaine with and without adrenaline, 10 ml syringe, 27 gauge needle and 18 gauge needle. Irrigation apparatus included syringe or irrigation device, saline or tap water, basin and splash shield. Suture armamentarium included absorbable and non absorbable sutures, suture tray and suture kit. Infraorbital nerve block administered. Topilca anaesthetic used as premedication, bed height adjusted, optimal lighting preferred, inspection and irrigation of the site, anesthesia administered, reinspect the wound, gentle probing, identification of any missing

or broken or mobile tooth or teeth chip. Deep soft tissue layer closure was achieved by approximation of buccal mucosa with simple interrupted sutures (4-0/5-0) with 4 or more knots in continuation along the vermilion surface. Postoperative care included antibiotic ointment, petroleum jelly, cold packs, non steroidal antiinflammatory drugs, acetaminophen and bland diet. Healing was uneventful.(Fig. 2) Review was done in a week time and then later in months.



Fig. 1



Fig. 2

Discussion

The lips aid in speech articulation, food consumption, and tactile sensation. Cosmetically the site can be deforming due to their prominence. Closure

via intraoral method is required in case of lacerations larger than 2 cm, which might interfere in mastication and result in food entrapment. Mental nerve block is used to anesthetise lower lip and infraorbital nerve block is used to anesthetise upper lip. In emergency room and oral-maxillofacial surgery, lip trauma is most commonly seen.⁽⁴⁾ Successful outcome both esthetically and functionally depends on the careful repair of the trauma site based on the type of involvement.^(5,6) Skin, muscle and oral mucosa form three layers of lip. Region above the upper lip and below the nose is connected by a vertical groove called philtrum. The junction of upper and lower lips form the commissure. The border between the lip and the surrounding skin is formed by a white roll known as vermilion. Innervation of upper lip, skin above upper lip and lower eyelid is done by infraorbital nerve. Innervation of gingiva, lower lip and skin between the lower lip and chin are done by mental nerve. Minor introral lacerations are left open for healing.⁽⁷⁾ Mucosal lacerations with flap interfering in mastication, creation of food entrapment regions and more than 2 cm are clear indications for intraoral closure. In case of presence of tooth fragments radiographs to be planned.^(8,9) Increased incidence of lip infection occurs due to bacterial plaque and saliva. Tetanus vaccination status to be updated.^(10,11) Certain cases of infection are low due to excellent vascularity of lip region. Based on the degree of depth involved and contamination, antibiotic administration should be planned. Deep scars and tissue redundancy usually occur in vermilion border involvement. Arteriovenous malformations rarely occur in traumatic lacerations of the oral mucosa. Open intraoral wounds might collect food debris, which in turn removed by saline irrigation. In order to prevent scarring the non absorbable sutures can be removed after 4-5 days. Manipulation of sutures with the tongue to be avoided. Points to be noted during vermilion border involvement are equal sides and

proper alignment. In our case, since the patient was of cooperative nature, the whole procedure was carried out in a smooth manner. Absence of medical complications, age, depth of injury and site of injury facilitated the successful outcome both functionally and esthetically.

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