

Common Dental and Orofacial Trauma Evaluation and Management



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KEYWORDS

• Dental trauma • Facial wounds • Maxillofacial trauma

KEY POINTS

- Preservation and restoration of normal function and normal aesthetics is of paramount importance in the treatment of orofacial and dental trauma.
- Injuries can be limited to the soft tissue, or be complex multisystem trauma; however, the fundamental approach and goals are the same.
- Consideration of the basic principles discussed in this article will help promote successful outcomes and patient satisfaction when managing trauma to the head and face.

COMMON DENTAL AND OROFACIAL TRAUMATIC INJURIES ENCOUNTERED BY THE GENERAL PHYSICIAN

Fundamental abilities such as vision, speech, mastication, and respiration, in addition to appearance, can be affected by traumatic injuries to the head and face; therefore, a primary goal is to preserve and restore normal function and aesthetics. As with any traumatic injury, the patient must be assessed according to Advanced Trauma Life Support guidelines before receiving oral and maxillofacial surgery care. Life-threatening problems involving the maxillofacial region may be encountered, such as excessive bleeding and airway compromise, and should be promptly addressed.¹ The neck should be temporarily immobilized until cervical spine injuries have been ruled out. Once the patient is stabilized, it is important to obtain an adequate history and a mechanism of injury for proper evaluation and management. A focused Head, Ears, Eyes, Nose, Throat (HEENT) examination and neurologic examination are especially important in head and facial injuries. Any significant neurologic change from baseline warrants immediate assessment and management.

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Soft-Tissue Injuries

Facial soft-tissue injuries are common, and can vary considerably in type and severity. Because soft-tissue injuries can be associated with more extensive underlying trauma, a thorough physical examination should be performed.² In general, soft-tissue injuries can be subdivided into abrasions, contusions, lacerations, and avulsions. Specific considerations and treatment depend on anatomic location of injury.

Abrasions

Description An abrasion is a wound caused by superficial damage to the skin, usually limited to the epidermis, but may occasionally involve the dermis. Patients may also present with mucosal abrasions inside the mouth. Abrasions occur as a result of friction between exposed skin and an object, such as scraping. Abrasions demonstrate denuded epithelium and can be painful because they may involve terminal nerve fiber endings; however, bleeding is usually minor. Abrasions that involve and extend into the subcutaneous layer are considered avulsions.

Treatment The abraded area should be cleansed thoroughly with saline irrigation to remove foreign debris. Local anesthetics and, possibly, a scrub brush may be required for deeper abrasions. Topical antibiotic ointment to keep the wound moist with an optional bandage is sufficient, and topical anesthetics may be applied for pain control. Systemic antibiotics are usually not indicated, and nonprescription pain medications may be used based on severity of symptoms. Intraoral mucosal abrasions usually require no treatment besides routine oral hygiene. Within a week, superficial epidermal abrasions will usually scab and reepithelialize without scarring. Abrasions that extend into deeper tissues will likely result in scar formation. For deep abrasions with the potential for significant soft-tissue deformity or questionable involvement of other structures in proximity, referral to a maxillofacial surgeon is recommended.

Contusions

Description A contusion, commonly referred to as a bruise, is a hematoma of the tissue without a break in the surface. Contusions occur by physical compression from blunt trauma. Contusions may appear to be simply a soft-tissue hemorrhage; however, examination for any underlying osseous and dentoalveolar injuries is warranted.

Treatment Contusions will usually self-resolve. Ice or pressure dressings can help decrease swelling. The body will resorb the hematoma over time, and during the healing process the bruise may change colors, appear to spread, and mistakenly appear worse. One must be wary of systemic symptoms, which may indicate more serious underlying injury or infection. Because contusions generally resolve on their own, referral is not necessary unless the hematoma is expanding, in which case emergent surgical intervention may be required.

Lacerations

Description Any tear in the soft tissue (skin or mucosa) is considered a laceration (**Fig. 1**). Skin lacerations are very common. Lacerations result from sharp-edged objects, such as a knife, razor, or glass, but also from underlying bony fractures. Lacerations may appear linear, jagged, or stellate depending on the mechanism of injury. Damage to deeper structures (based on anatomic location), such as nerves, vessels, ducts, muscles, and glands, should be ruled out.

Treatment Treatment of lacerations will vary based on depth and location of the laceration (eg, skin, mouth, ear, eyelid, lips), but similar principles apply to the initial

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