

3. CRANIOFACIAL, NECK & SPINE
B. Maxillofacial Injuries

OBJECTIVE: Define priorities in the management of facial trauma.

GUIDELINES: The management of maxillofacial injuries involve the application standard resuscitation priorities as delineated in Chapter 1 with particular emphasis placed the airway and controlling the severe bleeding that can be associated with maxillofacial trauma. Of note, severe maxillofacial injuries can be frequently associated with traumatic brain injury and cervical spine fractures.

The following management principles apply to patients with severe maxillofacial injuries:

1. **Airway:** Avoid naso-tracheal intubation; orotracheal intubation with in-line stabilization is the accepted modality to secure the airway. Severe maxillofacial trauma involving the mouth and the mandible may necessitate a cricothyroidotomy.
2. **Bleeding:** Patients with severe maxillofacial trauma are at risk of having obstruction of the airway from aspiration of blood and/or loose teeth. Any suggestion of aspiration must be accompanied by a prompt evaluation of a secure airway followed by intervention as necessary.
3. **Circulation:** Severe bleeding can occur from lacerations associated with maxillofacial fractures. Scalp bleeding should be promptly controlled with an interlocking suture. Anterior nasal bleeding should be controlled with anterior packing. Posteriorly nasal bleeding should be controlled with a Foley catheter and anterior packing. Control facial bleeding with interlocking 3-0 Prolene.
4. **Disability:** Perform a complete neurological examination in the conscious patient. If there is anisocoria, consider the possibility of oculomotor nerve injury or eye globe injury. Always assess ocular movements to check for entrapment.
5. **Expose:** Include evaluation of the external ear canals for hemotympanum and assess the oral cavity for missing teeth.

Imaging includes CT of the head and of the maxillofacial structures with thin cuts. All patients with severe maxillofacial trauma (Le Fort II and III) should be subjected to a CTA of the head and neck to exclude blunt cerebrovascular injuries.

For open facial fractures involving extra-oral or mucosal surfaces (tooth-bearing areas), there is no strong evidence available at this time to recommend for or against antibiotics administration. In cases where lacerations or open facial fractures result in the consultation of facial trauma services, recommendations for antimicrobial therapy will be followed in a collaborative fashion. Therefore, if the patient has open facial fractures, give 1 g of cefazolin IV. Laceration without gross contamination or signs of infection does not warrant antibiotic therapy. If the lacerations are associated with fractures involving the sinuses, you can either add clindamycin 600 mg IV every 8 hours or, conversely, give 3 g IV amoxicillin clavulanate¹ (Level 3). Basilar skull fractures with or without CSF leak do not require antibiotic prophylaxis^{2,3} (Level 1).

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References

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