KGMC incision: New approach for exposure of body of mandible

Sir,

The intraoral approach to expose the body of mandible is procedure of choice. As noted, we also manage

fractures of the posterior body, angle, and rarnus with intraoral approaches, but these more posterior fractures require increased commitment interms of time, expertise, and equipment.[1-6]

One advantage of this approach is the ability to constantly access the dental occlusion during surgery. The greatest benefit to the patient is the hidden intraoral scar. The approach is also relatively rapid and simple although access is limited in some regions, such as the lower border of the mandible.

The major concern with using intraoral approaches for mandibular fractures is lower lip numbness from injury to the mental nerve. Temporary hyposthesia is common, related to traction, and resolves.

The only neurovascular structure of any significance that must be negotiated during procedures in the mandibular body/symphysis region is the mental neurovascular bundle. The artery and vein that accompany the mental nerve are insignificant from a surgical standpoint. The mental nerve is a terminal branch of inferior alveolar nerve (mandibular nerve), and is sensory to the skin and mucosa of lower lip, the skin in the region of chin, and the facial gingiva of anterior teeth.

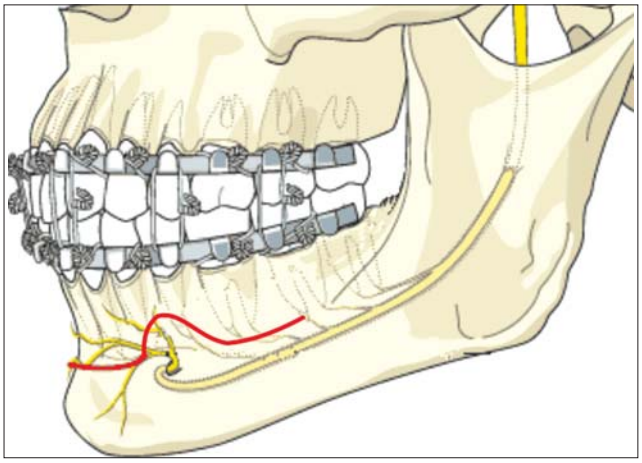

Figure 1: Diagramatic representation of the incision line

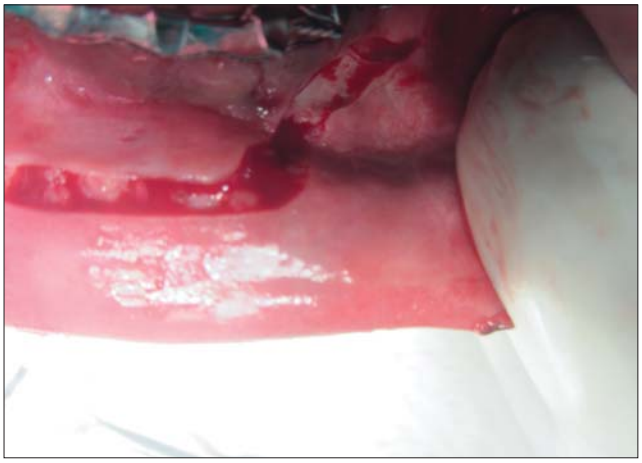

Figure 2: Clinical picture of incision

The mental nerve exits the mental foramen that is located midway between the alveolar and basal border of the mandible and is usually below or slightly anterior to the 2nd bicuspid tooth. The mental nerve divides under the depressor angulioris muscle into three main branches: one descends to the skin of chin, and the other two ascend to the skin and mucous membrane of lower lip and gingival. The branching pattern is variable however, and several finer branches may be noted. As the branches enter the lower lip, they become superficial and can usually be seen just beneath the mucosa of lower lip when it is everted.

Complications are few but include mental nerve damage and lip malposition, both of which are minimized with the use of proper technique.

To avoid injury to nerve during the operative procedure, we have modified the normal vestibular incision.

1. Make an incision through the mucosa in the vestibule. Between the canines the incision is made 10-15 mm away from the attached gingiva in a curvilinear fashion.
2. Posterior to the canine the incision is only 5 mm away from the attached gingiva, staying superior to the mental nerve.
3. Behind the 2nd bicuspid, the incision line goes downward again at a level 10-15 mm away from attached gingival. Thus, making an inverted U-shaped cuff of mucosa around the mental nerve trunk in the bicuspid region [Figures 1 and 2].
4. Freeing of the mental nerve allows for better soft-tissue retraction. Tissue scissors are used to spread parallel to the nerve.
5. Protect the mental nerve through Howarth Elevator which was placed firmly over the Bone.

Advantage of this incision is that it provides better exposure of lower border of mandible in the posterior body region with minimum trauma to the soft tissue. Also, the mucosal incisions are placed in the gingival buccal sulcus with enough soft tissue on the gingival side to allow easy closure.

The advantage of U-shaped mucosal cuff in the bicuspid region is that it provides better access and less injury to the mental nerve as it emerges from the mental foramen in this region, thus minimizing the post-surgical neurological complications.

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References

1. Chuong R, Donoff RB. Intraoral open reductaon of mandibular fractures. Int J Oral Maxillofac Surg 1985;14:22-8.
2. Dlerks EJ. Transoral approach to fractures of the mandible. Laryngoscope 1987;97:4-6.
3. Nishioka GJ, Sickels JE. Transoral plating of mandibular angle fractures: A techmque. Oral Surg Oral Med Oral Pathol 1988;66: 531-4.
4. Raveh J, Vuillemin T, Ladrech K, Roux M, Sutter F. Plate osteosynthesis of 367 mandibular fractures: The unrestricted indication for intraoral approach. J Craniomaxillofac Surg 1987;15:244-53.
5. Wald RM Jr, Abemayor E, Zemplenyi J, Mannai C, Lesavoy MA. The transoral treatment of mandibular fractures using noncompressionminiplates: A prospective study. Ann Plast Surg 1988;20:409-13.
6. Thaller SR. Management of mandibular fractures. Arch Otolaryngol Head Neck Surg 1994;120:44-8.

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