Case Report

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A Simple Method of Lingual Flap Retraction in Third Molar Surgery

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Abstract

While performing third molar surgery, it is of paramount importance to obtain access to perform atraumatic extraction, especially in cases of deep seated third molars. Retraction of the lingual flap improves access and it reduces the chances of lingual nerve injury. Many instruments are documented in the literature for the same, but with their inherent drawbacks. Hence to overcome the drawbacks of already being used techniques, we recommend the use of silk suture for lingual flap retraction. It is a simple method and easy to use with various advantages over existing techniques.

Keywords: Lingual flap; Third molar; Lingual nerve injury; Retraction

Case Report

The incidence of lingual nerve injury (LNI) has been reported on a higher side when deep seated impacted third molars are surgically extracted. The risk of LNI further rises when the distal bone removal is deemed necessary [1]. It has been promulgated by Pogrel and Goldman that surgical removal of third molar can be performed with relative ease if the access to surgical site is improved and this can be achieved by meticulous retraction of lingual flap [2].

Retraction of lingual flap during third molar surgery can be achieved with the help of various instruments such as Howarth's periosteal elevator, Molts number 9 periosteal elevator, Freer's elevator, Seldin's periosteal elevator, Hovell's retractor, Walter's-type lingual retractor etc. As the lingual nerve lies supraperiosteally, these instrument are to be inserted subperiosteally requiring mucoperiosteal flap elevation hampering vascular supply to the area. Moreover, these instruments are made up of stainless steel which imparts pressure over the soft

tissue subsequently resulting in increased risk of LNI and neuropraxia. To avoid using these instruments and associated complications, we recommend the use of silk suture for this purpose.

According to Kiesselbach and Chamberlain [3] average horizontal distance of the nerve from lingual cortical plate is 0.58mm +/- 0.9mm and vertical distance below the alveolar crest is 2.28mm +/- 1.96mm. Keeping these dimensions in mind, we used 3-0 silk suture to retract lingual flap (Figure 1). The needle is passed through the lingual flap in a linguobuccal direction on the distal aspect and it is turned and passed again through the lingual flap in a buccolingual direction on the mesial side. Both the ends of suture are loosely tied and held with a hemostat. The hemostat can be held by an assistant or it can be left on the opposite side of operating site. This technique ameliorates the exposure to the surgical site increasing visibility and ease in performing the procedure, subsequently decreasing the risk of LNI. We have operated 2411 deeply impacted third molar cases of from January 2013 to December 2017 and this technique

was effectively used in all the cases with no complications of LNI reported till date.

None

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Figure 1: Photograph showing lingual flap retraction using 3-0 silk

Advantages of this Technique

- Atraumatic
- Economical
- Patient is comfortable even during long standing surgeries
- Additional assistance not required
- Stainless steel retractors can hamper the view to surgical site from assistant's side. This can be easily avoided in the technique presented.
- No force is exerted over lingual nerve preventing neuropraxia or LNI
- Mucoperiosteal flap elevation is not required hence vascular supply is not hampered.

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None

Conflict of Interest

None to declare

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