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Case Report

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Mandibular Exostosis in Canine with Single Tooth Recession – A Rare Case Report

Rachna Jain¹, Daljit Kapoor², J Sujay³

Contributors:

¹Reader, Department of Periodontology, Gian Sagar Dental College and Research, Rajpura, Patiala, Punjab, India; ²Professor and Head, Department of Periodontology, Gian Sagar Dental College and Research, Rajpura, Patiala, Punjab, India; ³Reader, Department of Orthodontics, SJM Dental College and Hospital, Chitradurga, Karnataka, India.

Correspondence:

Dr. Rachna Jain, Reader, Department of Periodontology, Gian Sagar Dental College and Research, Ramnagar, Rajpura, Patiala, Punjab, India. Phone: +91-9888401986. Email: rachnaperio@gmail.com

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Abstract:

Buccal exostoses occur along the buccal aspect of the maxilla or mandible, usually in the premolar and molar areas. It has been suggested that the bony outgrowth represents a reaction to increased or abnormal occlusal stress to the teeth in the involved areas. Gingival recessions may occur without any symptoms but may give rise to the patient concern about poor esthetics, dentine hypersensitivity, inability to perform oral hygiene procedures, and loss of the tooth. This article presents a rare case of exostosis in the mandibular right canine region and single tooth recession in the mandibular left central incisor region which was successfully managed by a combination of osseous resective surgery done to treat exostosis and lateral pedicle technique for root coverage.

Key Words: Exostosis, gingival recession, lateral pedicle technique, osseous resective surgery, tori

Introduction

Tori and exostoses are nodular protuberances of mature bone, the precise designation of which depends on anatomic location.¹ Torus palatinus and torus mandibularis (TM) are the two most common intraoral osseous outgrowths.^{2,3} TM is a bony protuberance located on the lingual aspect of the mandible, commonly in the canine and premolar areas. Buccal and palatal exostoses are multiple bony nodules that occur less frequently than tori.^{2,4} Buccal exostoses occur along the buccal aspect of the maxilla or mandible, usually in the premolar and molar areas. However, the occurrence of exostosis in the buccal aspect of the mandibular canine region is a rare occurrence. Gorsky *et al.*⁵ summarized that the etiology of this common osseous outgrowth is probably multifactorial, including environmental factors acting in a complicated and unclear interplay with genetic factors. Gingival recession is the apical migration of the marginal gingival. Various surgical

techniques have been introduced to correct gingival recession defects.⁶

This article presents the occurrence and treatment of exostosis and treatment of single tooth recession in the mandibular anterior region. The rarity of the anatomic site of buccal exostosis on the mandibular canine involved in this case along with no probable etiology for recession only in the left central incisor makes it unique.

Case Report

A 25-year-old female patient reported to the Department of Periodontology, Gian Sagar Dental College and Hospital, Ramnagar, Rajpura with a chief complaint of swelling in the lower right front region and receding gums in lower anterior tooth. On examination the swelling was found to be bony hard, extending from distal surface of right mandibular central incisor to the mesial surface of right mandibular canine. The recession was present in relation to 31 and was grade II according to Miller's classification (Figures 1 and 2). On measurement with a periodontal probe the recession was 4 mm and the width of attached gingiva was approximately 3 mm in the adjacent teeth. The patient was examined for the etiology of recession, and it was found that the patient had a deep bite, so slight incisal grinding was done.

Surgical procedure

History and blood investigations showed that the patient was fit for surgery. An informed consent was taken from the patient prior to the surgery. The patient was educated and motivated to observe strict plaque control measures and scaling and root planning was done. Patient was recalled for weekly plaque control assessment and was called for surgery after 4 weeks. The periodontal surgical procedure was done under local anesthesia. A full thickness mucoperiosteal flap was elevated by giving an internal bevel incision extending from mesial surface of 31 to distal surface of 43 (Figure 3). Bleeding surface was created on the distal surface of 31 with BP blade no. 11. The area was debrided of granulation tissue and root planning was done (Figure 4). Osteoplasty was done using a carbide round bur. After this root surface biomodification was done using cotton pledgets soaked in a saturated solution of citric acid (pH of 1.0) for 2-5 min and the root surface was profusely irrigated with water (Figure 5). The flap was shifted laterally (Figure 6) and sutured using 3-0 mersilk sutures (Figure 7) and pack was placed (Figure 8). The patient was prescribed with systemic antibiotics capsule Doxycycline 200 mg for the 1st day



Figure 1: Pre-operative.

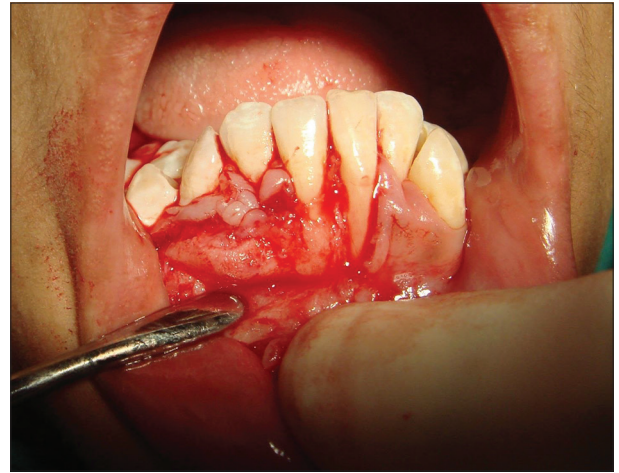


Figure 4: Exposure of exostosis and root planning.



Figure 2: Measurement of recession.

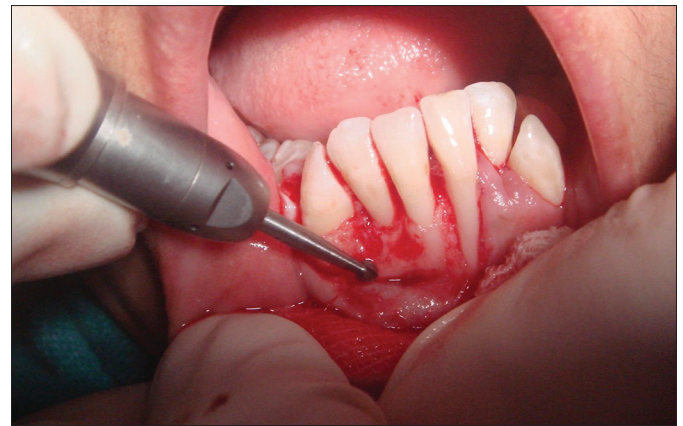


Figure 5: Osseous resection and excessive tissue removal.



Figure 3: Initial incision (internal bevel incision).



Figure 6: Flap being shifted laterally.

followed by 100 mg for next 4 days; anti-inflammatory analgesic tablet combiflam (ibuprofen 400 mg, paracetamol 325 mg) thrice daily for 5 days and were instructed to rinse with 0.2% Chlorhexidine digluconate twice daily for 1 week. The patient was then discharged with post-surgical instructions. The patient was recalled after 1 week and sutures were removed, and the area was irrigated.

The patient was instructed to maintain strict plaque control measures and was put on regular recall checkups. After 3 months, the recession was completely covered and the gingiva showed no signs of inflammation and also there was no recurrence of exostosis (Figure 9).

Discussion

The prevalence of buccal and palatal exostoses is reported to be 26.9%.⁷ Buccal exostoses occur along the buccal aspect of



Figure 7: Suture given.



Figure 8: Pack placed.



Figure 9: Post-operative after 3 months.

the maxilla or mandible, usually in the premolar and molar areas. Its occurrence on the canine region is an extremely rare occurrence. It has been suggested that the bony outgrowth may be due to increased occlusal forces due malalignment of teeth or occlusal interferences.¹ The treatment includes osseous resective surgery. There are various causes of gingival recession, which may include toothbrush trauma, deep bite etc., even though it is painless, but it can create problems such as hypersensitivity, unesthetic appearance, difficulty in maintaining oral hygiene etc. The selection of the surgical technique depends on several factors, including the anatomy

of the defect site, size of the recession defect, the presence or absence of keratinized tissue adjacent to the defect, the width and height of the interdental soft tissue, and the depth of the vestibule or the presence of frenula.⁸ In this case report, a lateral pedicle flap technique was used for successful root coverage. The reported mean percentage of root coverage ranges between 34% and 82%.⁹ Indication of this technique single tooth recession but depending upon the adjacent tooth.¹⁰ It is well-stated that for successful root coverage outcomes adequate height and width of keratinized tissue¹¹ on the adjacent tooth is required.

Conclusion

This article presents a rare case of exostosis in the mandibular right canine region and single tooth recession in the mandibular left central incisor region, which was successfully managed by a combination of osseous resective surgery done to treat exostosis and lateral pedicle technique for root coverage.

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