IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)
e-ISSN: 2279-0853, p-ISSN: 2279-0861.Volume 18, Issue 6 Ser. 11 (June. 2019), PP 43-46
www.iosrjournals.org

Palato-Gingival Groove – A Case Report

Vellanki Vinay Kumar[1] Anusha V [2]. , Anuraag B Choudhary [3], Trupti Chordia [4]
[1](Reader Department of Conservative Dentistry & Endodontics, Nijalingappa Institute of Dental Science, Gulbarga/ Karnataka/ India)
[2](Private Practitioner, Hyderabad, India)
[3](Reader Department of Oral Medicine & Radiology, VSPM Dental College, Nagpur/Maharashtra/India)
[4](Senior Lecturer Department of Oral Pathology VSPM Dental College, Nagpur/Maharashtra/India)

Abstract: *The occurrence of palato-gingival groove on the lateral incisor is extremely rare developmental anomaly. This case report describes the prompt diagnosis to unreveal this etiology and treatment options to treat this defect. The tooth was treated by saucerization, apicectomy and retrograde restoration with glass ionomer cement. After 1 year follow up of treatment, the tooth was functional without any signs and symptoms clinically and radiographic changes were positive. The knowledge of tooth anatomy and its morphological defects offers a strong base for establishing a perfect diagnosis. Proper understanding of the endo-perio relationship is important because it frequently dictates the treatment plan.*

Keywords: *Palato-gingival groove, saucerization, apicectomy, retrograde restoration, glass ionomer cement.*

Date of Submission: 02-06-2019 Date of acceptance: 17-06-2019

I. Introduction

The dental pulp is closely connected with the periodontal ligament through apical foramina, accessory foramen and sharpeys fibres results in periradicular lesions principally either from periodontal apparatus or pulpdentin organ. These entities were collectively called endoperio lesions. There could be many etiological factors of which developmental anomalies are[1] the rarest ones causing this disease. The region in which the lateral incisors are located is considered to be an area of embryological risk, where number of malformations occur [2]. Until recently if a tooth is present with a draining sinus tract and periodontitis, it would be extracted due to contraindicated endodontic treatment and hopeless periodontal prognosis .As a result many teeth are sacrificed unnecessarilySo such a developmental anomaly with no history of dental caries or trauma, but which makes the tooth nonvital and causes loss of attachment[3]. This is the palatogingival groove or radicular lingual groove which is an unrevealed etiology. So this defect can be treated successfully using combined endodontic and periodontic therapy. However if clinicians are aware of the forms in which these conditions may occur and can apply proper treatment modalities, a number of tooth with radicular lingual grooves could be saved.

II. Case Report

A 38 year old male visited our O.P.D with complains of pain and pus discharge in the right upper front region of jaw for past 6 years. History revealed that pain was mild and intermittent. Clinical Examination revealed a soft tissue examination revealed, there was an intraoral sinus with pus discharge in relation to labial mucosa of 12. Periodontal examination revealed the gingiva on the palatal aspect of 12 was inflamed, edematous; bleeding on probing, pus discharge from gingival sulcus and a deep isolated tubular periodontal pocket with depth of 9mm and grade II mobility was present. Endodontic examination revealed mild pain on percussion and no response to pulp vitality tests. On radiographic examination, a radiolucent "para pulpal"[4] line superimposed over the root canal and "pear shaped"[5] radiolucency in the coronal aspect was present and a circumscribed radiolucent area with irregular borders having crestal bone loss was found in the region of 12.

Diagnosis:
Radicular lingual groove on the palatal aspect of 12 causing periapical abscess with intraoral sinus and localized chronic periodontitis.
As there was pulpal and periodontal involvement this type of lesion will necessitate both endodontic & periodontic treatment
* Oral hygiene prophylaxis
* Root canal therapy
* Surgical procedures:
. Curettage with root planing
. Removal of etiology by saucerisation.

. Apicectomy
. Restoration of defect and retrograde restoration with
glass ionomer cement.
Preoperative antibiotics prescribed, oral prophylaxis done, root canal therapy completed, full thickness mucoperiosteal flap raised , curettage with root planning accomplished and granulation tissue curetted in periradicular area. The root apex was in infected for long duration, hence apicectomy was performed. The saucered defect and apex were closed with chemically cured glass ionomer cement , flap approximated with saline irrigation and the patent was given post-operative instructions Patient recalled after 24 hours for review and suture removed after a weeks' time, periodic post-operative review and radiographs were taken.

III. Figures And Tables

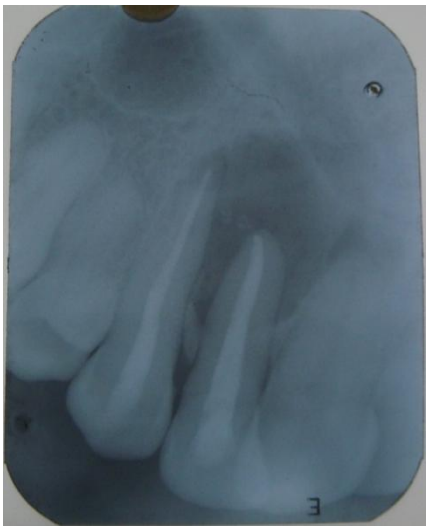

Figure 3: Post obturation radiograph

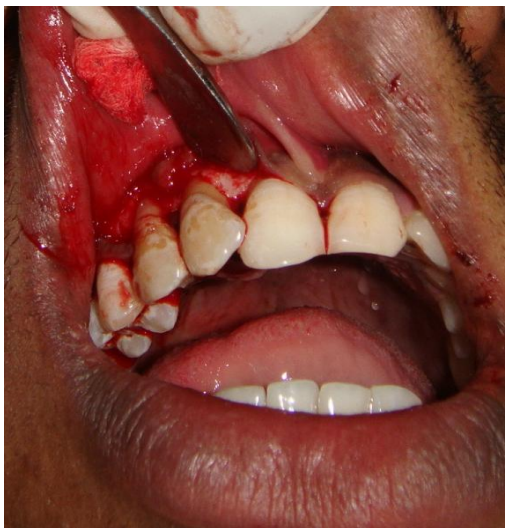

Figure 4 : Full muco-periosteal flap raised(labial)

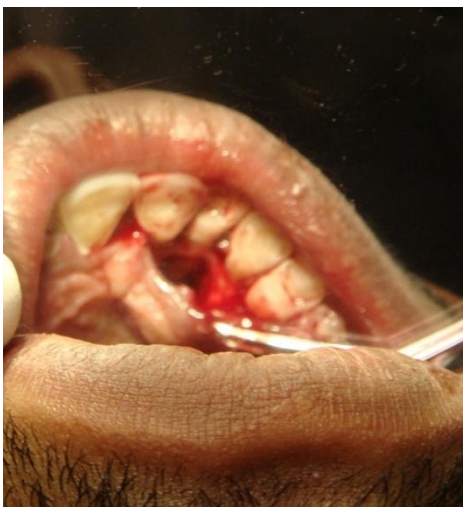

Figure 5 : Full muco-periosteal flap raised (palatal)

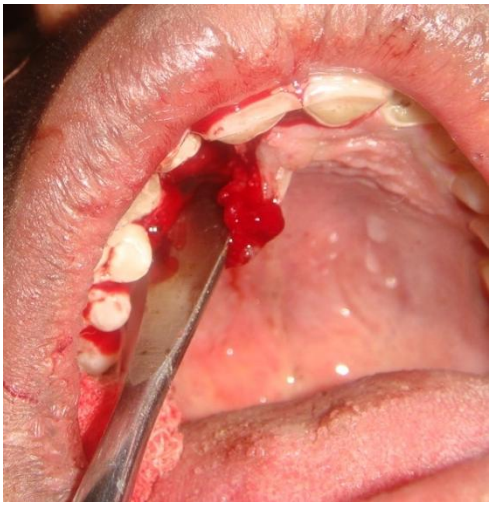

Figure 6 : enucleation and curettage

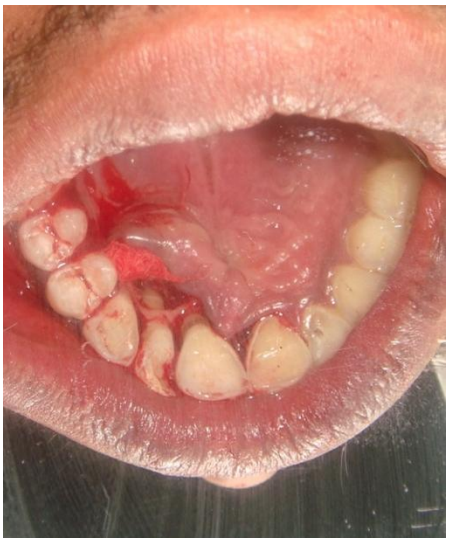

Figure 7: apicoectomy with retrograde restoration.

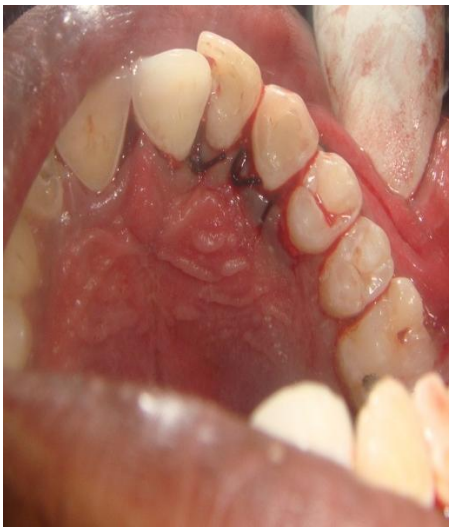

Figure 6 : suture placed

IV. Results

Postoperative examination revealed healing was satisfactory and patient was asymptomatic with a one year follow up. Radio graphically a dramatic reduction diameter of the peri-radicular lesion was found. Going by the above treatment protocol, a single tooth can now be diagnosed correctly and treated successfully with a predictable prognosis.

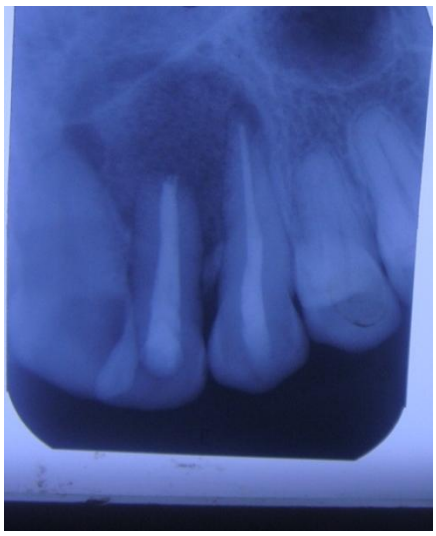

Figure 6 : 1 yr postoperative

V. Discussion

A palate-gingival groove is a developmental anomaly showing alterations in the growth and infolding of inner enamel epithelium and hertwigs epithelial root sheath[6] creating a groove that passes from cingulum of maxillary incisors apically on to the root 12. Consequently periodontal pocket is formed and resulting in retrograde infection involving the apex[7]. Theoretically this is an endoperio lesion showing a classification of "primarily periodontic origin resulting in endodontic lesion" . The endodontic treatment was followed by the periodontal procedures with retrograde restoration. On contrary in this case no bone regenerative substitutes were used and healing was as usual, adding the factor of cost effectiveness of this technique.

VI. Conclusion

The knowledge of tooth anatomy and the etiology offers a strong base for establishing a perfect diagnosis. The Radicular Lingual Groove is most often missed out during oral examination, so dentists must be cautious in diagnosing this developmental defect .

References

[1]. Didilescu A, Liescu R, et.al. Current concepts on the relationship between pulpal and periodontal diseases. TMJ. 2008; 58(1-2): 98-103.
[2]. Jesus Dijalma Pecora, Manoel Damia O Sousaneto Et Al, Invitro Study Of Incidence Of Radicular Grooves In Maxillary Incisors. Braz Dent J 1991 2(1):69-73.
[3]. Estrela C, Pereira HL, Pécora JD Radicular grooves in maxillary lateral incisor: case report Braz Dent J. 1995;6(2):143-6.
[4]. Fabra-Campos H. Failure of Endodontic Treatment Due To A Palatal Gingival Groove In A Maxillary Lateral Incisor With Talon Cusp And Two Root Canals. Endod. 1990 Jul; 16(7):342-5.
[5]. Peikoff MD, Perry JB, Chapnick LA. Endodontic failure attributable to a complex radicular lingual groove. J Endod 1985;11(12):573-577.
[6]. Piekoff MD, Trott J. An endodontic failure caused by an unusual anatomic anomaly . J Endodont 1977;3(9):356-. 359.
[7]. Pulgar Encinas,R.M., Noguerol Rodriguez,B. El surco palate-radicular: surelacion con patologia pulpar y/o periodontal. Av Odontoestomatol. 2000;12(2):83-89.

Vellanki Vinay Kumar. "Palato-Gingival Groove – A Case Report." IOSR Journal of Dental and Medical Sciences (IOSR-JDMS), vol. 18, no. 6, 2019, pp 43-46.