ORIGINAL RESEARCH PAPER
Volume - 10 | Issue - 09 | September - 2021 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

A SILENT CASE OF APICOECTOMY:- A CASE REPORT

Dental Science

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ABSTRACT

This article represent a case of recurrent periapical granuloma treated with curette of the lesion, apicoectomy and root end obturation on right and left maxillary central incisor. The operator have performed root – end resection and preparation under local anesthesia on upper right and left central incisor. The filling material zinc oxide eugenol is placed within the root canal to close the path of communication between the peri-radicular structure and infected root canal system with an intermediate restorative material. The lesion was fully curetted and sent for histopathology. A 20 year female patient was followed up at 2 weeks, 3 months and 6 months presenting as a functional and symptomless tooth with time the cavity filled with new bone , which is confirmed with the radiographic examination.

KEYWORDS

Root ,Apicoectomy,Surgery, Granuloma

INTRODUCTION :-

The main objective behind apical surgery is to treat the tooth and peri-radicular space which cannot be resolved by conventional endodontic (re-treatment). This goal should be achieved by cutting the end of root, curetting the cavity and bacterial tight closure of the root canal system at the cut root end. The bacterial filled cavity should be completely debrided by curettage to remove the infections site, cystic tissue , foreign body . The objective of this article is to give the reader an update about apical surgery.[1,2,3,4]

CASE REPORT :-

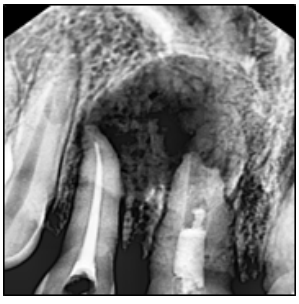
A female patient name Pooja , 20 years old attended to the K.D Dental College & Hospital, Mathura in the department of Oral & Maxillofacial Surgery complaining about pain in tooth # 11& 21 , which presented a history of endodontic treatment . Preoperative periapical radiograph was taken using a parallel technique. The mild pulsating pain in upper front teeth region since 2 months, revealed her chief complaint. Her another complaint was swelling in the labial aspect of upper front teeth since 2 month. She reported that her dentist tried to restore the diseased teeth with endodontic treatment. The operator attempts to preserve the tooth had less success because she kept feeling pain in same side. An IOPA had taken that demonstrated persistent bone resorption. She had recurrent infections which needed to be treated with appropriate antibiotics. The patient did not reported any major systemic disease or any kind of medication in the past. The patient is fit and well on Dental history, patient already had undergone root canal treatment of upper central incisor.On x-ray examination showed a Gutta Percha and the root canal sealent well done on Maxillary right and left central incisor respectively with a periapical radiolucency which was sprayed along the mesial surface of upper right lateral incisor . On the day of surgery, the patient was admitted to the hospital , the surgical procedure were described, the risk and benefits were explained and a consent form was signed.The patient was adviced to rinse her mouth with 0.15 % chlorhexidine . Patient draping was done by maintaining the sterilization protocol. Administered the local anesthesia with 1:80,000 epinephrine injection in the nasopalatine, Infra-orbital bilaterally and local infiltration around the apex of maxillary central incisor.

FLAP DESIGN:-

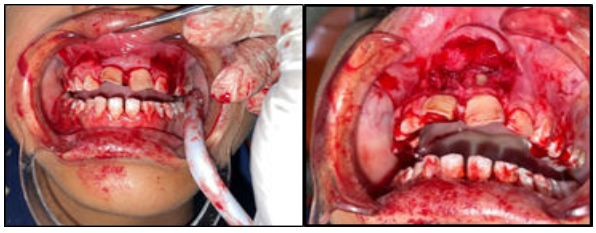
After elevating the flap, there was bony fenestration in the left central incisor. After dissection, the buccal bone showed a hollow space apical to the root of central incisor bilaterally, ostectomy was performed successfully with a straight fissure carbide bur with the opportunity to engage the bony defect to a buccal window 1cm in size and gaining access to the cystic structure and the root of both central incisor. The process of removal of lesion was completed from the infected site. Trapezoidal incision was made with releasing incision lateral to the central incisor. This surgical approach increases visibility. A straight fissure carbide bur was directed perpendicular to the long axis of both roots and cut the apex of the root about 3mm in length. This apical removal of root exposed the gutta percha material and removed any excess gutta percha protruding from the apical foramen. Saline and betadine was used to clean the cavity removing debris of gutta percha, dentin & cementum. After achieving the proper hemostasis the apex is resected at right angle with a straight fissure bur. The canal were obturated using zinc oxide eugenol and the excess restorative material was removed. The sharp border of buccal bone was trimmed and smoothened using bone rongeur , bone file and round bur. Subsequent histopathological examination of the samples reported the lesion as a plasma cell granuloma.

PRE-OPERATIVE VIEW

FACE PROFILE VIEW **INTRAORAL CLINICAL VIEW**

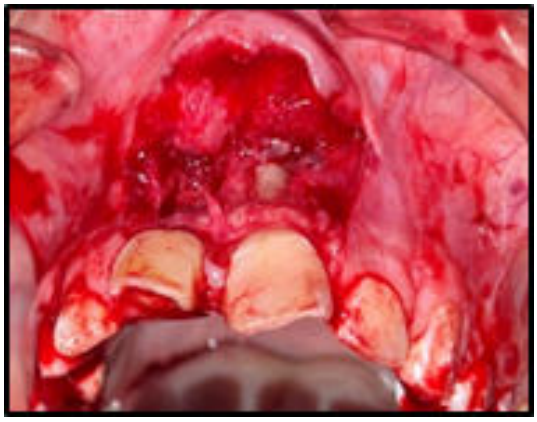


PRE-OPERATIVE RADIOGRAPH TREATED WITH CONSERVATIVE ROOT CANAL TREATMENT

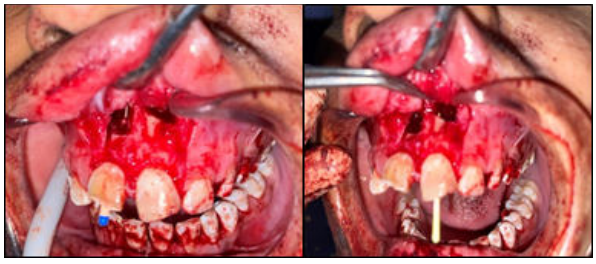


TRAPEZOID INCISION GIVEN **FULL THICKNESS FLAP RAISED**

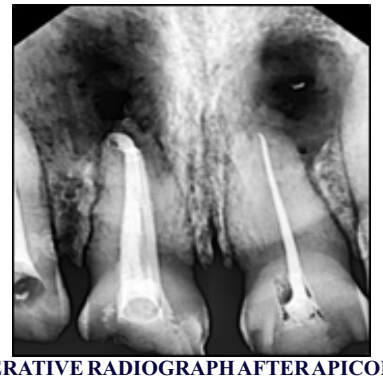
I.R.T 11 & 21.



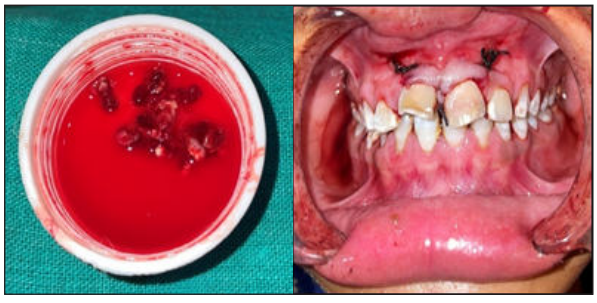
PICTURE REVEALING BONY FENESTRATION



OBTURATION DONE I.R.T 11 & 21



POST-OPERATIVE RADIOGRAPH AFTER APICOECTOMY



REMOVAL OF GRANULOMA SUTURE IN PLACE

DISCUSSION:

In this case , previously the root canal treatment was failed so periradicular surgery and apicoectomy would be the treatment of choice to preserve the tooth, root end resection was done on both the upper central incisor and within the canal the root canal filling material is filled to close the path of communication between the diseased cavity and infected root canal. An ideal property of root canal filling material has a good effect after the surgery. The ideal property of root canal material should be radiopaque, cost effective, non absorbable, non-corrosive, antibacterial moisture resistance , create a seal tight. The patient kept under follow-up for 6 month. On examination patient did not gave the history of pain, swelling and tissues. After radiographic examination, the IRM seemed to appear in place. After 6 months x-ray revealed the formation of thin layer of bone. Patient is quite satisfied and happy after saving the tooth & to have her tooth functional.[1]

CONCLUSION:

Now a days, if the tooth cannot be treated by conventional endodontics with apical pathology than the choice of treatment is apicoectomy. In case if the pathology cannot be diagnosed clinically sent it for biopsy and confirm the diagnosis.

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