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CASE- REPORT

Fenestration and dehiscence in a non vital Tooth – A case report

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ABSTRACT

Fenestration and dehiscence are usually accompanied with long standing traumatic teeth. If this occurs, the solution is surgical intervention along with endodontic treatment. This surgical procedure consists of raising the flap to expose the dehiscence, followed by curettage, placing the bone graft and repositioning of the flap. A conventional endodontic treatment is carried out before the surgical procedure. A case is described here, that illustrates this clinical situation.

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Introduction

Fenestration and Dehiscence are localized defects of the cortical bone which covers the teeth. Fenestration is termed as the situation when the root is denuded of bone and the root surface is covered only by the periosteum and the overlying gingiva [5,6]. In these instances, the marginal bone is intact. When the denuded areas extend through the marginal bone, the defect is called as 'Dehiscence'.



[Table/Fig 1] : Pre-Operative Photograph Showing Dehiscence and Fenestration.

They are usually symptom free [7,8]. This is the case for a traumatic tooth which is

accompanied with dehiscence without pain. Traumatic teeth are usually successfully treated after proper endodontic treatment. But in this case, we took up a surgical procedure after the usual endodontic treatment, to take care of the dehiscence.



[Table/Fig 2] : Radiograph Showing Obturated Central Incisor.

A Case report:

An 18 year old boy presented for consultation because of root exposure from the gums in the maxillary left central incisor [Table/Fig 1]. The patient was in good health and his history said that the window on the root was present from almost 1 year. The patient gave a history of trauma, 6-7 years back. The patient said that sometimes pus discharge was seen. Extraoral examination did not reveal any

anomalies. Intraoral examination revealed no occlusal problems. The root tip was seen through and through from the attached gingival [Table/Fig 1]. The involved crown of the tooth was black in colour, which confirmed its nonvitality. Palatal palpation revealed no abnormality. Radiographical examination showed an open apex. Root canal treatment was initiated. The working length was measured. Thorough cleaning and biomechanical preparation was done with copious irrigation of sodium hypochlorite in the first visit. In the second visit, the irrigation was done, the root canal was filled with calcium hydroxide paste and the access cavity was sealed for 1 week. At the third visit, the paste was removed by thorough irrigation and obturation was done.



[Table/Fig 3]: Photograph Showing Periapical Surgery and Placement of Bone Graft.

Because it was an open apex and the canal was blunderbuss, the roll-on technique of gutta percha was taken into consideration for obturation [Table/Fig 2]. The access cavity was sealed and surgery was planned.

In the fourth visit, a full thickness flap was raised and the root was exposed. It was seen on raising the flap, that there no bone was present on the labial aspect of the tooth [Table/Fig 3]. The area was curetted around the root. The apex of the root was trimmed and a bone graft was placed to ensure bone regeneration.

The flap was roughened from the inner surface which had to be attached to the bone.



[Table/Fig 4]: Photograph of Sutures Placed & Periodontal Dressing Given.

The flap was repositioned and sutured. A periodontal dressing was placed over the sutures [Table/Fig 4]. A prescription for antibiotic and anti-inflammatory treatment was given.

At the follow-up visit 1 week later, the sutures were removed and we could very easily

appreciate the closure of the mucosa at the root tip [Table/Fig 5]. The area of surgery differed, however, from the area which was described before the surgery. One month later, the patient was found to be quite comfortable and free of symptoms. After one year, the mucosa was completely healed and the site was absolutely fine.

Discussion:

The defect in the osseous coverage of the dental root may either have been fenestration or dehiscence. They occur almost exclusively on the buccal surfaces of the alveolar bone. Mandibular teeth are more often affected than maxillary teeth and anterior teeth are more frequently involved than posterior teeth [1,9].



[Table/Fig 5] : Photograph After 7 Day's of Sutures Removal.

Nevertheless, if only fenestrations are considered, the maxillary teeth appear to be more frequently affected than mandibular teeth, because the dehiscences predominantly affect the mandibular incisors. The predisposing factors for these defects can be age, tooth malpositions, trauma and strong occlusal forces. The fenestrations are most often seen on the mesiobuccal root of the maxillary first molar and the canine teeth [10,11].



[Table/Fig 6] : Photograph After 3 Months Showing Complete Healing.

Patients may frequently aggravate the problem by rubbing the annoying irritated area with their fingers. The clinical treatment consists of raising a flap, trimming the excess filling and remodelling of the root in such a way as to reposition it in the bony housing. The bone may then repair itself and the soft tissue will heal. In the case presented herein, a bone graft was used, so as to promote bone growth if possible. Even if bone doesn't form, the soft tissue will heal [2,3,4].

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