



An Esthetic Rehabilitation of Mesiodens with a Full Coverage Crown: A Case Report

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ABSTRACT :

This case report presents a rare case of presence of mesiodens in a young patient. In this particular case the patient demanded of a non invasive and quick treatment we decided to plan Post and core and after that tooth preparation and rehabilitation of mesiodens with a full coverage PFM crown.

Keywords: Aesthetic, Mesiodens, Supernumerary tooth

I. INTRODUCTION:

Supernumerary teeth are defined as those in excess when compared to the normal series.¹ They have been reported in both the primary and the permanent dentition.² Their reported prevalence ranges between 0.3–0.8% in the primary dentition and 0.1–3.8% in the permanent dentition. Supernumerary teeth can occur as singles, multiples, unilaterally or bilaterally and in the maxilla, the mandible or both. Cases involving one or two supernumerary teeth most commonly affect the anterior maxilla, followed by the mandibular premolar region.¹ Supernumerary teeth are estimated to occur in the maxilla 8.2 to 10 times more frequently than the mandible.¹ Eruption of supernumerary teeth often causes crowding. A supernumerary lateral incisor may increase the crowding potential and may cause an aesthetic problem in the upper anterior region. Retained deciduous teeth and abnormal diastema have also been reported.³

Supernumerary teeth can be categorized in many types. Based on locations it can be classified into Mesiodens, distomolar etc. Mesiodens is a typical conical supernumerary tooth located between the upper central incisors. It may be single or multiple; unilateral or bilateral; erupted or impacted, vertical, horizontal or inverted.² Opinion regarding management of mesiodens is complicated and is dependent on the status of eruption and position of mesiodens.⁴

II. CASE REPORT:

A 26 year old male patient reported to the department of Prosthodontics, Government Dental College and Hospital Aurangabad, with the chief complaint of an unesthetic dentition due to the presence of an extra tooth in the upper front region of the jaw. Patient complained that it was hampering his social well being.

On extraoral examination it was found that the patient has facial symmetry with convex profile, also lips were competent. Intraoral examination revealed a mesiodens which was conical, of small size and with mild discrepancy with gingival zenith compared to adjacent central incisors. Overjet and overbite were normal. Radiographic analysis was done to rule out the presence of any other pathology. All extraoral and intraoral photographs were clicked for diagnosis and treatment planning. Diagnostic impression was made in alginate (Zermack, Tropicalgin) and cast was poured in Type II dental stone (Goldstone). Diagnosis was confirmed to be the presence of unilateral (right) dysmorphic conical mesiodens.

Patient was given all the possible treatment plans, including extraction followed by orthodontic correction of the diastema. But the patient wasn't willing due to the huge time that the treatment plan was demanding. He demanded some quick and non-invasive treatment. So by taking into consideration the correction of midline, smile line and anterior guidance, root canal treatment followed by post and core build up and then full coverage PFM crown was planned over the mesiodens. Diagnostic mock up was done and confirmed with patient.

The mesiodens was root canal treated. Later post space was prepared in it and the fibre post (Mailyard fiber post, High-intensity quartz fiber resin post) was luted with GIC (GC Gold Label, luting & lining cement). Core was built



with composite (Charisma Smart, Universal light curing submicron- hybrid composite). Shade matching was done. Tooth preparation was done with shoulder margin. Gingival retraction was done (Ultradent Ultrapak cord 000) and final impression

was made in putty and light body Polyvinyl siloxane (Dentsply Aquasil). Provisional crown was given. Metal trial was performed and then definitive PFM crown was luted with GIC (GC Gold Label, luting & lining cement).



Fig 1: Conical Mesiodens Fig 2: Radiograph after RCT



Fig 3: post space preparation



Fig 4: Post placed



Fig 5: Shade Selection



Fig 6: Postoperative view

III. DISCUSSION:

Clinically mesiodens are classified into rudimentary (dysmorphic) or supplemental (eumorphic) according to their shape. Rudimentary mesiodens are further classified as conical, molariform, or tuberculate, the most common presentation being conical. Conical types have complete root formation, are generally located mesially between the central incisors, and rarely delay eruption of adjacent teeth.⁴ Many authors have different opinions regarding treatment of supernumerary teeth. For impacted mesiodens cases, extraction is the only treatment option. In asymptomatic cases, no treatment is indicated until patient has aesthetic concern.⁴

Nagrathna C et al⁵ opted for extraction of a mesiodens and recontouring of the other into a central incisor with help of strip crowns. Samantaroy et al⁶ attempted aesthetic contouring

with the help of ceramic veneers and ceramic crowns after treating the teeth endodontically. Mesiodens sometimes is unesthetic in appearance and also can cause problems in speech, affects looks. In this particular case, the mesiodens had a typical conical clinical crown but the root length was optimum also the bone supported as seen on the radiograph, so we decided to retain the tooth. At the same time we wanted to preserve the vitality of the adjacent teeth so they were not involved. The core was built and prepared in such a way that the definitive crown should at least look matching the midline. Zenith correction wasn't that great but it was looking esthetic and satisfactory than the preoperative condition. Patient felt confident and was satisfied with final treatment results. Esthetic rehabilitation with the post placed and complete coverage crown is a promising, durable, time and cost effective.



IV. CONCLUSION:

Due to the restrictions of time and demand of non invasive treatment, esthetic rehabilitation with post and core and full coverage crown was carried out successfully to achieve long term and promising results.

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