

Orthodontic Management of Multiple Retained Deciduous Teeth- A Case Study

Dr. Saumil Dwivedi

PG Student

Dept. of Orthodontics & Dentofacial Orthopedics
Babu Banarasi Das College of Dental Sciences
Lucknow, (India) 226028

Dr. Tripti Tikku

Prof. & H.O.D

Dept. of Orthodontics & Dentofacial Orthopedics
Babu Banarasi Das College of Dental Sciences
Lucknow

Dr. Rohit Khanna

Professor

Dept. of Orthodontics & Dentofacial Orthopedics
Babu Banarasi Das College of Dental Sciences
Lucknow

Dr. Rana Pratap Maurya

Reader

Dept. of Orthodontics & Dentofacial Orthopedics
Babu Banarasi Das College of Dental Sciences
Lucknow

Dr. Akhil Agarwal

Reader

Dept. of Orthodontics & Dentofacial Orthopedics
Babu Banarasi Das College of Dental Sciences
Lucknow

Dr. Geeta Verma

Senior Lecturer

Dept. of Orthodontics & Dentofacial Orthopedics
Babu Banarasi Das College of Dental Sciences
Lucknow

Abstract

Retained deciduous tooth is a common finding which may affects the path and position of erupting permanent tooth. But multiple retained deciduous teeth along with permanent teeth in non-syndromic, non-hereditary, asymptomatic patient with balanced hormonal level are a rare finding that has rarely been reported in literature. We are reporting a case of 19 years old female with multiple retained deciduous teeth along with permanent dentition and impacted canine in both the arches.

Keywords Retained deciduous teeth, Impacted canine, Non-syndromic

Introduction

Primary teeth may retain due to various reasons; the most common being developmental absence of the permanent teeth. While agenesis of primary teeth is rare (0.1-0.9%),¹ absence of permanent teeth is relatively high with the prevalence of 2.5-6.9% and sexual difference is also found where female : male ratio is 1.37:1.²

In normal dentition, the primary tooth roots undergo gradual resorption concurrently with the eruption of the successors. The normal interrelationship between the eruption of a permanent tooth and the resorption of the primary tooth is well described.³but the resorption of the primary tooth root is also generally viewed as a process that can occur when even the underlying permanent tooth is absent⁴. A continuous process of tooth eruption and shedding replaces the exfoliated deciduous teeth with succedaneous teeth. Impaired tooth eruption, where this process is disturbed may manifest either as delayed or complete absence of eruption, resulting in impacted, embedded permanent teeth, or retained deciduous teeth. In rare situation the primary teeth remained in their position and permanent teeth erupted in ectopic position. Possible etiologies for failure of eruption of teeth fall into two broad categories: systemic and local factors. Endocrine derangements like hypothyroidism can also cause generalized

underdevelopment and delayed exfoliation of the deciduous dentition.

Case report

A 19 year old female patient reported to the Department of Orthodontics, with the chief complaint of multiple teeth in both the jaws. On clinical examination it was found that the patient had retained deciduous incisors, canines, root stump of first deciduous molar in both the jaws, and retained left maxillary deciduous first molar. All permanent teeth except canines and maxillary left first premolar and right third molar were present (Figure 1 & 2). Radiographic findings showed all impacted maxillary and mandibular canines and maxillary left first premolar (Figure 3). Angle's Class I Type 1 malocclusion with class I molar relation on both sides were present. No other deleterious habit or anomaly was detected during extraoral as well as intraoral examination.

There was no family history of multiple teeth ruling out genetic etiology. Routine investigations and thyroid function tests were normal negating possibility of hypothyroidism.

It was decided to treat the patient with extraction of retained deciduous teeth and extraction of first permanent molars later on to provide space for permanent canines after surgical exposure that was carried on in department of oral surgery.

Discussion

Although occurrence of retained primary teeth is a common problem but multiple retained teeth along with impacted teeth and erupted permanent teeth by itself is a rare situation. Persistence of these multiple retained primary teeth leads to various clinical problems like periodontitis, profound caries and development of malocclusion. Careful assessment is necessary for all the patients with retained deciduous teeth, along with consideration of general factors such as the patient health, motivation, expectations and oral health. A local assessment should be made. Clinical examination should focus on coronal shape, colour and structural integrity of the primary teeth.

The common knowledge regarding the retained primary teeth explained that primary teeth may be retained because of diversified reasons, the commonest being the developmental absence of its permanent successors⁵. Impaction or intrabony migration of the permanent tooth may play a etiological role.^{6,7,8}

But in the present case, none of the above discussed etiological factors are found. Here, the situation is unique, as all the permanent successors were erupted in normal position, deflecting their deciduous predecessors labially.

Tooth eruption is a localized event in
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