



# Non-Syndromic and Idiopathic Condition with Multiple Retained Deciduous Teeth and Impacted Permanent Teeth in A 25-Year-Old Female – A Case Report

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## Abstract

Syndromes play an important role in the retention of deciduous teeth and impaction of permanent teeth. However, in some cases, the condition might occur without any linkage to syndromes. In this case report, we present a clinically challenging condition of a 25-year-old female complaining of missing teeth. Orthopantomogram revealed multiple retained deciduous teeth and impacted permanent teeth. Treatment plan included orthodontic extrusion and surgical removal. Unfortunately, due to absence of response from patient side, further investigations and proposed treatment protocol could not be applied. The main concept of the article is that a complete diagnosis both clinically and radiographically should be performed in an utmost detailed manner. Moreover, the article adds on the highlight that no syndromic link also occurs.

**Keywords:** Deciduous; Permanent; Retained; Impaction

## Introduction

Movement of the tooth in an occlusal or axial direction to achieve functional position from its developmental position is defined as eruption. Impaction of tooth occurs if there is a failure in the abovementioned event. Etiology includes tooth bud rotation, lack of eruptive force, premature loss of deciduous teeth, metabolic disorders, deficient space, thick fibrous tissue, syndromes, hormonal disorders, and crowding [1-8]. The main concept of the study is to emphasize on the occurrence of multiple retained deciduous and impacted permanent teeth without any linkage to syndromes.

opening and lateral temporomandibular joint movements were satisfactory. Clinical examination revealed presence of 20 teeth in the oral cavity. Radiographically, orthopantomogram revealed multiple impacted permanent teeth (Figure 1).



**Figure 1:** Orthopantomogram depicting multiple impacted permanent teeth.

Based on the condition, treatment plan such as orthodontic extrusion of the impacted permanent teeth and surgical removal

## Case Report

A 25-year-old female reported to the Department of Dentistry and Faciomaxillary Surgery with a complaint of missing teeth. The patient was conscious, oriented, and afebrile. Vitals stable. Past medical history and drug history were not relevant. Mouth

of the affected teeth. Unfortunately, due to absence of response from patient side, follow up was not possible.

## Discussion

Impactions account for 25% to 50% [9,10]. However, systemic conditions might have a link to impacted teeth. Orthodontic guided eruption is required for impacted permanent teeth [3]. EGF, EGF-R, CSF-1, CSF-1R, IL-1, IL-1R, c-Fos, NFB, MCP-1, TGF- $\beta$ 1, PTHrP, Cbfa-1 (now called Runx2), OPG, RANK/RANKL, tooth eruption molecules might lead to such conditions due to deviations in their architecture. Dental follicle is the primary site for these molecules whereas stellate reticulum is the secondary site [3]. Genetically CSF-1, NFB, and c-fos might play an important role in the defective process of eruption defect [2].

Generalized factors contributing to the etiology of impacted tooth are Cleidocranial dysplasia whereas factors such as dilaceration, ankylosis, trauma, neoplasm, morphological disorders, deficient space, retained deciduous tooth, premature exfoliation of deciduous tooth, and presence of cleft in the alveolar region are grouped under local division [6-9]. In our case report, retained deciduous teeth were the sole reason for the impaction of permanent teeth. Yunis–Varon Syndrome, Vitamin D deficiency, Gorlin–Sedano syndrome, Cleidocranial dysostosis, hypothyroidism, hypoparathyroidism, and Pseudo hypoparathyroidism, Gardner's syndrome comes under differential diagnosis. On comparison to Cleidocranial dysostosis, deformities of skull and shoulder were absent in our case. On comparison to Gardner's syndrome, multiple epidermoid cysts were absent in our case. On comparison to Gorlin–Sedano syndrome, deformities in relation to hand, foot and collar bone were absent in our case. On comparison to Yunis–Varon syndrome, deformities in relation to clavicle, fingers and spine were absent. On comparison to hormonal disorders. T3, T4 and TSH levels were unaltered in our case. In scientific literature, extensive search triggers that defects in the eruption pattern is due to a kind of blockage [4]. Treatment protocol involves multifaceted approach such as orthodontic extrusion and surgical removal to meet esthetic and functional demands.

## Conclusion

Considering the underlying medical condition, multidisciplinary approach is needed to guide teeth eruption in this case.

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