Hypophosphatemic Rickets and its Dental Significance

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I read with interest Rabbani et al's paper entitled "Dental problems in hypophosphatemic rickets, a cross sectional study" in the fourth issue of Iran J Pediatr 2012[1]. Clinical oral manifestations of hypophosphatemic rickets often include premature tooth exfoliation, hypoplastic enamel and dental infections. Apical rarefaction, rickety bone trabeculation and absent or abnormal lamina dura are frequent radiographic findings[2].

Single or multiple abscesses relate to the enlarged pulp chamber and pulp horns reaching the dentino-enamel junction or even the external surface of the tooth[2, 3]. Defective enamel is also abraded or fractured easily[2]. Prophylactic pulpectomy and stainless steel crown placement have been recommended in affected patients[2,3].

Since premature tooth exfoliation is sometimes a feature in this inherited abnormality[2], the paper what circumstances the oral examination was done and what index has been used to assess the inflammation of the gingiva.

One of the common dental findings of the affected patients according to the above mentioned paper is taurodontism. Taurodontism is a dental anomaly characterized by a tendency for the body of the tooth and pulp chamber to enlarge at the expense of the root, leading to a elongated pulp chamber[2-4]. This developmental condition results from improper level of horizontal invagination of the Hertwig's epithelial root sheet[5] and seen in approximately 2.5- 3.5% of the population as an isolated trait[4].

Taurodontism is found with conditions such as X-chromosomal disorders, Down syndrome, otodental dysplasia, trichodento-osseous syndrome, Mohr syndrome, microcephalic dwarfism, amelogenesis imperfecta (type IV) and ectodermal dysplsia[2-5].

Diagnosis of taurodontism is based on radiographic examination and its clinical significance is disclosed when pulp therapy is indicated[2]. Since this anomaly frequently occurs multiple[4], hence it was better to report the frequency of bilateral and multiple taurodontism of posterior teeth in the paper.

Key words: Hypophosphatemic Rickets; Taurodontism; Dental Problems

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