Oral manifestations of vitamin D resistant rickets in orthopantomogram

Rajendrasinh Rathore,¹ Triveni M Nalawade,² Deepak Pateel,³ Rachappa Mallikarjuna⁴

¹Department of Oral Pathology and Microbiology, Manubhai Patel Dental College and Hospital, ORI, Vadodara, Gujarat, India

²Department of Pediatric and Preventive Dentistry, Manubhai Patel Dental College and Hospital, ORI, Vadodara, Gujarat, India

³Department of Oral Pathology and Microbiology, K M Shah Dental College and Hospital, Vadodara, Gujarat, India

⁴Department of Pedodontics and Preventive Dentistry, K M Shah Dental College and Hospital, Vadodara, Gujarat, India

Correspondence to

Dr Rachappa Mallikarjuna, mmrachappa@gmail.com

DESCRIPTION

Vitamin D-resistant rickets (VDRR) is a rare disease. Its prevalence is 1:20 000.¹

A 9-year-old girl (figure 1A) reported with a chief complaint of missing teeth. General and extraoral examination revealed significant short stature and concave facial profile (figure 1B). On her next visit, study of her previous medical records revealed that the patient was a known case of VDRR. No relative had a similar medical history.

Intraoral examination (figure 2A) revealed that the patient had edentulous mandibular arch. Maxillary left second and maxillary right first and second primary molars were carious with mobility ranging from grades II to III.

An orthopantomogram (figure 2B) revealed maxillary left second and right first and second primary molars showing root resorption, hypoplasia, dentin abnormalities and enlarged pulp chambers. Also, an unerupted tooth-like structure was noted in mandibular left posterior region. All developing permanent teeth especially first molar showed large pulp chambers, short roots, poorly defined lamina dura and hypoplastic alveolar ridge.

Treatment consisted of conventional pulpotomies in respect to carious maxillary left second and right first primary molars. Preventive resin restoration was performed in respect to maxillary right second primary molar. Close follow-up was advised.

VDRR may skip generations and therefore be difficult to diagnose.² The clinical features are comparable to those of vitamin D-dependant rickets (VDDR); however, neither tetany nor convulsions are usually observed.³ Differential diagnosis includes VDDR I, VDDR II and from dental standpoint, conditions such as amelogenesis imperfecta and dentin dysplasia.

Figure 1 Extraoral view (A) frontal view of the 9-year-old girl with reduced lower facial height and a protruding lower lip. (B) Lateral view showing concave profile.

Figure 2 (A) Intraoral view showing edentulous mandibular arch and only three posterior deciduous teeth in maxillary arch. (B) Orthopantomogram showing multiple missing deciduous teeth and developing permanent teeth especially first molar showed large pulp chambers, short roots, poorly defined lamina dura and hypoplastic alveolar ridge.

Learning points

- ▶ Early diagnosis of these conditions is necessary to prevent major dental abnormalities and bone deformities like curved or arched legs.
- ▶ As these conditions are rare, proper knowledge and investigations like genetic or chromosomal mapping are helpful in establishing diagnosis.
- ▶ Preventive dental procedures like topical fluoride application and pit and fissure sealants should be carried in order to eliminate caries and propensity for occurrence of multiple periapical abscesses along with a close follow-up.

Competing interests None.

Patient consent Obtained.

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