

A Delayed And Unusual Sequence Of Teeth Eruption - A Case Report

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Abstract

Delayed tooth eruption is the most commonly encountered deviation from the normal eruption pattern; though occasionally the sequence of eruption can be unusual. Most parents are anxious about the variation in the timing of eruption, which is considered as an important milestone during a child's development. This case report documents a delayed and unusual sequence of teeth eruption in which the maxillary lateral incisors were the first set of teeth to appear. The possibility of a variation in the timing and sequence of teeth eruption should be envisaged so that parents can be appropriately reassured.

Introduction

Eruption is the axial movement of a tooth from its nonfunctional position in the bone to functional occlusion.¹

Deciduous dentition usually emerge within the first three years of life. The timing and sequence of emergence of deciduous teeth differ to some extent between populations and geographic areas and even within seemingly homogenous groups.² The period of eruption of the deciduous teeth may be related to sex,³ gestational period, general growth and nutritional status.⁴ Significant deviations from accepted norms of eruption time are often observed in clinical practice. Premature eruption has been noted, but delayed tooth eruption is the most commonly encountered deviation from normal eruption time. It may be the primary or sole manifestation of local or systemic pathology.⁵ Eruption of the maxillary central incisor before the mandibular is however rare while the eruption of the maxillary lateral incisors as the first set of teeth is very rare.

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A review of literature did not reveal any documented case of the maxillary lateral incisors being the first set of teeth to erupt.

Most parents are anxious about the variation in the timing of the eruption, which is considered as an important milestone during a child's development.⁶

Variation in the sequence of eruption can be a greater cause for concern because the eruption of the upper central incisor before the lower has been associated with evil omen in some parts of Africa.⁷

The case report is that of a delayed and unusual sequence of teeth eruption in which the maxillary lateral incisors were the first set of teeth to appear.

Case Report

A twelve month old baby was brought by his mother to the Dental Clinic of the Lagos State University Teaching Hospital following referral from the Paediatrics Clinic. The presenting complaint was delayed eruption of the infant's deciduous dentition. The mother gave a history of delivery after a full-term, uncomplicated pregnancy, with a birth weight of 3.9kg. The patient's developmental milestones were normal. There was no history of trauma to his oro-facial region. There was no family history of congenital anomalies, unerupted teeth or hypodontia.

Examination revealed a well developed, well nourished, male child who did not appear ill or irritable.

Extra-oral examination revealed no abnormality and a review of systems was non contributory. There was no clinical evidence of congenital abnormalities or genetic disorders associated with delayed tooth eruption. On intra-oral examination, oral soft tissues were found to be clinically healthy without any pathology, swellings, fibrous attachments or any sign of inflammation.

The mandible was edentulous while partial eruption of the maxillary lateral incisors was noted. Observation and palpation of the alveolar ridges showed a characteristic bulge of a tooth in the process of eruption in the mandibular and maxillary region corresponding to the eruption sites of the deciduous central incisors. Periapical radiographic investigation did not reveal any pathology. The mother was reassured that it was a case of delayed and unusual pattern of tooth eruption and that there is no other associated pathology.

At the first follow up visit a month after, the maxillary lateral incisors were fully erupted and the maxillary central incisors were erupting. Eruption of the mandibular central incisor was at age 14 months. The left lateral mandibular incisor was observed at age 15 months while the eruption of the right lateral incisor was at age 16 months.



Fig. 1 A delayed and unusual sequence of teeth eruption

Discussion

The normal eruption of deciduous and permanent teeth into the oral cavity occurs over a broad chronologic age range. Racial, ethnic, sexual, and individual factors can influence and are usually considered in determining the standards of normal eruption.⁸ Delayed tooth eruption can be a normal variation or could be caused by local factors, systemic factors or genetic disorders. Local conditions causing delayed tooth eruption include obstructions resulting from supernumerary teeth, mucosal barrier, scar tissue, and tumors.

Systemic causes include nutritive deprivation^{9,10} and endocrine dysfunctions such as Hypothyroidism, hypopituitarism, hypoparathyroidism. Apert syndrome,^{11,12} cleidocranial dysostosis,¹³ and Gardner syndrome¹⁴ are examples of genetic disorders that have been associated with delayed tooth eruption. Treatment options when these pathologies are diagnosed include observation, elimination of obstacles to eruption (eg, cysts or soft tissue overgrowths), exposure of affected teeth and control of any systemic disease.^{15,16}

Folayan et al ¹⁵ in a study of the eruption time and sequence for primary teeth in Nigerian children observed that the mandibular left and right central incisors were the earliest set of teeth to erupt with a mean age of 8.09 +/- 2.73 months.

The maxillary right and left central incisors erupt next, followed by the maxillary and mandibular right and left lateral incisors respectively.

This sequence of eruption is the same in studies from other countries with minor variations in the timing of eruption.¹⁶⁻²⁰

In the present case, both the timing and the sequence of eruption were unusual. The maxillary lateral incisors were the first set of teeth to erupt, which was highly unusual and almost previously undocumented. The mandibular central incisor which should be the first to erupt at about 8 months was observed at 14 months. Societal expectations, based on norms and taboos could be a source of parental anxiety.²⁰

Aderinokun et al ²² observed that the majority of a group of Nigerian respondents erroneously believed that the eruption of upper deciduous teeth before the lower is associated with evil. This association was however related to the educational status and age of the respondents. Respondents with high educational qualification however viewed this occurrence as a mere individual variation.

The mother in the present case did not exhibit unusual anxiety even though she was concerned, possibly because she was well educated.

Aderinokun et al ²² recommended that an educational intervention should be directed at populations having erroneous beliefs about the sequence of eruption in order to reduce the anxiety related to this human variation.

Conclusion

Knowledge of the normal time and sequence of tooth eruption is of clinical importance to anticipate the need for investigation and intervention. The possibility of a variation in this pattern should however be envisaged so that parents can be appropriately reassured.

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