Hyperdontia: Case Report

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ABSTRACT

Aim The purpose of this case report is to explain that the patiens with hyperdontia need regular follow-up and that the necessary treatments should be done gradually.

Case Report Our patient, who applied to the Oral Diagnosis and Radiology Clinic of Biruni University Faculty of Dentistry, was diagnosed with hyperdontia as a result of radiological examination. At the same time, 4 primary premolar teeth and 4 paramolar teeth were seen in the maxilla and mandible. According to the family history, it was learned that this situation had not been seen before in the family's history.

Conclusion We suggest that routine check-ups at regular intervals, after necessary treatments have been performed for patients diagnosed with hyperdontia, are crucial for preserving permanent teeth.

Keywords Dental anomalies, Dentistry, Hyperdontia, Primary teeth, Radiographic controls

Introduction

Hyperdontia is the occurrence of having more teeth than normal in an individual. Anomalies in tooth count, or in other words, having fewer or more teeth than normal, arise from abnormalities in proliferation events during tooth formation. Proliferation events can deviate from normal for two reasons. The first reason is defects in genes that give species-specific genetic information to continue cell proliferation at specific points on the dental lamina during development (1). This type of disorder shows that familial traits are involved in the etiology of numerical anomalies. The genetic or chromosomal anomaly is passed on as autosomal recessive and there is a hereditary predisposition to numerical anomalies (1). The second reason deviating proliferation from normal is the various damages that can occur during proliferation, such as mechanical, traumatic and chemical damages as well as ionizing radiation, and infections. All of these reasons can cause deviations from normal proliferation points on the dental lamina, resulting in hyperdontia or hypodontia, and rarely anodontia (2).

In addition to these, hyperdontia can also occur in some anomalies that involve the entire body. Researchers agree that the folding of the dental lamina can result in the development of supernumerary teeth when cleft lip-palate occurs. Additionally, hyperdontia can be seen in Cleidocranial Dysostosis, Oro-digito-facial Dysostosis, Gardner syndrome, and Hellermann-Streiff syndrome (3-5). Other related rare genetic syndromes are Fabry disease, Ellis-van Creveld syndrome, Trico–Rhino–Phalangeal syndrome, Rubinstein-Taybi Syndrome and Nance-Horan syndrome (6).

The excess number of teeth is called "supernumerary teeth". Sometimes they form anomalies in the shape of cones or stumps. They are generally small in size. However, mesiodens are always conical. If the extra tooth exactly mimics the morphology of the tooth group it is found in, it is called a "supplemental tooth". Hypoplasia is rare in these type of teeth (7).

The supernumerary teeth usually do not erupt and their presence is detected either by symptoms or radiographic examination. The ratio of erupted supernumerary teeth to impacted supernumerary teeth is approximately 5:1 (5). Hyperdontia is more common in the lower jaw. The excess number of teeth in deciduous dentition is a rare condition (6-8).

The eruption time of supernumerary teeth is the same as that of normal teeth. These teeth usually erupt ectopically. Supernumerary teeth often appear unilaterally. Rarely, they can appear symmetrically. Mesiodens is the most common type of supernumerary teeth. Then, the upper fourth molars and lower small molars follow in order. In deciduous dentition, supernumerary teeth most commonly occur in incisors. They rarely appear in deciduous canines (9).

It is very rare for supernumerary teeth to be present in both the deciduous and permanent dentitions of the same individual. They can remain not erupted with permanent teeth, cause dental crowding, and sometimes prevent the eruption of permanent teeth. If they remain impacted, they can cause displacement and root resorption of teeth. Supernumerary deciduous teeth can cause delayed development or vestibuloversion of normal deciduous teeth (10).

In this article, findings related to a case of hyperdontia that is interesting due to its occurrence in both the deciduous and permanent dentitions and its symmetrical presentation in the deciduous dentition will be presented.

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Case Report

The patient is a 19-year-old girl who applied to our Department of Oral Diagnosis and Radiology for treatment of decayed teeth.

According to the patient's medical history, no characteristics were found in her medical history. Further examination of the patient's father and two siblings revealed no similar condition. The patient's mother, although young, wears complete upper and lower dentures. Both the mother and father stated that they had not encountered such a condition in their families before. After radiological examination of orthopantomographs of the patient, a permanent four permolar and paramolar tooth was detected in the maxilla and mandible. (Figure I).

Figure 1: Permanent supernumerary teeth seen on panoramic radiograph.

Discussion

Hyperdontia is the condition of having more teeth than the normal number in an individual. It is suggested that there is a familial predisposition to hyperdontia and it is inherited as an autosomal recessive trait (2). In our case, hyperdontia was observed for the first time in the family. Therefore, it can be considered that a recessive character played a role in the emergence of hyperdontia. There is no anomaly or cleft lip/palate affecting the body in our case.

Hyperdontia is slightly more common in males (1). Our case is a 19-year-old female. There are two permanent premolars and two permanent paramolars on the upper and lower jaw. The incidence of hyperdontia in the upper jaw is eight times more frequent than in the lower jaw. In our case, supernumerary teeth are also located in the upper jaw. Supernumerary teeth usually cannot erupt (8). When supernumerary teeth erupt, they usually erupt along with normal teeth and are often ectopic. However, in our case, supernumerary permanent teeth in both the upper and lower jaws erupted next to the normal permanent teeth and took their place in the dental arch without being ectopic. As for the supernumerary permanent tooth, since it has not erupted yet, it is unknown what effect it will have on the dental arch in the future (2).

Supernumerary teeth are most commonly found between the central incisors, followed by the upper fourth molars and lower premolars (1, 2, 10, 11). In our case, supernumerary teeth were found in the upper and lower premolars and upper and lower paramolars of the permanent dentition. In our case, there were supernumerary teeth in the upper and lower permanent teeth.

Conclusion

We suggest that routine check-ups at regular intervals, after necessary treatments have been performed for patients diagnosed with hyperdontia, are crucial for preserving permanent teeth.

Declarations

Author Contributions: *Conception/Design of Study- O.E.B.; Data Acquisition- M.Y.K.; Data Analysis/Interpretation- E.K.; Drafting Manuscript- R.S., T.S.; Critical Revision of Manuscript- O.E.B.; Final Approval and Accountability- O.E.B.; Material and Technical Support- O.E.B.; Supervision- O.E.B.*

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