Case Report

Management of Idiopathic Gingival Fibromatosis in a Child with Autism: A Case Report

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Abstract

Gingival fibromatosis is a rare disorder characterized by abnormal enlargement of gingival tissue. It is usually associated with systemic conditions, different syndromes, genetic conditions, drug induced or might be idiopathic in origin. It is slow progressive in nature and mostly occurs during the stages of tooth eruption. The condition give rise to different problems such as pain, delayed eruption, masticatory pain, periodontal disease, dental caries and aesthetic concern. The oral hygiene status of patient has an important role on further deterioration of the condition. The treatment option varying from simple management by oral hygiene instruction to surgical approach, depends on the severity of the lesion. This case report describes clinical manifestations and management of a case of idiopathic gingival fibromatosis in an eleven years old autistic child. In this case, the classical manifestations of gingival fibromatosis were encountered and was managed by surgical excision under general anesthesia.

Key words: Autistic Child**,** Benign dental lesions**,** Dental Treatment, Gingival Fibromatosis,

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Introduction

Gingival fibromatosis is a clinical condition characterized by enlargement of gingival tissue which might be progressive, generalized and severe in nature.[1] It is benign in nature and slow enlargement of keratinized gingiva is detected in such cases.[2] In severe cases, the gingival enlargement may cover the crown of the teeth that may results in functional limitations and aesthetic concern.[3] The condition might arise due to genetics factors, inflammatory conditions, drug induced or systemic diseases.[1] It is often associated with delayed tooth eruption in the area of fibrous gingival tissue.[4] The etiology of the condition might be also associated with the poor oral hygiene, inadequate oral hygiene maintenance, nutritional imbalance or hormonal influences.[5] Histologically it appeared as a hyperplastic epithelium, hyperkeratosis and presence of numerous fibroblasts with avascular connective tissue.[6,7] It is usually develops as an isolated disorder but rarely appeared as a part of syndromes thus clinical features likes hypertrichosis, mental retardation and epilepsy are seen in syndromic cases.[8] The treatment option includes complete surgical removal of fibrous tissues followed by maintenance for oral hygiene and removal of cofactors which induced gingival hyperplasia.[9] Herein, this case report represents a case of gingival fibromatosis in an autistic child with its surgical management and follow up.

Case Report

A 11 years old male visited in private dental clinic of Dhaka, Bangladesh with the chief complaint of pain and swelling of gum over the tooth. The child was accompanied by his parents and parents stated that they have been encountering the child's pain and discomfort for several months. The guardian of the child added the child is suffering from autism spectrum disorder. He cannot eat properly due to chronic pain on biting, nor sleep well due to toothache. Moreover, the child is healthy except this medical condition and taking medication (Risperidone) in regular basis. The parents were asked regarding any familial history of this type of gum swelling but they cannot confirm any noted issue about the familial history. Following taking the permission from the parents, clinical examination of the child was carried out.

The intraoral examination was carried out and a firm swelled gingiva was detected over mandibular permanent molar tooth. Markedly gingival enlargement is seen in vestibular and lingual gingiva, and they cover the crown of the left sided permanent molar (figure 1). Regarding the other findings- several broken-down roots of primary molars was detected as well as grossly carious right sided mandibular permanent molar was noted. In the extra oral physical examination, nothing abnormality was detected on face, cheeks, skin or any other part of the body.

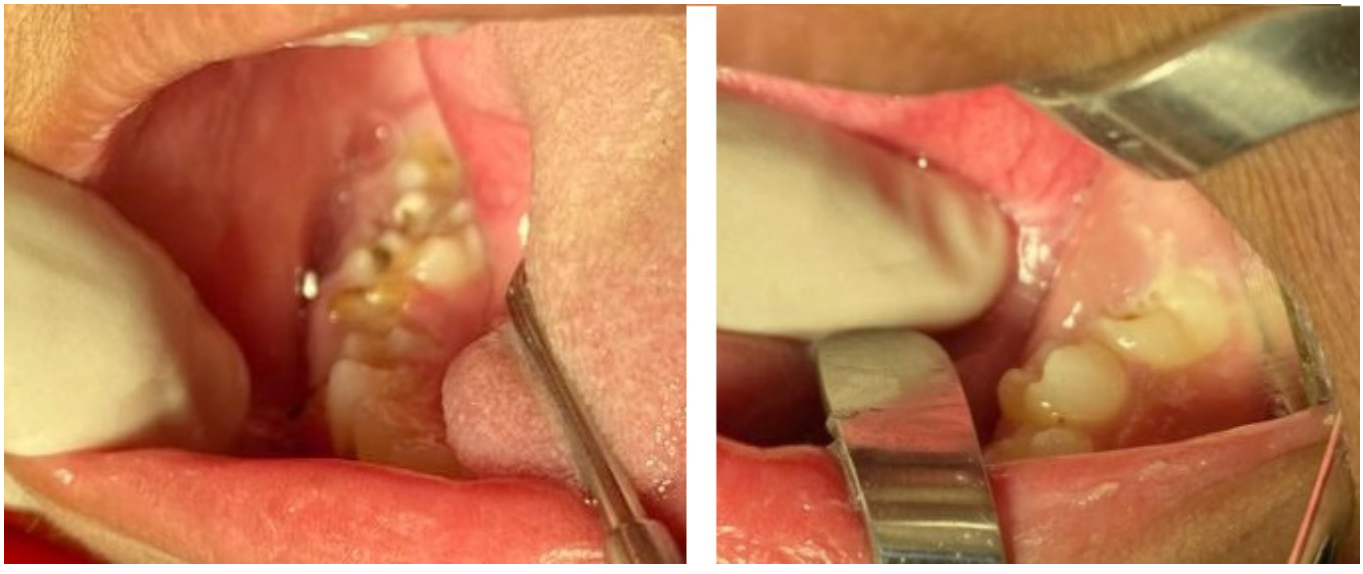

Figure 1: Clinical manifestations of mandibular dentition. Gingival fibromatosis is seen over the lower left sided mandibular dentition.

A panoramic radiograph (figure. 2) was taken and evaluated in order to find out any other abnormalities on dentition or jaw. On the radiographic examination, all permanent tooth germ was detected in their normal development stages as well as nothing abnormality was detected on the jaw.

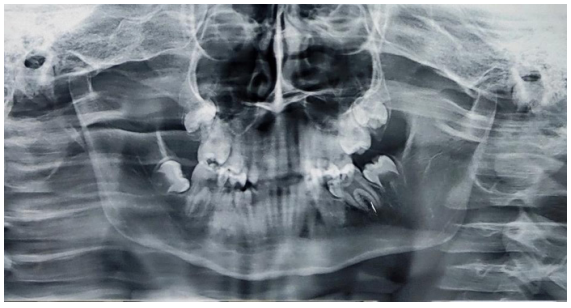

Figure 2: Panoramic radiograph showed normal development of dentition

Based on the clinical and radiographic findings, the diagnosis was made idiopathic gingival fibromatosis with multiple broken-down roots of primary dentition and acute irreversible pulpitis on lower right 1st mandibular permanent molar. The treatment plan was discussed with the parents that surgical excision of gingival fibromatosis, extraction of multiple broken-down roots of primary teeth and endodontic treatment of mandibular right permanent molar. The parents were informed about the behavior management protocol and they were agreed to conduct all treatment procedure under general anesthesia and they requested to extract the mandibular right permanent molar in order to avoid further complications in future. Moreover, all the advantages and risk factors of general anesthetics were discussed and they agreed to conduct the treatment procedure. Following the pre-anesthetics evaluation and taking the required diagnostic test for general anesthesia, informed consent was taken from the parents in written form and treatment plan was reconfirmed again. The parents were instructed to maintain the nothing per oral protocol of general anesthesia and other preparatory measures for the operation procedure.

On the day of operation, child's physical examination was reconducted by general anesthesia surgeon and nothing per oral protocol was reconfirmed. The induction and intubation procedure were conducted by the anesthesiologist and the dental operation was carried out in the oral cavity (figure 3). The gingival fibromatosis was removed using scalpel and Gracey curettes (figure 4) under infiltrative technique of local anesthesia at the vestibular, lingual and intrapapillary regions. Following the complete removal of the lesion, other treatment was carried out in order to maintain the optimum oral conditions (figure 5). Following the reverse, the patient was moved into the post-operative theatre are monitored until complete recovery. The patient was prescribed oral antibiotic and NSAID for 7-10 days in order to control post-operative infection and pain. The excised specimen was sent for histological examination and no malignancy was reported. Recall examination was carried out after 10 days and parents reported that, child is quite well, did not encountered any severe pain and can have a meal without any problems.

Figure 3: The dental operation of removal of gingival fibromatosis

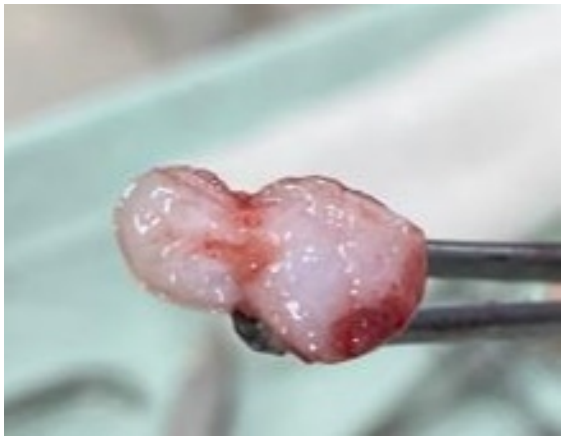

Figure 4: The excised lesion of gingival fibromatosis

Figure 5: The extracted broken-down roots and mandibular molar

Discussion

Gingival fibromatosis is a gingival disease in which gingival overgrowth varies from mild to marked in one or both jaw.[4,5] It is less common in children and mostly associated with poor oral hygiene condition or use of different drugs.[10] In this case report we have encountered gingival fibromatosis of idiopathic origin with poor oral hygiene. Kamolmatyakul *et al.* study showed that, the overgrown gingiva would not likely be infected if there is not any other lesion in the area of gingival swelling.[8] Similar pattern was also noticed in our case that, gingival swelling was covered the occlusal surface of molar but was not having any signs of infections. The affected site was attached gingiva, gingival margin and interdental papilla which is also seen in the study of Nayak *et al*.[11] A study by Houda *et al.* revealed that, gingival enlargement usually begins at the time of eruption of either deciduous or permanent dentition and progresses airing active eruption stages.[10] In our study, we discovered that, the enlarged gingiva covered the occlusal surface of the crown thus it might assumed that the enlargement begins at during the eruption of permanent molars. A study by Morocho-Monteros *et al.* stated that, the condition might be associated with some hereditary syndromes such as Rutherford syndrome, Cowden syndrome, Zimmerman-Laband syndrome and Cross syndrome.[11] This case does not represent any syndrome of the patient but patient had some medical issues related autism spectrum disorder.

The treatment option of gingival hyperplasia varies from reinforced oral hygiene instruction to surgical excision.[12] The surgical excision might be conventional or electrosurgery.[7] While making the treatment planning the age of the patient, medical condition and severity of the lesion plays a vital role.[13] In this case conventional surgical excision under general anesthesia was chosen due to considering medical condition of the child as well as amount of work needed. Surgical excision was

considered due to presence of pain (during mastication), disturbances in speech as well as compromised oral hygiene condition.[12] The tissue excised lesion is usually avascular and composed of dense connective tissue-rich in collagen fibrils which is similar to the study by Katz et al.[14] Overall maintenance of oral hygiene is required to achieve the good result after surgical excision.[6] The early diagnosis is key factors for prevention of complications such as pain, ulceration, mastication problems, aesthetic problem and periodontal complications.[9] In our case, all broken down roots were removed thus will help in establishment of healthy oral condition as well as fine eruption of permanent teeth.

Conclusion

The case illustrates clinical features and management of gingival fibromatosis of idiopathic origin. The condition is less common in children but knowledge regarding its clinical manifestations and management protocol is important. Gingival fibromatosis may be isolated or part of a syndrome, thus physical evaluation is required following clinical signs of enlargement of gingiva. Early diagnosis might play a big role to reduce further complications.

Conflicts of interest

The author declares no conflict of interest

Acknowledgement

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