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Case Report

Reactive Localized Inflammatory Gingival Hyperplasia in Primary Dentition: A Report of Rare Case and Comprehensive Management

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Abstract

Reactive localized inflammatory gingival hyperplasia is a common benign tumor-like lesion of the gingiva, which appears in the interdental papilla or free gingival margin. It is because of local irritation, which is asymptomatic, and have a variable growth rate. Many of them are locally invasive and inclined to recur and their physical presence in the mouth can lead to traumatic occlusion and entrapment of debris, predisposing to infection. It is therefore of great importance that these be treated carefully with the elimination of the causative factor. In this case report, we are discussing about the management of reactive localized inflammatory gingival hyperplasia after trauma in the upper left primary central incisor in a 4 year old child.

Keywords: Trauma; Epulis, Pulpectomy; Post and Core; Strip Crown

Introduction

The reactive localized inflammatory gingival hyperplasia is one of the most frequently encountered benign lesion of the oral cavity [1]. Virchoff introduced the term epulis in 1864, the term is derived from the ancient Greek word 'epoulis' and is an a specific clinical term that means 'growth on gums'[2]. It occurs more commonly in females in the ratio of 2:1 [3,4]. Based on their histopathological findings, epulis has been classified under the following four headings: fibrous, granulomatous (pyogenic granuloma), angiomatous and giant cells epulis [5]. Fibrous epulis usually presents as a firm, pink, uninflamed mass, and it usually tends to grow from below the free gingival margin/interdental papilla. The patient is usually asymptomatic in most of the cases but pain may occur secondary to trauma [6].

The most common mechanisms in the development of soft tissue tumor-like lesion in the oral cavity included reactive hyperplasia and neoplasia. The majority of localized overgrowths are considered reactive rather than neoplastic in nature. Described under a variety of names, the 'reactive localized inflammatory gingival hyperplasia is a relatively common tumor-like lesion of the gingiva [7]. It is considered to be a reactive lesion rather than true neoplasia, usually asymptomatic with a variable growth rate [8]. Reactive lesions are swellings that develop in response to chronic and recurring tissue injury, which stimulates an exuberant or excessive tissue response [3]. Histologically, intact lesion consists of bundles of collagen fibers covered with keratinized squamous cell epithelium. When traumatized, the lesion contain inflammatory infiltrate and ulcerated area will be covered with fibrin and organisms from the oral flora [9]. The fibrous reactive localized inflammatory gingival hyperplasia usually appears in the interdental papilla as the result of local irritation (calculus, bacterial plaque, caries or restorations with irregular margins and trauma [10].

We present an interesting case of 'reactive localized inflammatory gingival hyperplasia. The present case shows a swelling arising from the maxillary gingiva as a reactive lesion that developed in response to acute tissue injury, which stimulated an exuberant or excessive tissue response in relation to upper left primary central incisor due to trauma.

Case Report

A 4-year-old male child came to the department of pedodontics and preventive dentistry with the chief complaint of a growth in the upper front tooth region since one month. Father gave the history of self-fall as the child was playing around the house. Immediately they consulted a dentist after the fall, emergency treatment was given and bleeding was arrested. However, no further investigations were done and the patient was not called for any follow-up. His medical history and familial history were noncontributory as he was the only child to nonconsanguineous parent. On intraoral examination, he presented with a gingival growth irt upper left primary central incisor (61) [figure 1]. The entire tooth was covered with the polyp both bucally and palatally [figure 2]. The lesion had started 1 month ago and has been increasing in size and no other findings were present both in the maxilla and the mandible. On radiographic examination there was crown root fracture seen irt upper left primary incisors [figure 3] fractured fragments was extending 2mm below the palatal gingival margin. Based upon the clinical and radiographic finding we arrived at the diagnosis as 'reactive localized inflammatory gingival hyperplasia. The parents were advised complete excision of the lesion both bucally and palatally followed by removal of the fractured fragment. Informed consent was obtained from the patient. The lesion was totally removed by excision with surgical scalpel under local anesthesia and the fractured fragment was removed irt upper left primary incisor. Patient was recalled after a week for pulpectomy, composite post and core and strip crown were also done in the subsequent visits (Figure 4-6).

Figure 1: Pre-operative photograph showing fibrous gingival growth on the labial aspect Irt 61.

Figure 2: Pre-operative photograph showing fibrous gingival growth on both buccal and Palatal aspect irt 61.

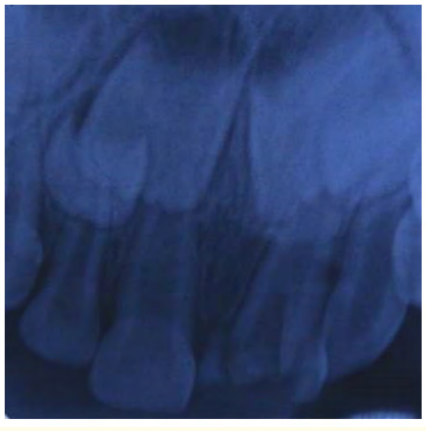

Figure 3: Pre-operative radiograph showing fractured fragments irt 61.

Figure 4: Showing post –op cemtation of post and core.

Figure 5: Showing composite strip restoration irt 61.

Figure 6: Showing post –op x –ray after Final treatment irt 61.

Dietary counseling with care of the restorations, and importance of maintenance of good oral hygiene as well as the importance of periodic dental visits. Follow-up for preservation of the primary dentition was informed to the patient and parents.

Discussion

The clinical aspect of the 'reactive localized inflammatory gingival hyperplasia is the growth of well-delimited tissue, of a smooth surface, which may be normal colored mucosa/ sessile/pedunculated base, of hard consistence, usually extending both bucally and palatally on the anterior maxilla [11]. In the present case we noticed a swelling arising from the maxillary gingiva in relation to the upper left primary central incisor (61). This case demonstrates that the epulis formed due to reactive condition after trauma. The biggest challenge as a clinician is arriving at a definitive diagnosis. The gingiva is commonly affected by non-neoplastic and neoplastic lesions, the latter being characterized by a progressive growth that can be either benign or malignant. Moreover, the great majority of localized overgrowths of the gingiva are considered to be reactive rather than neoplastic in nature. Fibrous inflammatory hyperplasias may occur on any surface of the oral mucous membrane as either pedunculated or sessile growth. The majority remain small and lesions more than 1 cm in diameter are rare on the cheeks, tongue and floor of the mouth possibly because masticatory trauma restricts their size through necrosis and ulceration. Several authors observed that irritation fibroma is more common in adult females [12]. In our case we have diagnosed a reactive lesion which is fibrous inflammatory hyperplasia in a 4 year old male child. In addition, their research found no marked difference in location of irritation fibroma between upper and lower jaws [12]. A study reported a significant higher frequency and site distribution in maxilla than the mandible [13]. Which is similar in our case. Treatment usually includes complete excision of the lesion and thorough curettage of the area due to its origin from the periosteum and periodontal ligament cells to prevent recurrence [13]. In this case, the simple but controlled excision of the lesion with a surgical scalpel and a basic good technique was used which allowed reducing anxiety in the patient. A conservative surgical excision with gingival recontouring was preferred because of the absence of bone invasion.

Restoration of deciduous anterior and posterior teeth with severe loss of coronal structure is a challenging task for the dentists. The main aim is to avoid extraction of these teeth and restore them so that child is able to perform normal masticatory function, and good esthetics is maintained. Pulp therapy was done irt upper left central incisor followed by placement of post. The use of intracanal posts in endodontically treated teeth improves the retention of an eventual restoration. In the past, alpha/ omega shaped orthodontic wires [14] stainless steel prefabricated posts, and natural teeth from a tooth bank have been used as posts in primary teeth [15,16].

Prefabricated posts are fast, economical, and easy to use, but they do not consider the individual shape of the root canal. Although metal posts are indicated for primary teeth, because of their color metal post do not meet the esthetic requirement and may cause problems during the course of natural exfoliation [17]. Composite post provides acceptable esthetics; however, there is risk of loss of retention owing to polymerization shrinkage in children. Patient needs to be given complete information regarding the

treatment plan preferable in local languages about the diagnosis, nature of treatment, risk involved, prospects of success, prognosis if the procedure is not performed and alternative methods of treatment [18]. In this case we have done pulp therapy followed by placement of composite post and core and final restoration with composite strip crowns.

Conclusion

Reactive localized inflammatory gingival hyperplasia caused by a number of factors thus making it difficult to rule out the exact cause of the growth. In cases where the patients are apprehensive, patient counselling plays an important role and patients need to be assured about the benign condition of the growth and how the disorder can be treated without any serious complications. In conclusion, for treating such lesions early diagnosis is very important followed by management. A complete surgical excision along with its base and elimination of irritating factors seems satisfactory to prevent recurrence. Pulp therapy was followed by post and core for better retension of composite restoration can be a possible treatment outcomes in such cases with a regular follow-up.

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