CASE REPORT

Gingivitis artefacta minor secondary to poor endodontic treatment of a primary molar – A case report

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Abstract

The aim of this case report is to highlight poor endodontic treatment and persistent periradicular periodontitis as a possible etiology of gingivitis artefacta minor. Self-inflicted gingival lesion can be defined as an intentional self-abrasion of the gingiva, in which injuries are caused by the patient’s own fingernail. This disorder is the most commonly found in younger age groups. It has both major and minor forms. Gingivitis artefacta minor is the milder, localized form which is usually due to an underlying local irritant or aggressive tooth brushing habits. Gingivitis artefacta major designate a more aggressive form which is linked to psychological disorders. The case report described here discusses gingivitis artefacta minor, an oral presentation of self-injurious behavior in an otherwise healthy 10-year-old girl, which developed as a consequence of poor endodontic treatment to a primary molar tooth. Prompt treatment of the case which included extraction of the offended tooth resulted in cessation of the destructive habit and healing of the periodontal breakdown. This case report describes the possibility to treat gingivitis artefacta minor and maintain the gingival and periodontal health of a patient with a destructive habit, once the underlying cause is disclosed and promptly managed. However, careful monitoring is of paramount importance and is recommended to prevent possible complications. Although habitual fingernail scratching is a common habit among children, emphasis on the necessity of a comprehensive history to rule out any possible systemic contribution is highly crucial to reach an accurate diagnosis and plan a successful treatment accordingly.

Keywords: Gingival recession, self-mutilation, self-injurious behavior

Introduction

Self-injurious behavior (SIB) may be defined as “that which results in the infliction of physical damage and, perhaps, pain upon oneself.”[1]

An injury is considered to be self-inflicted if it embraces the criteria of being socially unacceptable, repetitive, and result in mild or moderate tissue damage.[2]

SIB is sometimes referred to as factitious behavior, self-mutilation, and masochistic habits.

Self-inflicted dermatitis may be found extra orally on the scalp, face, or limbs. The behavior here is more commonly seen in young children suffering from genetic disorders such as Lesch–Nyhan syndrome, Cornelia de Lange, and Gilles de la Tourette syndrome.[3,4]

Oral presentations include ulceration and laceration of the tongue as a result biting and cigarette burns[5] and scratching of the gingiva resulting in recession (gingivitis artefacta) associated with bone loss.[6] In severe cases, this leads to autoextraction.[7,8]

The recent classification of non-plaque-induced gingival disease includes traumatic gingival injuries which are further classified into either thermal injuries, chemical or physical injuries.[10] Physical injuries to the gingiva comprise accidental, iatrogenic injuries.[7]

Self-inflicted gingival lesion can be defined as an intentional self-abrasion of the gingival, in which injuries are caused by the patient’s own fingernail. This disorder is most commonly found in younger age groups. It has both major and minor forms.[11]

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a more aggressive form which is linked to psychological disorders.[12]

Another classification of factitious gingivitis was suggested by Stewart and Kernohan; their classification is based on the underlying cause of the self-inflicted lesion; Type A where an underlying local irritant exists such as localized gingival lesion or infection. In Type B, the self-inflicted lesion is a result of an established poor oral habit such as nail biting or sucking on objects such as pens, pencils, or pacifiers. Type C comprises a more complex or undefined underlying cause which can be attributed to psychiatric disorders.[12]

Case Report

A healthy 10-year-old girl was brought to the pediatric dental clinics of the King Khalid University complaining of severe tooth sensitivity to cold related to her upper left primary molar. Her dental history revealed recent endodontic treatment to the same tooth in a private clinic. Her mother noticed she developed nail scratching of the gum adjacent to the treated molar a few days following their last dental visit which was 10 days back. The mother described her daughter new habit as vigorous and repetitive. Intraoral examination discloses gingival recession and bone loss on the buccal aspect of tooth 65 in an otherwise healthy mouth.

Socioeconomic status revealed that parents were from middle-class socioeconomic background leading an average contented life.

The child was relaxed and cooperative during her dental examination.

Periodontal evaluation

Periodontal evaluation revealed a healthy oral cavity with good oral hygiene. A localized Miller’s Class II gingival recession was present on the buccal surface of tooth 65. The clinical attachment loss was found to be 8 mm related to distobuccal root and 4 mm on the mesiobuccal root [Figure 1].

The gingiva in relation to tooth 65 appeared red and edematous. Plaque deposits were minimal.

Radiographic interpretation

A standard periapical radiograph was taken to tooth 65 [Figure 2]. It revealed that tooth 65 was pulpectomized with poor obturation; the obturating material in the palatal root was not well packed, short and with big voids present, while both mesiobuccal and distobuccal canals were not obturated at all.

Periradicular radiolucency and buccal bone loss related to both buccal roots was noted and especially to the distobuccal root.

A diagnosis of gingivitis artefacta minor as result of local irritant “periradicular periodontitis” was made.

After thorough clinical and radiographic examination and it was decided that extraction (of both teeth 64 and 65) and close patient monitoring would be the best treatment to be undertaken. The child’s mother preferred to extract only tooth 64 and asked to postpone tooth 65 extraction to the week after.

1 week later, during the recall appointment, mother declared that nail scratching habit was still expressed by her child. The tooth presented with increasing damage to the tooth supporting structures with clinically obvious furcation involvement with successor erupting in between. Calculus deposits in the distobuccal root [Figure 3].

The offending tooth was then extracted on the same appointment after taking mother informed consent [Figure 4].
Mother was asked to monitor her child closely for nail scratching habit cessation and recalled a week later.

The mother reported later that her daughter had stopped the nail scratching habit immediately following extraction of the offended tooth [Figure 5]. Intraoral clinical examination 3 weeks later revealed excellent periodontal healing and improvement of the lesion.

Discussion

Self-inflicted gingival lesion represents a challenge for the dentist in terms of diagnosis and definitive treatment. Diagnosis should only be made after taking thorough medical history to rule out any associated psychological disorders,[4] infectious diseases, congenital malformations, and genetic syndromes. Dental history would be helpful in determining any possible local dental cause. Many factors should be taken into account before deciding on the ideal treatment protocol to address when confronting gingivitis artefacta minor including; a detailed case history including oral hygiene practices and habits describing the intensity, duration and frequency of the habit, repeated history of similar lesions, and present emotional status of the patient and parents.[13]

Masochistic oral injuries can be premeditated or accidental or can result from an uncommon habit. These lesions usually result from an external foreign object or a patient’s own fingernail that habitually causes stripping of the gingival tissue in a specific area.[5]

Oral self-mutilation varies from simple gingival ulcerations resulting from fingernail scratching to extremely serious injuries.[14-18]

In this case, the main etiology behind the development of the vigorous fingernail scratching habit that led to severe gingival recession and bone loss was improper endodontic treatment performed to the adjacent primary molar “tooth 65.”

Despite the fact that there are no standard preventive protocols to avoid or treat orofacial self-inflicted lesions, the treatment plan is tailored according to the special circumstances of the individual case.[18]

In this case report, the child’s noxious behavior had stopped completely following removal of the local irritant “extraction of tooth 65,” excluding any underlying psychological disturbance.

Improvement of the periodontal health in the recall appointments highlighted the cessation of the destructive nail scratching behavior.

Conclusion

Although habitual fingernail scratching is a common habit among children, emphasis on the necessity of a comprehensive history to rule out any possible systemic contribution is highly crucial to reach an accurate diagnosis and plan a successful treatment accordingly.

Clinical Significance

This case report describes the possibility to treat gingivitis artefacta minor and maintain the gingival and periodontal health of a patient with a destructive habit once the underlying cause is disclosed and promptly managed.

Careful monitoring is of paramount importance and is recommended to prevent possible complications.

Approval

Informed written consent and approval was obtained from the patient’s mother to obtain pictures. A full explanation was offered to the child’s mother that the child’s case and pictures would not in any way identify the child.

References