Case Report

Gingival Fenestrations Due to Poor Oral Hygiene in Children and Adolescents: Report of Two Cases

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Abstract
Gingival fenestrations are an opening through unattached oral keratinized tissue. Gingival fenestrations have rarely been reported in the literature. However, these lesions may be more common than has been reported; lack of symptoms may inhibit patient awareness. The etiology of these lesions are clearly unknown.

In this article, two cases of gingival fenestration due to poor oral hygiene in adolescents evaluated. The clinical features and likely healing results of the lesion are discussed. We claimed they are observed in thin gingiva with usually bacterial plaque and sub gingival calculus deposits on root and enamel surfaces in suprabony periodontal pockets.

INTRODUCTION

Periodontal disease is an inflammatory disease of the gingival that spreads into periodontal ligament and alveolar bone causing the destruction of the collagen fibers that attach the tooth to the bone and the resorption of the supporting bone. It is an inflammatory process initiated by bacterial plaque around the teeth, which may progress with deepening of the gingival sulcus to form a “pocket” that harbors the bacteria and metabolic debris. If periodontal disease is untreated, teeth can become loose and ultimately lost [1]. Early-onset periodontal disease is found in approximately 1 % of the adolescent population [2,3]. In children and adolescent the most common conditions are mild gingivitis, with gingival recession and painful, hemorrhagic papillae and sometimes gingival enlargement [1].

Fenestration is a term derived from the Latin word, fenestra, meaning window. It has been used frequently in the periodontal literature to describe areas in the alveolar process devoid of bone, creating a window exposing the root surface [4].

Gingival fenestration usually occurs on the facial and labial of the anterior unattached keratinized gingival tissue in maxillary and mandible [4-6].

Although, reports on the relationship between gingival fenestration and poor oral hygiene are very few, the influence of different factors (such as; anatomic factors and orthodontic therapy) on developing gingival fenestration has been the subject of much discussion in the literature [4,5-8].

In present report, two cases of gingival fenestration due to poor oral hygiene in adolescents described.

CASE REPORTS

In December 2014, 13-year-old boy and in April 2016, 14-year-old boy came to our Periodontology Department for the treatment of periodontal problem. All oral findings in our two patients are set forth in Table (1). Hygiene index (HI) of Lindhe was used to determine oral hygiene of the patients and HI was found 82 % and 75 % (for first and second patients, respectively). Then gingival bleeding index (GBI) of Ainamo and Bay was used and GBI was found 28 % and 40 % (first and second patients, respectively).

Our two cases were the 13 and 14-year-old boy with characteristics of gingival fenestration. The gingival fenestrations occurred on the facial surfaces of the anterior unattached keratinized gingival in the maxilla. In the first case, gingival fenestration was in the facial of maxillary right canine tooth (Figure 1). A probe inserted through the sulcus, exciting through the gingival fenestration (Figure 2). In the second case, gingival fenestration was large on the gingival enlargement (Figure 3). Pseudo pocket was measured as 6.2 mm in facial of maxillary left central incisor. In the both cases, gingival fenestration were eliminated in the course of treatment.
DISCUSSION

The gingival fenestration appears to occur infrequently but is probably more common than realized, due to a limited time span of existence and possible lack of patient awareness [4]. Also, our patients were not aware.

The enlargement gingiva becomes more freely movable by forces such as lip pressure, tooth brushing, or the force of food during mastication. The movement of the gingival tissue, combined with a sulcular irritant in the form of subgingival calculus and plaque, can create a window in the gingiva by means of combined mechanical and chemical destruction of tissue, producing a gingival fenestration [4-8,11-13]. In the present cases, keratinized gingiva was associated with subgingival plaque and calculus. There were pseudo periodontal pockets in facial of teeth with gingival fenestration.

The prevention of periodontal breakdown in young patients is mostly based on education of child and of his family. Parents should be informed about the importance of oral health for children, and should be taught that the main symptom of periodontal disease is gingival bleeding. Gingival bleeding is the most apparent feature of gingival inflammation and become positive correlation with the accumulation of plaque and calculus.
Plaque and calculus deposits which are the most important pathogenic factors of periodontopathy should be removed either with ultrasound or with hand instruments. If there are gingival pockets, scaling or root planning should be performed to remove calculus. These procedures are basic elements of periodontal treatment. In addition to gingival fenestration can be eliminated with routine surgical pocket elimination [1,3,14]. The child should learn how to brush his teeth correctly, which should be carried out at least twice a day, and how to use dental floss and sometimes chlorhexidine digluconate 0.2 % [1,3]. A dental visit should be made at least four times a year. In the present cases, the only therapy that were performed were careful removal of subgingival deposits, and brushing instructions in first visit. Then, fenestration was eliminated by surgical treatment.

In conclusion, this disease is very important but a little attention is given. Gingival fenestration can be related to poor oral hygiene. To maintain periodontal health and to correct the esthetic, this lesion should be corrected.

REFERENCES