



Management of Telangiectatic Granuloma Associated With Orthodontic Treatment: A Case Report

Aparna Srivastava¹, K.K.Chaubey², Ashima Agarwal¹, Saurabh Kumar¹

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ABSTRACT: Telangiectatic granuloma is one of the inflammatory hyperplasia seen in oral cavity; it has got particular significance because of its unexpected clinical course. It arises in response to various stimuli such as low grade irritation, traumatic injury or hormonal factors. It predominantly occurs in second decade of life in young females, possibly because of vascular effects of female hormones. The gingival overgrowth was surgically excised with the help of laser and histopathological examinations was done for accomplishment of definitive diagnosis and to rule out various neoplastic possibilities as the lesion resembled a neoplasm. Although telangiectatic granuloma is a non-neoplastic growth in oral cavity; proper diagnosis, prevention, and management is very important.

Keywords: Telangiectatic Granuloma; Inflammatory Hyperplasia; Gingival Overgrowth

I. CASE REPORT

A 14 year female patient, was referred to the Department of Periodontics with a chief complaint of growth on upper lip since last five months. The patient was apparently all right five months back, when she noticed a small growth in the upper lip region. The growth was gradual in onset, slowly progressing and with time had

increased to present day size. She also complained of moderate pain and bleeding from same region since 2 months and had discomfort particularly during eating.

The patient was undergoing orthodontic treatment due to irregularly placed upper front teeth from since last one and half years. She had undergone scaling and root planing one and half years back.

No relevant medical history was given by the patient. There were no contributory family and habit history. Periodontal examination revealed good oral hygiene with minimal plaque and calculus deposits.

On extraoral examination, the face appeared bilaterally symmetrical, with competent lips and the lymph nodes were not palpable. Intraoral examination revealed a 10 mm x 6 mm roughly ovoid mucousal growth in the upper lip side. The growth was reddish pink, firm, well defined, non-pedunculated, non-pulsating, smooth surfaced and associated with bleeding (**Figure 1**). On the basis of the history and clinical findings a provisional diagnosis of irritational fibroma was given.



Figure 1: Preoperative view

Surgical excision of the lesion was done under local anaesthesia with the help of laser (**Figure 2**) and the specimen was taken for histopathological examination. Histopathological examination revealed a soft tissue fragment presenting keratinised stratified squamous

epithelium overlying fibrocellular connective tissue stroma. Connective tissue stroma consists of numerous proliferating endothelial lined blood capillaries along with dense inflammatory cell infiltrate. These characteristics confirmed the diagnosis of telangiectatic granuloma (**Figure 3**).



Figure 2 : Post-operative view

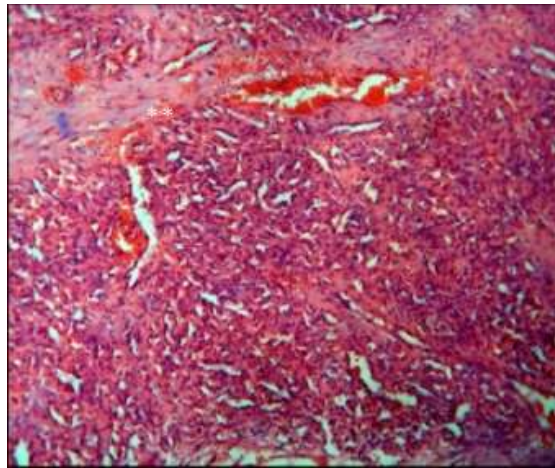


Figure 3 : Histological view

The patient was kept on periodontal maintenance therapy and proper brushing technique

and oral hygiene instructions were re-instated. There was no recurrence of the lesion seen on 1 year recall post-operatively. **(Figure 4)**

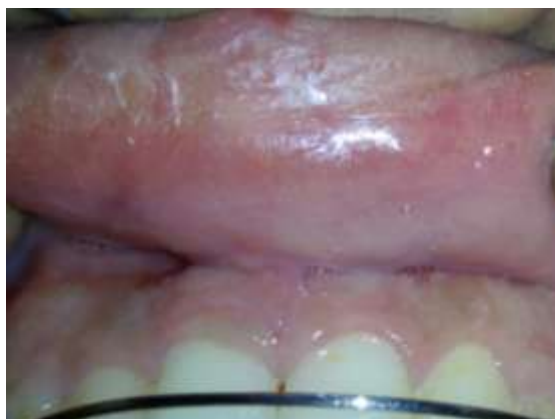


Figure 4 : Post – operative view after 1 year

II. DISCUSSION

Esthetics are important in people's lives, and facial appearance has a profound influence on personal attractiveness and self-esteem because it affects health and reverberates in social, affective,

and professional relationships. There is an increasingly tendency nowadays for adult patients to seek orthodontic treatment, especially those needing oral rehabilitation (1).

The main goal of this treatment is to improve dental occlusion and make teeth in proper



alignment, which ultimately results in a good functioning of dentition (2). Along with the benefits of orthodontic procedures, it has many complications which are faced by the patients undergoing treatment. Few studies explore such issues as pain, food accumulation under brackets and discomfort that may occur during treatment (3).

It is reported that 95% of the orthodontic patients experience varying degree of pain during orthodontic treatment (4). Throughout orthodontic treatment, both intra-oral and extra-oral tissues are at threat of injury (5). Arch wires, brackets, bands and long unsupported stretches of wire resting against the lips can also lead to ulcerations (6). Excessive muscular activities of the cheek or tongue may also act as triggers for this (7).

Ulcerations, pain, and discomfort are frequent side effects, which result from irritation caused mainly by fixed orthodontic appliances (6,8,9). Although painful and unpleasant, lesions heal quickly because of the fast metabolism of oral mucosa in young and healthy orthodontic patients (10).

Orthodontic appliances may weaken plaque removal, proper oral hygiene, and overall affect the dental health (11). Gingivitis may develop in patients who do not institute proper oral hygiene measures (12). Patients often exhibit gingival hypertrophy, bleeding, increased plaque accumulation, and calculus formation during orthodontic treatment (13). Thus, oral hygiene measures are recommended because bands, brackets, ligature wires, and elastics encourage the accumulation of microbial flora and food residues. In time, the plaque accumulation around orthodontic appliances may cause periodontitis and dental caries (14).

'Telangiectatic granuloma' term was given in 1899 by Sabrazer and Laubie. It is a common reactive neof ormation of the oral cavity, which is composed of granulation tissue and develops in response to local irritation or trauma (15).

Telangiectatic granuloma is a reactive tumour like lesion that arises in response to various stimuli such as chronic low grade local irritation, traumatic injury, hormonal factors or certain kinds of medication. It is more prominent in the second and the third trimester of pregnancy because of the alteration of the hormones that evokes the activity of proinflammatory cytokines. The lips, tongue and buccal mucosa are the next most common sites. Lesions are slightly more common on the maxillary gingiva than the mandibular gingiva; anterior areas are more frequently affected than posterior areas.¹⁶ In present case, local factors such as orthodontic

brackets and hormonal alteration were the responsible factors for the the lesion.

Clinically, it is a smooth or lobulated exophytic lesion manifesting as small, red erythematous papules on a pedunculated or sometimes sessile base, which is usually hemorrhagic and compressible and may develop as dumb-bell shaped masses . The size varies in diameter from a few millimeters to several centimeters. Rarely the lesion exceeds 2.5 cm in size and it usually reaches its full size within weeks or months, remaining indefinitely thereafter. Clinical development of lesion is slow, asymptomatic and painless but it may grow rapidly. The surface is characteristically ulcerated and friable which may be covered by a yellow, fibrinous membrane and its color ranges from pink to red to purple, depending on the age of the lesion (16).

Management of patients with such lesions involves conventional surgery along with the control of local factors (17). Other protocols include the use of flash lamp dye laser, cryosurgery, injection of ethanol, sodium tetradecyl sulphate sclerotherapy, intralesional corticosteroid injection and lasers(18). Lasers offer advantages of providing a sterile field, haemostasis, good tissue management with less time involved for the procedure and reduced postoperative pain. Reduced postoperative discomfort, oedema, scarring and shrinkage have all been associated with laser excision (19). Since telangiectatic granuloma is highly vascular, the use of laser is advantageous as laser energy ablation seals the blood vessels, thus, minimising the bleeding potential, leading to excellent haemostasis. Thus minimally invasive laser treatment was opted. Laser not only provides a better incision performance, allowing good modelling of the tissues but also seals the lymphatics and nerve endings. Thus, reducing the postoperative pain and swelling. The healing was uneventful and satisfactory with no clinical evidence of charring or any thermal damage to the lateral tissues (20). The recurrence rate of telangiectatic granuloma is 15%, which is attributed to incomplete excision of the lesion and failure to remove the etiologic factors (21). Frumkin et al. suggested a conservative non-surgical protocol to prevent recurrence, which includes removal of irritating factors with debridement under local anaesthesia along with adjunctive measures, such as chlorhexidine mouthwash and strict oral hygiene instructions. In present case there was no recurrence till 1 year was observed.



III. CONCLUSION

Although telangiectatic granuloma is a non-neoplastic growth in oral cavity; proper diagnosis, prevention, and management is very important. Surgical excision is the treatment of choice. Recurrence is not infrequent; so in such cases follow-up and re-excision may be necessary.

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