An interesting case of strawberry shaped gingival overgrowth in a patient with deep anxiety and severe trepidation to medical treatment

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Quick Response Code

doi: 10.5866/2015.7.10231

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Article Info:

Received: July 10, 2015

Review Completed: August 11, 2015

Accepted: September 13, 2015

Available Online: July, 2015 (www.nacd.in)

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ABSTRACT:

Peripheral ossifying fibroma though not a new entity, is an issue of concern primarily if it has an impact on the esthetic appearance and phonetics. A 55 year old female patient presented to the department of Periodontics with a similar lesion but, of a larger size and duration of 15 years. Excision of the lesion was done with scalpel. The key features of the case were the apprehensive nature of the patient and the post operative complication of de novo hypertension, which was successfully managed. This case mainly stands as an example of the role of a clinician in gaining patient's confidence which is of prime importance in the successful outcome of the treatment. It also emphasizes on the post operative monitoring of the patient's status for preventing further complications.

Key words: Gingival overgrowth, Anxiety, Esthetics, Treatment outcome.

INTRODUCTION

The bacterial role with the host inflammatory response in the etiology of gingival enlargement has been established and needs no further validation. Though established in the scientific community, it has not been percolated in the general population and more specifically in the illiterate and

economically backward rural population in countries like India. The lack of awareness usually leads to many misconceptions and taboos related to the basic, simple and pain free treatment options of periodontal diseases. Other important factors for avoidance of dental treatments are fear of pain, cost and lack of dental professionals. Treatments that

may have some discomfort like impactions, post surgical symptoms etc are generalized to other primary dental treatments and these are then passed on by a few patients to the society in an exponential manner.

Here we present a case of gingival overgrowth in a 55 year old poorly motivated, severely apprehensive female patient with a history as long as fifteen years.

Case Report

A 55 year old female patient reported to the Department of Periodontics and Implantology, Kamineni Institute of Dental Sciences, Narketpally with the complaint of swelling in upper front tooth region since fifteen years. On eliciting the history, patient was apparently asymptomatic fifteen years ago when she noticed a small nodule like swelling in the region of maxillary anteriors on the facial aspect, which gradually increased and attained the present size and there was no contributing medical history. Patient was severely apprehensive and the fear of treatment prevented her from attending any clinic since fifteen years. Social pressure and unaesthetic appearance had forced the patient to report to the hospital with the present complaint.

Accordingly, the patient was subjected for psychological assessment by a psychiatrist due to her severe anxious nature to assess the severity of symptoms of anxiety using Hamilton Anxiety Rating Scale (HAM-A) where a score of 43 was obtained grading her as severely anxious.¹ Psychological management was needed so as to prevent any untoward incident during the peri-operative period. After professional counseling, patient was put on alprazolam 0.5mg orally 12 hrs and another dose of 0.5mg 1hour before the procedure.

Extra oral examination revealed incompetent lips due to the lesion with no palpable lymph nodes. Intraoral examination showed a well defined ovoid, erythematous, pedunculated solitary lesion of approximately 30x26x12 mm in dimension in the maxillary anterior region between #8 and #9 on facial aspect (Figure 1). Lesion extended supero-inferiorly 5mm below the floor of the nose and

pressing the upper margin of the lower lip and displacing the central incisors mesiodistally. On palpation the lesion was firm, non-tender and mobile with lobulated surface. The displaced central incisors showed grade II mobility.

Maxillary occlusal radiograph revealed mixed radiolucent radiopaque mass with an ill defined periphery suggestive of calcified mass within the soft tissue mass in interdental area of #8 and #9. Displacement of the crowns i.r.t #8, #9 in distal direction and roots in mesial direction is observed (Figure 2). Complete Haemogram revealed a normal blood picture except for increased erythrocyte sedimentation rate (40 mm). Provisional diagnosis of peripheral ossifying fibroma with a differential diagnosis of pyogenic granuloma, peripheral giant cell granuloma, peripheral odontogenic fibroma was made.

Management

After thorough scaling and pre surgical evaluation the patient was put on prophylactic regimen consisting of Amoxicillin-500 mg thrice daily and was recalled after a day. Surgical excision of the lesion was planned taking into consideration the size and extent of the lesion. After adequate local anaesthesia the lesion was carefully excised using a scalpel and the surrounding involved bone of about 15x5mm was removed using rotary instruments (Figure 3 and 4) later the specimen was sent for biopsy (Figure 5). Bleeding was controlled at 2 bleeding points using ball electrode (electrocautery). The two displaced central incisors were extracted. Excision of the lesion involved a substantial amount of labial gingiva for which a modified partial thickness triangular flap was reflected on both the sides and superiorly up to mucogingival junction (Figure 6). This design allowed the flap to be displaced mesially so as to cover the denuded labial surface and achieve complete wound closure. Interrupted sutures (3-0, Silk) were given for stabilization of the flap and control of hemostasis (Figure 7), while periodontal dressing was given to assist in patient comfort and uneventful healing.

Figure 1: Intra-oral view showing the initial presentation of an erythematous soft-tissue lesion in maxillary anterior region.

Figure 2: Maxillary occlusal radiograph depicting mixed radiolucent radio-opaque lesion interdentally between #8 and #9.

Figure 3: Soft tissue excision with scalpel

Figure 4: Hard tissue excision using straight fissure bur

Figure 5: Excised hard (A) and soft tissue (B)

Figure 6: Operated site after excision showing the involved areas with displaced mucoperiosteal flap.

Figure 7: Suturing of mesially displaced double flap ensuring primary healing

Figure 8: (A) Histologic section of tissue lined by stratified squamous epithelium and subepithelial inflammatory infiltration (H & E; 10X). (B) Tissue showing bone like calcifications (H & E; 40X).

Figure 9: Two weeks post operative view

Figure 10: One month post operative view with prosthesis

Figure 11: Six months post operative view

JNC 7: algorithm for treatment of hypertension

*BP goal <140/90 or <130/80 mmHg for those with diabetes or chronic kidney disease

Chobanian *et al.* JAMA 2003;289:2560–72

The Patient was advised to continue the antibiotics along with Aceclofenac - paracetamol twice a day for another 3 days.

Patient was admitted to medical ward for 24 hr observation based on the postoperative elevated Blood Pressure (BP). Her Pre operative BP was 124/80 but precariously post op BP raised to 148/90mm of Hg which was treated by telmisartan (40 mg)-hydrochlorothiazide (12.5 mg) once a day. The condition was diagnosed as *de novo* hypertension. The next 12 hr BP readings showed high fluctuations even as high as 240/120mm of Hg, which was treated by administering nitroglycerine drip (added in normal saline 4.5 drops/ml 5 hourly) and telmisartan (40 mg)-amlodipine (5 mg) once a day. After the treatment, the BP came down to normal limits and was later maintained by oral anti hypertensive drug, nifedipine-20 mg once a day. The patient was then discharged after 24 hrs observation with normal BP status and was stressed on life style modification.

Histopathology

Light microscopic examination with H and E staining of the sections revealed parakeratinized stratified squamous epithelium of variable thickness and fibro cellular connective tissue stroma. The connective tissue stroma showed irregularly shaped cementum and bone like calcifications suggestive of cemento ossifying fibroma (Figure 8).

Clinical outcome

Healing was uneventful when examined after 3 weeks except for a small inflammatory area and a bony spicule (Figure 9). 1 and 6 months post operative views with prosthesis in place (Figures 10 and 11) and improved facial esthetics. Subsequent examination revealed reduced Hamilton score (18) and stable blood pressure.

DISCUSSION

Reactive hyperplasia comprises a group of fibrous connective tissue lesions that commonly occur in the oral mucosa as a result of microbial irritation.^{2, 3} Peripheral ossifying fibroma (POF) is one such lesion which is relatively uncommon.⁴ POF accounts for 3% of all oral tumors and for 9.6% of all gingival lesions.^{5, 6}

POF was first reported by the Shepherd in 1844 as alveolar exostosis. Eversol and Rovin in 1972, later coined the term peripheral ossifying fibroma.⁷ It presents as a painless pedunculated or sessile mass on gingiva or alveolar mucosa measuring usually not exceeding 3 cm. Females are more commonly affected and anterior maxilla is the most prevalent location.⁸

Histologically, the POF consists of a fibro cellular component with focal deposits of bone, some cementum as well as irregular amounts of decalcification. A chronic inflammatory infiltrate is commonly seen around the periphery of the lesion.⁹

Prognosis is relatively good but recurrence is seen in 16-20% of cases. The reason for recurrence includes (a) incomplete removal of lesion, (b) failure to eliminate local irritants and (c) difficulty in access during surgical manipulation.¹⁰

Though the etiopathogenesis of POF is uncertain, origin from cells of periodontal ligament has been suggested. The reasons for considering periodontal ligament origin include excessive occurrence of POF in the gingival interdental papilla, the proximity of the gingiva to periodontal ligament, the presence of oxytalan fibers within the mineralized matrix of lesion and the fibro-cellular response in periodontal ligament.¹¹ *de novo* hypertension is newly diagnosed hypertension which was medically managed in accordance with the JNC-7 guidelines.¹²

As noted in the present case report, the psychological profile of a patient is very important to be considered before any surgical procedure to prevent any untoward events peri and post operatively and as interdepartmental approach is required for managing such cases it is better to operate them in hospital set up than in clinics.

POF is a slowly progressing lesion, the growth of which is generally limited. Many cases will progress for long periods before patients seek treatment because of the lack of symptoms associated with the lesion. A slowly growing pink soft tissue nodule in the anterior maxilla should raise suspicion of a POF.¹³

CONCLUSION

Proper diagnosis with continuous vigilance, thorough examination and interdisciplinary collaboration in all phases of treatment whenever required results in successful clinical outcome of the case. Such poorly motivated successfully managed case can inculcate and reinforce positive attitude towards dental treatment in other poorly motivated patients.

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