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Research Article

RECURRENT PUBERTY ASSOCIATED GINGIVAL ENLARGEMENT SUPER ADDED WITH INFLAMMATION: A CASE REPORT

[1]Dr. Sneha Singh, [2]Dr.Abu Nafe, [3]Dr. Anamika, [4]Dr. Amit Sinha, [5]Dr. Abid Hussain

[1, 2,3,4,5] Madhubani Medical College

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ABSTRACT

Gingival enlargement also synonyms with the terms gingival hyperplasia or gingival hypertrophy, can be defined as an abnormal growth of gingival tissue. The present case report describes a case of a longstanding gingival enlargement in a young male involving lower interior region. Surgical therapy was carried out to provide a good aesthetic outcome. No recurrence was reported at the end of 10thmonth recall.

INTRODUCTION

One of the common forms of gingival disease is gingival enlargement and can be caused by gingival inflammation, fibrous over growth or a combination of two[1]. It can be caused due to plaque and calculus, systemic disturbances, hormonal changes and medicines specially cyclosporine, nifedipine, phenytoin sodium. Under the broad category of dental plaque induced gingival diseases that are modified by systemic factors, those associated with the endocrine system are classified as puberty and pregnancy associated gingivitis[2]. Sex steroid hormones directly and indirectly exert an influences on cellular proliferation, differentiation and growth in target tissues. Estrogen can influence the cytodifferentiation of stratified squamous epithelium as well as synthesis of fibrous collagen. Progesterone has also shown to stimulate the production of the inflammatory mediator, prostaglandin E2 and enhance the accumulation of polymorphonuclear leukocyte in the gingival sulcus, It increases inflammation during puberty[3]. The size of gingival enlargement greatly exceeds that usually seen in association with comparable local factors. Marginal and interdental gingiva are characterized by prominent bulbous interproximal papilla often only the facial gingiva are involved and the lingual surfaces are relatively unaltered[4].

Case Report

A male patient aged 17 years was reported in the department of periodontics at Mithilla minority dental collage and hospital with a chief complaint of bleeding and swollen gums since 6 months wrt mandibular anterior region. The patient also reported with the history of discomfort during brushing due to malocclusion of teeth. So, he could not brush properly. Patient had no medical history. Dental history revealed multiple supra and subgingival scaling with external bevel gingivectomy 3 months back. Intraoral examination revealed –Poor oral hygiene, diffuse gingival enlargement with ballowning of interdental papilla of the anterior region of mandibular arch was seen, gingiva appeared reddish pink in colour and bleeding on probing occurred with slightest probocation due to accumulation of marginal plaque and calculus. (Figure-1)

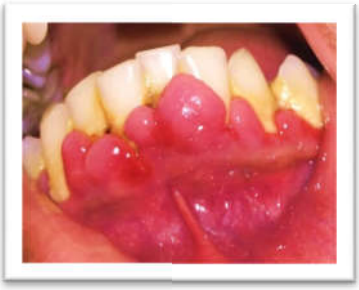

Figure-1 Pre - operative pic

Corresponding author:* **Dr. Sneha Singh
Mithilla Minority Dental Collage and Hospital, Darbhanga, Bihar

IOPA did not show any abnormalities and blood reports were also normal. Oral prophylaxis including thorough removal of supra and subgingival plaque and calculus was done. Oral hygiene instructions were given to the patient and Philips sonicare standard ultrasonic brush was prescribed to the patient and recalled after 21 days. After 21 days there was a gradual reduction in the size of enlargement. (Figure-2)

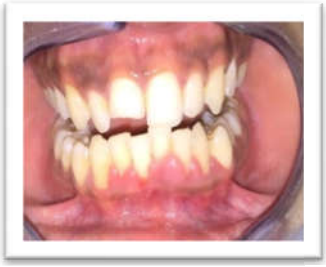

Figure-2 Post-operative pic after 21 days

However due to persistence of gingival overgrowth, external bevel gingivectomy was performed and excised tissue was sent for histopathological examination.

RESULT

The histopathology revealed hyperplastic epithelium with the prominence of blood vessels. Chronic inflammatory cells were evident around the blood vessels. Collagen fibres were irregularly arranged and densely fibrous in nature. (Figure-3)

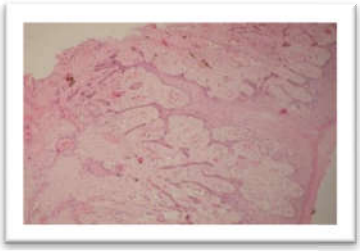

Figure-3 Post-operative pic

There was no evidence of enlargement and oral hygiene was also good after 10 months of surgery. (Figure- 4)

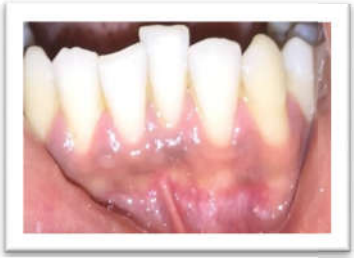

Figure-4 Histopathological report

DISCUSSION

Puberty is the period of transition towards maturation and adulthood. At this time, there is marked increase in Testosterone level in males and Estrogen and progesterone level in females[5]. An increase in gingival inflammation was correlated with increased progesterone and estrogen levels without a significant increase in mean plaque index[6]. Clinical appreances may be due to increased amount of P. Intermedia and Capnocytophagia species that are found in case of puberty associated gingival enlargement. Puberty associated enlargement can be superadded with inflammation due to deposition of local factors[7]. Gingival overgrowth varies from mild enlargement of isolated interdental papillae to segmental or uniform and marked enlargement affecting 1 or both of the jaws with a diverse etiopathogenesis[8]. Here, we report a case of puberty associated gingival enlargement superadded with inflammation. In this case, patient had history of recurrence of enlargement due to poor oral hygiene. Patient also had malocclusion of teeth, so, he could not brush properly. He was prescribed ultrasonic brush, the filament of the brush head vibrating at ultrasonic frequency and ionic mode where an electrical charge is applied to the tooth surface and it disrupts the biofilm[9]. The most acceptable surgical approaches for the treatment of gingival enlargements is gingivectomy or the flap technique. Patient education, motivation and compliance during and after dental treatment are most important factors[10].

CONCLUSION

For the success of treatment oral hygiene motivation should be started at the initial stages of treatment itself. Etiology of any pathology should be eradicated simultaneously with the treatment[11]. This case report highlights how proper taking a proper case history and clinical examination are helpful in differentiating amongst different enlargements and can help in proper management of such cases.

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