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LOCALIZED INFLAMMATORY GINGIVAL HYPERTROPHY - A CASE REPORT

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INTRODUCTION

It has long been known that changes in sex hormones play a significant role in gingivitis, particularly in adolescents. Several studies have demonstrated significant impacts of fluctuating amounts of oestrogen and progesterone on the periodontium, beginning during puberty.[1] Pubertal, menstrual cycle, and pregnancy-related gingival illnesses are grouped under the general heading of dental plaque-induced gingival diseases that are influenced by systemic variables.[2] Puberty-associated gingival enlargement differs from merely gingivitis-associated lesions in terms of the degree of enlargement and its propensity to reoccur in the presence of sparse plaque deposits, indicating a significant impact by the hormonal changes.[1]

CASE REPORT:

A 17 year old female patient reported to the Department of Oral Medicine and Radiology with a complaint of growth in upper right front region of jaw since 1 year which was initially smaller in size and grew to the present size. The growth was sudden in onset and there was no

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pain accompanying the growth. Patient gave history of bleeding on local irritation. This was the second incidence of growth at the same site. Patient provided history of excision at a local hospital 3 years ago but could not provide further details or reports of the same.

Fig. 1 A: Exophytic, pedunculated growth seen in the interdental gingiva of 13,14.

Fig. 1 B: Extension onto the palatal aspect through the col area

Fig. 2: Mild angular bone loss i.r.t 13, 14 with rarefying osteitis i.r.t 13

A 3*3 cm roughly rhomboidal shaped growth was noted in the region of 13 and 14 at the interdental papilla. The mass was exophytic, pedunculated and extended onto the palatal aspect through the col area (Fig. 1A and 1B). It had a smooth surface superiorly. The mass was pinkish- red in colour and non-compressible. Superior aspect appeared erythematous and lower aspect appeared pale pink. Edges were clearly defined and smooth. The consistency of the growth was soft to firm. No tenderness was present on palpation. Bleeding was present on probing. The interdental papilla i.r.t 13, 14 appeared to be inflamed, shiny and there was loss of stippling noted. Plaque accumulation and calculus was observed.

Based on the clinical features a dental diagnosis of localized gingival hyperplasia i.r.t 13, 14 was given with a differential diagnosis of fibrous epulis, peripheral ossifying fibroma, hyperplastic gingival inflammation. An intraoral periapical radiograph was taken to check for any bone loss. Mild angular bone loss i.r.t 13, 14 with rarefying osteitis i.r.t 13 was noted (Fig. 2). Routine blood investigations were advised which revealed that the patient was anemic. The lesion was excised using scalpel and sent for biopsy (Fig. 3 and 4).

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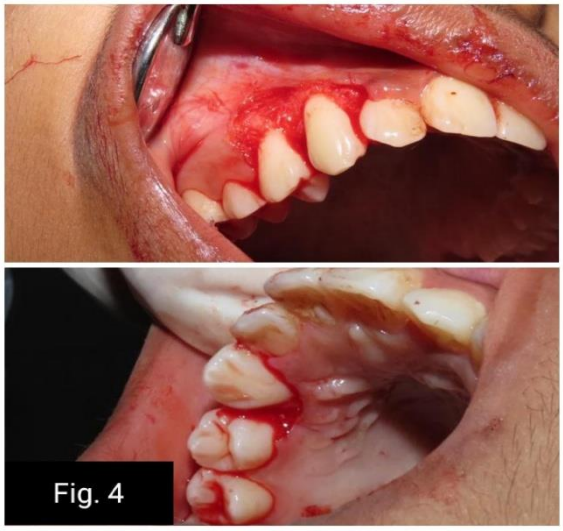
Fig. 3: Excised specimen

Fig. 4: Immediate post-operative picture



Histopathology of the biopsy specimen revealed fibro-epithelial hyperplasia. A diagnosis of puberty-induced gingival enlargement was determined based on the age of onset, clinical features, and histopathological examination. A full mouth deep scaling was done and oral hygiene measures were reinstated to the patient putting emphasis on maintenance and regular follow-ups.

DISCUSSION

Both in boys and girls, inflammatory gingival hypertrophy frequently happens throughout puberty and is associated with poor oral hygiene.[3] Gingival changes in female patients are linked to physiological hormonal changes throughout puberty, pregnancy, and menopause.[1] Estrogen and progesterone production rises at puberty and stays at a reasonably consistent level for the duration of the typical female reproductive phase and several studies have been

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performed supporting this. These steroid hormones can affect fibroblast and keratinocyte cell division, growth, and differentiation in the gingiva. Progesterone and oestrogen both stimulate the synthesis of inflammatory mediators, which in turn alters blood vessels.[4] An extensive initial incidence of gingival hypertrophy that tended to decrease with age was seen in a longitudinal study of 127 children aged 11 to 17 years.[5] Even when local causes persist, the intensity of the gingival reaction lessens as adulthood approaches. However, these influences must be eliminated for a full restoration to normal health.[1] In our case, after excision the patient underwent oral prophylaxis. Patient was advised to undergo regular follow-ups to prevent recurrence. To establish a diagnosis in such cases, a clinician should examine all findings as a whole which includes history of the patient, clinical features, radiographic features, histological exmination and most importantly the age of the patient. Treatment plan can vary from scalpel to laser excision and removal of the local irritant if any.

CONCLUSION:

Gingival growth occurs throughout the sexual maturation stage as a result of the increased sensitivity of the gingival tissues to plaque and hormonal influences on the microbial flora. Patients and parents need to be made aware of the serious impact that sex hormones may have on oral and periodontal tissues. Although the treatment is fairly straight forward, chances of recurrence makes it challenging.

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