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Management of localised gingival overgrowth: An overview from a case report

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Abstract
Gingival overgrowth presents itself in various forms and clinical features. Gingival overgrowth can have localised or generalised presentation. It becomes a reason of primary concern when it appears in area of aesthetics. This case report focuses on the diagnosis and treatment of a male patient who had reported to the department with gingival overgrowth. The patient reported with localised gingival overgrowth involving the mandibular anterior region. The gingival overgrowth was a single well defined overgrowth involving the buccal aspect of mandibular gingiva. Thorough blood investigations and radiographic investigations were carried out. The case report highlights the management of localised gingival overgrowth.

Keywords: gingival overgrowth, localised, inflammatory, surgical excision

Introduction
Gingival overgrowth is a common clinical presentation. The most common reason is the plaque induced gingival inflammation. The inflammation usually starts at the interdental papilla and then later involves the adjacent gingival tissue. The removal of etiologic agent like plaque, usually causes decrease in inflammation resulting in the resolution of the gingival overgrowth. However, gingival overgrowth can have multiple etiologic factors. As a result, sometimes, removal of plaque does not cause resolution of the gingival overgrowth and thus requires surgical intervention. In females, the gingival overgrowth can be influenced during pregnancy and during menstrual cycle by presence of progesterone and oestrogen. An advantage is provided to the bacteria for their growth due to the residency of these hormones in gingival tissue [1].
When the gingival overgrowth reaches a notable size, it can be painful to the patient. Also, in severe cases, the gingival overgrowth can cause difficulty in mastication. In addition to pain, a sizeable gingival overgrowth also interferes with routine oral hygiene procedures which can further cause plaque accumulation.

Case report
A 28 year old male patient reported to the Department of Periodontics and Oral Implantology with the chief complaint of increase in the size of the gingiva in the lower front region of jaw since past 1-2 months. The patient was apparently alright 1-2 months ago when he noticed an increased mass in the lower front region of the jaw. The patient noticed that there was presence of bleeding in the same region. The patient also gave a history of increase in the size of the mass. The patient also reported of having pain while chewing as the gingival overgrowth kept increasing. As the bleeding from the tissues and the pain associated with the region increased, the patient reported to the department for the treatment of the same. The patient did not present with any relevant medical history. The patient reported with the family history of father being diabetic and under medication since past 10 years.

Examination

No abnormalities were detected with the face, lips and the temperomandibular region. Turesky Gillmore-Glickman's modification of Quigley Hein Plaque (1970) index was recorded and gave a score 1.4. Gingival Index by Loe and Silness (1963) was recorded and a gave a score of 1.2 indicating moderate gingivitis. On intra-oral examination, a thick band of subgingigval calculus was observed in the region of mandibular anterior teeth on the left side involving the teeth 32, and 33. The rest of the teeth showed presence of supragingival calculus.

On gingival examination, it was found that the patient had generalised healthy gingiva which was firm and resilient except in the region of 32 and 33. The gingival overgrowth presented as a single well defined ovoid lesion involving the interdental papilla present between mandibular left lateral incisor and mandibular left canine and the marginal gingiva of mandibular left canine [Figure 1]. The gingival overgrowth was reddish pink in colour. The overgrowth was about 10mm x 9mm in dimension [Figure 2 and 3]. The overgrowth was sessile and had a smooth shiny surface. There was presence of bleeding in the area of overgrowth. The overgrowth covered middle third of both the mandibular left lateral incisor and canine. On palpation, the gingival overgrowth had a soft and oedematous consistency.

Investigations

Intraoral periapical radiographs were taken. The radiographs did not show presence of bone loss. Haematological investigations demonstrated blood parameters and blood sugar with normal limits.

After the radiographic and haematological investigations were carried out, full mouth scaling was conducted.

Diagnosis

According to 2017 World Workshop on the Classification of Periodontal and Peri-Implant Disease and Conditions, based on the history presented by the patient, a final diagnosis of " Gingivitis-dental biofilm induced" was given.

Management

Following full mouth scaling and advising 0.2% Chlorhexidine mouthwash, the patient was recalled for follow up. At the follow-up visit, the gingival overgrowth still persisted, hence the patient was scheduled for surgical removal of the gingival overgrowth.

Local anaesthesia of 0.2% lignocaine with 1:80,000 adrenaline was infiltrated. With a 15 No Blade, external bevel gingivectomy was carried out and the gingival overgrowth was removed with a margin of healthy adjacent tissue in the left mandibular region between the lateral incisor and canine. Figure 4 shows the immediate post-operative photograph. The tissue was sent for histological examination[Figure 5]. Post-operative instructions were given and the patient was asked to continue the use of 0.2% Chlorhexidine mouthwash twice a day. The patient was recalled for follow up at 1 week. The 1 week follow up resolution of inflammation and improved gingival contour. The healing was satisfactory. Figure 6 show post-operative photograph at 1 week.

Provisional diagnosis for the gingival overgrowth was given as: Pyogenic granuloma, Peripheral giant cell granuloma and Inflammatory gingival overgrowth. H and E stained tissue section showed parakeratinised stratified squamous epithelium, which was ulcerated at few places. The epithelium also showed arcading at few places. The underlying connective tissue stroma showed blood vessels and chronic inflammatory infiltrate. The overall features were suggestive of inflammatory fibrous hyperplasia.

Discussion

The patient presented with satisfactory oral hygiene except in the area of gingival overgrowth. True gingival overgrowth is a result of both increase in cell number (hyperplasia) and cell size (hypertrophy) when observed histologically. On examination, there was presence of subgingival calculus and plaque, as seen after application of plaque disclosing agent. Thus, poor oral hygiene in the area of gingival overgrowth had a remarkable role in the pathogenesis of the gingival overgrowth. Also, the patient did not present with any medical history, thus ruling out drug induced gingival overgrowth. In the present case report, based on the clinical, haematological and histological, the gingival overgrowth was classified as localised discrete inflammatory overgrowth. Gingival overgrowth can be of multifactorial origin, hence histological examination is of prime importance for accurate diagnosis. Once the diagnosis is established, an appropriate treatment plan can be prepared for the patient.

The treatment of gingival overgrowth is based on the clinical, radiographical and haematological investigations of the patients. The localised gingival overgrowths are usually treated by excision of the gingival overgrowth by internal bevel gingivectomy, external bevel gingivectomy, gingivoplasty using electrocautery, diode laser or CO2 lasers [2]. The localised gingival overgrowth are usually classified as reactive focal overgrowth, since these overgrowths occur as a result of gingival reaction to chronic low grade local irritants like plaque, calculus or other particular irritant [3, 4]. The presence of gingival overgrowth can obstruct normal food excursion thus, causing food debris and plaque accumulation leading to further bone loss and aggravating the disease [5].

Fig 1: Pre-operative photograph

Fig 2: Photograph showing the dimension of the gingival overgrowth

Fig 3: Photograph showing the dimension of the lgingival overgrowth

Fig 4: Immediate post-operative photograph

Fig 5: Excised tissue

Fig 6: Post operative photograph at 1 week

Conclusion

Gingival overgrowth in the anterior region is of chief importance due to its unaestetic appearance. Accurate diagnosis of the lesion is essential for its proper management. Surgical excision of the tissue with adequate management of the oral hygiene can maintain healthy gingival environment and prevent recurrence of the gingival overgrowth. This case report thus highlights the importance of proper diagnosis and treatment planning of localised gingival overgrowth.

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References

1. Nakagawa S, Fujii H, Macicda Y, Okuda K. A longitudinal study from prepuberty to puberty of gingivitis. Correlation between the occurrence of Prevotella intermedia and sex hormones. J Clin Periodontol 1994;21:658-665.
2. Coletta RD, Graner E. Hereditary gingival fibromatosis: a systematic review. Journal of Periodontol 2006;77(5):753-64.
3. Puranik RS, Puranik SR. Localised gingival growths: do they belong to the common spectrum called frog? Aust Dent J. 2011;56(1):109
4. Al-Rawi N. Localised reactive hyperplastic lesions of the gingival: A clinic pathological study of 636 lesions from Iraq. Internet Dent J Sci 2009;7:1.
5. Pandit IK and Pandit N. Non-specific inflammatory gingival enlargement: A case report. J Ind Soc Pedo Prev Denr 2000, 21-3.