Gingival fibroma versus verrucous leukoplakia – A clinical dilemma!!!

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Abstract:
Gingival overgrowths found in the oral cavity are mostly due to reactive hyperplasia and rarely depict neoplastic nature. It is a challenge for the clinician to give final diagnoses of gingival overgrowth. Gingiva is a common site for various benign and malignant lesions. Oral cavity is an ideal niche for the manifestation of various precancerous and cancerous lesions. Fibrous growths present in the oral cavity include a varying group of reactive, precancerous, and cancerous conditions. This report describes a case of a 55-year-old male who clinically presented with a localized fibromatous gingival overgrowth in relation to lower left mandibular canine-premolar region that was diagnosed as a gingival fibroma associated with leukoplakia. On histopathological examination, it was diagnosed as a case of proliferative verrucous leukoplakia. Many a times, clinicians face dilemma while diagnosing an overgrowth as it is difficult to differentiate clinically. Hence, a thorough clinical knowledge and a pathologist’s opinion become mandatory to give final diagnosis to such gingival overgrowths.

Key words:
Gingival enlargement, gingival fibroma, proliferative verrucous leukoplakia

INTRODUCTION

An intraoral soft-tissue overgrowth is pathological when it projects beyond the normal anatomical limits of tissue. Fibrous growths involving oral soft tissues are very common and consist a wide variety of reactive and neoplastic conditions.

Proliferative verrucous leukoplakia (PVL) is a distinct clinical form of oral leukoplakia and a rare potentially malignant oral mucosal disorder with a high rate of progression to oral cancer. PVL occurs in <1% of adults and frequently involves periodontal sites. Initially, PVL grows as a focal hyperkeratosis patch that progressively becomes a wide multifocal disease with gross exophytic nature.

CASE REPORT

A 55-year-old male patient reported to the department of periodontology, with the chief complaint of growth in the lower left front teeth region for past 5–6 months. The patient was absolutely normal 5–6 months back. The growth was painless in nature. The patient did not give any significant medical history. The past dental history of the patient includes extraction of a tooth 1 year back. The patient also gave a history of smoking 4–5 cigarettes per day for 20 years. The patient was not under any medication for chronic illness. On extraoral examination, no abnormalities were detected, and the regional lymph nodes were not enlarged and palpable.

Intraoral examination revealed calculus deposits with generalized stains over teeth. Cervical abrasion was present in relation to 22 and 23 [Figure 1]. Generalized gingival melanosis was present. Homogeneous, nonscrapable grayish-white patch was present on the left buccal mucosa extending from second premolar region till third molar region suggestive of smoker’s palate [Figure 2]. A fibrotic gingival overgrowth was present lingually in relation to 32, 33, 34 which was about 1.2 cm × 1 cm in size, extending from mesial margin of lateral incisor to mesial margin of first premolar [Figure 3]. It was firm in consistency having smooth surface and regular border.

On the basis of chief complaint, the past history, and the clinical features, a provisional diagnosis of gingival fibroma associated with leukoplakia was given.

An intraoral periapical radiograph of the involved site revealed no bony lesion. After phase...
one therapy, excisional biopsy of the lesion was done and excised tissue was sent for histopathological analysis [Figure 4]. The histopathological report revealed irregular surface epithelium with parakeratotic nature showing some areas of keratin plugging with proliferative changes. The underlying connective tissue was fibrous in nature without much inflammatory changes suggestive of PVL [Figure 5].

On the basis of above investigations, a final diagnosis of PVL was made. The patient was motivated to quit smoking habit and reinforced to maintain oral hygiene. Patient is now on periodic follow-up [Figure 6].
**DISCUSSION**

In 1985, Hansen et al.[1,2] defined PVL as a distinct form of leukoplakia characterized by multifocal slow-growing lesions resistant to all forms of treatment, with a high rate of recurrence and a tendency to transform to oral squamous cell carcinoma and verrucous carcinoma. A PVL of gingiva which is a clinically distinctive form of PVL was proposed by some investigators[3] to identify a subset of patients with only gingival involvement. Other oral sites such as buccal mucosa, gingiva, alveolar ridges, and tongue can be affected, but gingiva is one of the most commonly involved sites. PVL has four features such as chronic proliferation, multiple occurrences, refractoriness to treatment, and high rate of malignant transformation.[4]

The etiology of PVL remains still unclear. PVL occurs both in smokers and nonsmokers.[5] Occurrence of PVL is most common in women in their seventh to eighth decade of life. It begins as a simple slow-growing, persistent leukoplakia which later spread and become multifocal. It involves the gingiva frequently. During its development, erythematous and/or verrucous areas can be seen occasionally that may progress to verrucous carcinoma or squamous cell carcinoma.

Increase in size of the gingiva is a common feature of gingival disease. The localized lesions of the oral cavity include irritation fibroma, peripheral ossifying fibroma, squamous papilloma, giant cell fibroma, pyogenic granuloma, and peripheral giant cell granuloma. Most of times, overgrowth in oral cavity are fibromas that represents reactive local fibrous tissue, resulting from trauma or chronic irritation.

In the present case, the clinical presentation of PVL was entirely different and was more similar like a gingival fibroma. It is usually slow growing and develops initially as a rough textured white plaque of hyperkeratosis that later shows exophytic and proliferative feature, but in the present case, no such features were present. In this case, it progressed quite rapidly over a period of about 5–6 months as patient states and assumed a fibrotic gingival overgrowth. The fibrotic gingival overgrowth was without the presence of white plaque of hyperkeratosis and no exophytic features was present and surface of lesion showed smooth pattern with regular borders mimicking a gingival fibroma.

**CONCLUSION**

Soft-tissue lesions of the oral cavity many times put a challenging task for the clinician to achieve the diagnosis of the lesions. Many times, these lesions show their usual and characteristic presentation, leaving little doubt about the diagnosis. However, sometimes, clinical presentation and histopathological analysis of soft-tissue lesions do not match and may leave the clinician with certain diagnostic uncertainty. Hence, histopathological examination becomes must to diagnose such dilemma. The aim of reporting this case is to make aware the dentists about the different clinical presentation of PVL as seen in the present case. These cases should be followed up for a longer time period even after performing treatment because of their higher recurrence rate and can undergo malignant transformation.

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**Conflicts of interest**
There are no conflicts of interest.

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