DIAGNOSTIC CHALLENGE Answers

Case 1

Diagnosis

Verrucous Carcinoma

Differential diagnosis

1. Verrucous Hyperplasia – Non-invasive, similar appearance.
2. Squamous Cell Carcinoma – More aggressive, ulcerative, infiltrative.
3. Oral Papilloma – HPV-related, smaller, papillary growth.
4. Proliferative Verrucous Leukoplakia (PVL) – Premalignant with potential for VC transformation.
5. Chronic Hyperplastic Candidiasis – White plaques, responsive to antifungals.

Discussion

Verrucous carcinoma (VC) is a low-grade variant of squamous cell carcinoma known for its slow growth, exophytic warty appearance, and locally invasive behavior with minimal metastatic potential. Patients typically present with a painless, slow-growing mass or lesion that may cause discomfort during chewing, speaking, or swallowing, depending on its location. Clinically, Verrucous Carcinoma appears as a whitish or erythematous, well-demarcated lesion with a warty or cauliflower-like surface, often in areas prone to chronic irritation such as the buccal mucosa, tongue, or gingiva. Risk factors include chronic irritation from ill-fitting dentures, tobacco use (smoking or smokeless forms), HPV infection, poor oral hygiene, and long-standing precancerous conditions like leukoplakia or oral submucous fibrosis.

Diagnosis is based on clinical examination and histopathological analysis. The lesion typically shows papillary architecture, hyperkeratosis, minimal cellular atypia, and a "pushing" invasive pattern into connective tissue rather than the infiltrative margins seen in conventional squamous cell carcinoma. Imaging such as CT or MRI may be used to assess local invasion in advanced cases. Treatment primarily involves surgical excision with clear margins, as this ensures complete removal. Radiation therapy is used cautiously due to the risk of anaplastic transformation. Adjunctive care includes addressing modifiable risk factors like replacing ill-fitting dentures and tobacco cessation. With appropriate treatment, Verrucous Carcinoma has an excellent prognosis due to its low metastatic potential, but regular follow-up is crucial to detect any recurrence.

Our Patient

Our Patient had the typical features of verrucous carcinoma with no lymph node involvement.Incisional biopsy of the patient was performed to confirm the diagnosis.Surgical excision was done with clear margins.The patient is kept on follow up to check for any signs of recurrence.

Answers

Case 2

Diagnosis

Pyogenic granuloma

Discussion

Pyogenic granuloma is a benign, reactive vascular lesion commonly occurring in the oral cavity, characterized by a red, smooth, or lobulated growth that is highly vascular, often ulcerated, and bleeds easily. Despite its name, it is neither pyogenic nor granulomatous, arising as a response to local irritation, trauma, hormonal changes, or poor oral hygiene. It is frequently found on the gingiva, particularly in the maxillary anterior region, but can also appear on the lips, tongue, or buccal mucosa. The lesion ranges in size from a few millimeters to several centimeters and may grow rapidly initially before stabilizing. While typically painless, it can cause discomfort or interfere with speech and eating if large or ulcerated. Common triggers include plaque, tartar, trauma from sharp teeth, dental appliances, or hormonal fluctuations, particularly during pregnancy, where it is referred to as a "pregnancy tumor." Histopathologically, it consists of granulation tissue with numerous blood vessels, inflammatory cells, and fibroblastic stroma, often with surface ulceration. Diagnosis is based on clinical examination, imaging to rule out bony involvement, and biopsy to confirm atypical presentations. Management involves removing irritants through scaling and improving oral hygiene, with surgical excision often required to prevent recurrence, along with histopathological confirmation. Adjunctive therapies such as laser excision or cryotherapy may also be used, and regular follow-ups are essential. The prognosis is generally good with appropriate treatment, though recurrence may occur if underlying irritants or hormonal triggers are not addressed.

A biopsy of the lesion is essential to confirm the diagnosis and rule out other conditions like peripheral giant cell granuloma, squamous cell carcinoma, or fibroma. Intraoral periapical (IOPA) or panoramic X-rays can help assess underlying bone involvement or rule out bony lesions.

Our Patient

There was no bony involvement of the lesion. Surgical excision of the lesion was performed along with scaling and polishing to remove local irritants and avoid recurrence.