

Oral verrucous carcinoma A diagnostic and therapeutic challenge

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Abstract

Oral verrucous carcinoma is a rare condition with clinical and histopathological similarities to other diseases, which makes initial clinical and therapeutic approach difficult. Once diagnosed, the gold standard of treatment is surgery, and the surgical approach must be selected according to what is most appropriate for the patient. It has a good survival prognosis; however, it involves high morbidity due to the potential functional and aesthetic effects of advanced disease.

We present a patient with oral verrucous carcinoma with extensive involvement, whose diagnosis was delayed due to the condition's similarity to oral lichen planus. (*Acta Med Colomb* 2024; 49. DOI: <https://doi.org/10.36104/amc.2024.2990>).

Keywords: oral verrucous carcinoma, squamous cell carcinoma, frequency, diagnosis, radiation therapy, chemotherapy, surgery.

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Clinical case

This was a 52-year-old woman with no relevant personal medical history who had had verrucous lesions on her upper lip for several years, which had spread to her lower lip, tongue and hard palate over the last few months. She had been previously diagnosed with oral lichen planus, but her physical exam showed yellow hyperkeratotic, verrucous, fissured plaques on her upper and lower lips (Figure 1) which extended toward the oral mucosa as thick, whitish plaques

that were not loosened by scraping (Figure 2). In addition, the side of the tongue, gums and hard and soft palate had whitish plaques with similar characteristics.

Due to the extent and chronicity of the clinical condition, biopsies and additional tests were performed. The results showed a negative HIV test, non-reactive anti-hepatitis C antibodies (ANTI-HCV), and a negative hepatitis B surface antigen (HBsAg).



Figure 1. Upper and lower lips showing yellow hyperkeratotic, verrucous, exophytic plaques with irregular, poorly defined, infiltrated borders.



Figure 2. Showing how the verrucous plaques on the upper and lower lips extend toward the internal mucosa. There are whitish, exophytic, irregular plaques on the hard and soft palates that coalesce and form larger infiltrated plaques which were not removed by scraping. The dorsal and right ventral surface of the tongue shows a whitish plaque with the same characteristics.

The histopathological findings of the lip biopsy were compatible with verrucous carcinoma; the biopsies of the gums and palate showed verrucous hyperplasia, and the tongue biopsy showed low-grade atypical epithelial hyperplasia.

Based on these findings, the patient underwent surgical treatment with Mohs micrographic surgery, due to the location and size of the lesion, to preserve the tissue and protect the patient's function and appearance.

Discussion

Verrucous carcinoma is a subtype of squamous cell carcinoma which accounts for less than 5% of cases. The oral cavity is the most common site of presentation (75%), followed by the larynx (15-35%). This type of carcinoma represents 2-12% of all oral epithelial malignancies (1).

Since it does not metastasize distally, verrucous carcinoma has a 95% five-year survival prognosis (1). However, it does have progressive, aggressive local growth and may have lymph node metastasis in 3% of cases (2, 3).

The main differential diagnoses for oral verrucous carcinoma include oral florid papillomatosis (4), verrucous hyperplasia (5), focal epithelial hyperplasia (6), and verrucous leukoplakia, among others. These conditions draw a fine histopathological and clinical line that makes the initial clinical approach difficult, delaying patients' proper diagnosis by months and even years. Clinically, these conditions present with diffuse, well defined and painless verrucous, papillomatous plaques, which tend to grow slowly. It should be noted that the main difference compared to verrucous carcinoma is that the latter shows clinical induration and infiltration (7). However, the definitive diagnosis is made by histopathological evaluation (8, 9) showing filiform or digitiform projections covered in hyperplastic, well-differentiated keratinizing squamous epithelium. Enlarged tumor cells are found, but without pleomorphism or atypia, scant mitoses (which usually occur above the basal cell layer) and a network of wide, blunt ridges extending toward the underlying stroma, without invading it (2, 10).

The first line of treatment for these patients is surgery, although there is still controversy regarding which should be the first choice: conventional surgery or Mohs micrographic surgery (11). Various studies have found that the risk of recurrence with the conventional approach may be up to 75%, compared with an estimated 16% for Mohs surgery. Since verrucous carcinoma has a locally aggressive behavior and a high risk of local recurrence, Mohs micrographic surgery should be considered as first line treatment, depending on

the location and extent of the lesion. However, further studies are needed to directly compare the two techniques (11).

With regard to adjuvant or neoadjuvant treatments, comparative studies have been done with radiation therapy and chemotherapy, finding that they do not improve the prognosis and, on the contrary, may lead to worsening and progression of the condition due to the risk of anaplastic transformation (7, 12). There are other adjuvant therapies like carbon dioxide laser, cryotherapy and methotrexate, with some benefit for patients who are not candidates for surgery (13-15).

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