

Giant keratoacanthoma in a patient with acquired immunodeficiency syndrome treated with Mohs micrographic surgery

Queratoacantoma gigante em paciente com síndrome da imunodeficiência adquirida tratado com cirurgia micrográfica de Mohs

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RESUMO

O queratoacantoma (QA), apesar de frequente na prática diária, é um tumor que gera questionamentos. O aspecto mais intrigante associa-se à sua posição no limite entre malignidade e benignidade. A abordagem do tumor, bem como sua classificação, é controversa. Na definição da conduta, é importante levar em conta o potencial de transformação para carcinoma espinocelular. Desse modo, a excisão cirúrgica é a terapia de escolha, sempre que possível. Algumas situações merecem atenção adicional, como a imunossupressão associada. Neste artigo, relatamos um caso de QA gigante em um paciente com síndrome da imunodeficiência adquirida tratado com cirurgia micrográfica de Mohs.

Palavras-chave: Ceratoacantoma; Retalhos Cirúrgicos; Neoplasias Nasais; Neoplasias Cutâneas; Cirurgia de Mohs; Síndrome de Imunodeficiência Adquirida; HIV; Imunossupressão

ABSTRACT

Keratoacanthoma (KA), although frequent in clinical practice, is a tumor that raises questions. The most intriguing aspect is associated with its position on the border between malignancy and benignity. The approach to the tumor, as well as its classification, is controversial. When defining the conduct, it is essential to consider the potential for transformation into squamous cell carcinoma. Thus, surgical excision is the therapy of choice, whenever possible. Some cases require additional attention, such as associated immunosuppression. In this article, we report a case of giant KA in a patient with acquired immunodeficiency syndrome treated with Mohs micrographic surgery.

Keywords: Keratoacanthoma; Surgical flaps; Nose Neoplasms; Skin Neoplasms; Mohs surgery; Acquired Immunodeficiency Syndrome; HIV; Immunosuppression

INTRODUCTION

Keratoacanthoma (KA), although common, is a tumor that still raises questions. Although described in 1888 by Sir Jonathan Hutchinson, its etiology, epidemiology, histopathological diagnostic criteria, prognosis, and treatment guidelines remain controversial until today. The most intriguing aspect is its position on the limit between benignity and malignancy, which must be considered when defining the conduct.¹

Several clinical presentations are described, and solitary KA is the most common manifestation. The giant KA represents an unusual variant, characterized by a lesion larger than 2 cm in diameter, with a preference for the face, especially affecting the nose and eyelids.²

Case Reports

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We report a case of giant KA in an immunosuppressed patient due to infection by the human immunodeficiency virus (HIV), treated with Mohs micrographic surgery (MMS).

CASE REPORT

A 47-year-old man presented KA in the nasal region, relapsed after conventional surgery excision with 4 mm margins two months before. He received recent HIV diagnosis, and was in regular use of antiretroviral therapy, with undetectable viral load (CV). However, he still presented low CD4+ lymphocytes levels (138 cells/mm³), characterizing immunosuppression. The examination revealed a hardened nodule with a smooth surface, regular borders, and central hyperkeratosis, affecting the nasal dorsum and wall, measuring 4.4 x 3.8 cm, with absence of palpable lymph node enlargement (Figure 1). Additional investigation with computerized axial tomography scan and nuclear magnetic resonance revealed involvement restricted to soft tissues. New anatomopathological examination was compatible with invasive squamous cell carcinoma (SCC) type KA. Because it was a recurrent, extensive tumor, and in a high-risk location, a MMS approach was indicated. The surgical procedure was performed obtaining free margins in the third stage. The surgical defect was reconstructed using a paramedian forehead interpolated flap (Figure 2). Due to the close relationship between the deep margin and the nasal bone, identified during the intraoperative period, we chose adjuvant radiotherapy. The patient is being followed up, with good evolution and no signs of recurrence (Figure 3).



FIGURE 1: Hardened nodule with smooth surface, regular borders, and central hyperkeratosis affecting the nasal dorsum and wall

DISCUSSION

The relationship between KA and SCC is widely discussed. While some authors consider the KA as a scaly proliferation with a distinct follicular base that generally follows a benign clinical course, others claim that it is a clinical variant of SCC prone to spontaneous regression, but with occasional aggressive behavior and even metastasis. The conclusion of the problem is hampered by the lack of anatomopathological criteria that differentiate the two entities. Reports of transformation of KA into SCC also suggest the possibility of dealing with different stages of the same entity.^{3,4,5,6,7} For this reason, some specialists prefer to use broader terms in histopathological reports, such as “SCC - KA type”, “probable KA”, or “SCC cannot be ruled out”, to define the tumor.¹

The approach to solitary KA is controversial, but it is important to consider its potential to transform into invasive SCC and metastasize defines the treatment. Expectant conduct is questionable, unless clear signs of resolution are present. It can cause considerable damage in major lesions due to destruction of underlying structures or unsightly scar resulting from involution.^{1,2} Other therapeutic options include curettage and electrodissection, intralesional application of chemotherapeutic agents, radiotherapy, and topical agents. However, the disadvantage is that they do not allow the histopathological confirmation of the complete removal of the tumor. Thus, surgical excision is the first-line therapy, whenever possible. There is no specific determination on the margins in conventional surgery, considering the same ones recommended for non-invasive SCC (4–6 mm).¹ Adjuvant radiotherapy is an option in selected situations, such as in cases of higher clinical aggressiveness or even in giant KA, such as the case presented.^{2,8}

MMS shows the lowest recurrence rate among all modalities.⁸ The procedure allows intraoperative assessment of 100% of the tissue margins, different from the conventional surgical approach, where only representative sections of the tumor are examined, limited to less than 0.01% to 1% of the entire excised margin. When available, it is the method of choice for extensive lesions (larger than 2 cm) or those that affect critical areas, where tissue preservation is desired due to the advantage of minimizing the size of the surgical defect before the wound closes. MMS is also indicated in immunosuppressed patients because of the higher frequency and aggressiveness of keratinocytic carcinomas in this group.^{10,11,12}

The increased risk of SCC in immunosuppressed individuals is well established. Regarding specifically to HIV, studies show that infected people have higher rates of SCC recurrence, even among younger individuals with well-controlled HIV, suggesting that the disease itself may represent an additional factor in immunosuppression.^{13,14} Moreover, concerning the development of subsequent SCCs, a relationship between an increased risk of new tumors and a lower number of CD4 and high CV was observed. It suggests that, in this context, there is an association with immunodeficiency biomarkers.¹⁴ Therefore, due to the relationship between KA and SCC, patients with HIV require

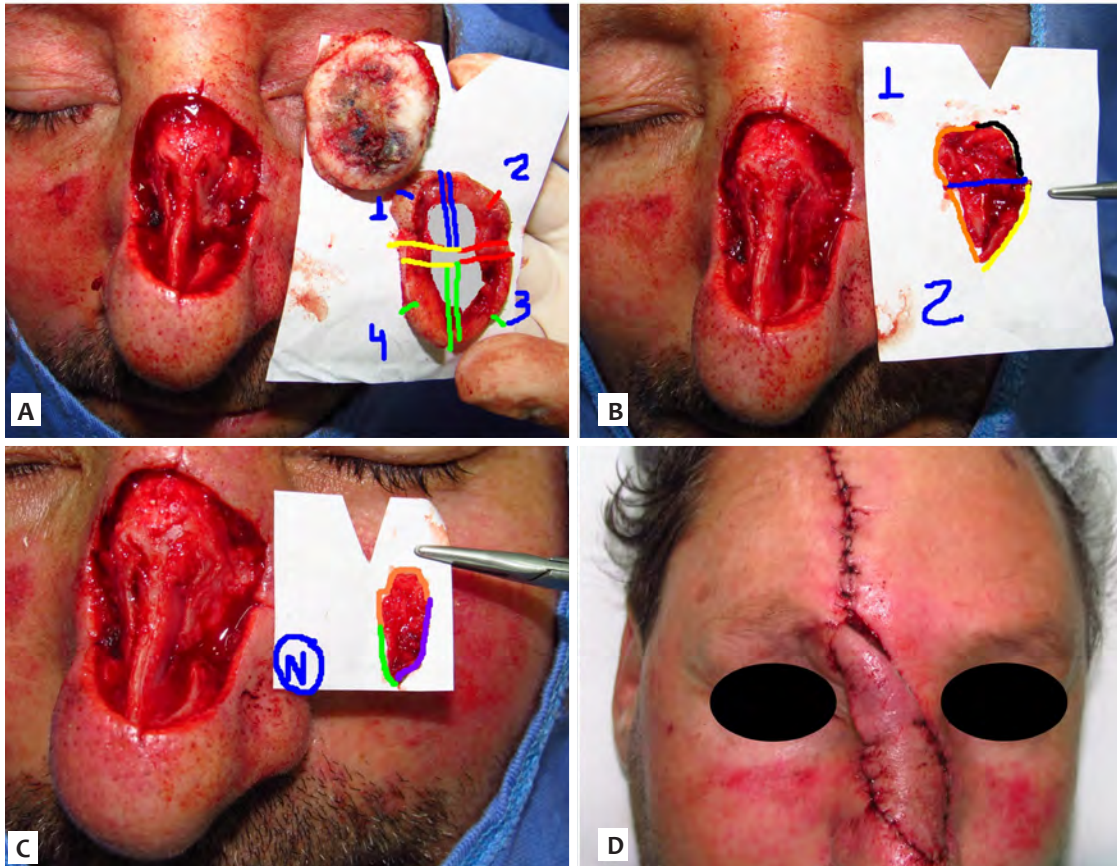


FIGURE 2: A - Surgical defect after removal of the specimen with a small margin in the first stage, with residual tumor.

B - Surgical defect in the second stage, still with residual tumor.

C - Final surgical defect after obtaining free margins in the third stage, with a deep margin closely related to the nasal bone.

D - Immediate postoperative period of the first surgical procedure - reconstruction with paramedian frontal flap



FIGURE 3: Third postoperative month, with irrigation pedicle of the paramedian frontal flap sectioned in a second surgical procedure, showing good functional and aesthetic results, with no signs of tumor recurrence

special attention in determining the ideal therapy, with MMS being an excellent option.

The case reported corroborates the greater aggressiveness in this group since tumor recurrence occurred after conventional technique excision, considered a first-line method to approach KA.

Patients with KA should be monitored after treatment for the possibility of recurrence or, due to Koebner's phenomenon, the development of a new lesion in the area previously addressed, usually between one week and eight months after the intervention.

Guidance to avoid possible triggering factors, such as prolonged and intense exposure to ultraviolet light and medical or cosmetic procedures in photodamaged skin areas, are also important.¹ It is noteworthy that HIV patients require additional attention during follow-up, considering influence of the disease on the risk of SCC.^{13,14}

CONCLUSION

Giant KA is a rapidly evolving tumor that can reach large dimensions, causing local destruction and presenting the possibility of malignancy. MMS represents a good treatment option in these cases, especially in the presence of additional risk factors, such as immunosuppression, given the possibility of a complete evaluation of margins and high cure rates, in addition to the aesthetic and functional benefits resulting from preserving healthy tissue. ●

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