Mohs Micrographic Surgery on recurrent trichoblastoma

irurgia micrográfica de Mohs em tricoblastoma recidivado

Case Report

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ABSTRACT

Trichoblastoma is a slow-growing and well-circumscribed rare adnexal tumor. Although considered a benign neoplasm, there are cases of aggressive trichoblastomas. This paper reports a case of a 66-year-old female patient with a recurrent and continuously growing tumor in the right nasal wing that was treated with Mohs Micrographic Surgery.
Keywords: mohs surgery; skin neoplasms; surgical flaps.

RESUMO

O tricoblastoma é tumor anexial raro, benigno, de crescimento lento e bem-circunscrito. Apesar de ser considerado neoplasia benigna, existem casos de tricoblastomas com comportamento agressivo. Relata-se o caso de uma paciente do sexo feminino, de 66 anos, com lesão tumoral recidivante e de crescimento contínuo na asa nasal direita tratada com cirurgia micrográfica de Mohs.
Palavras-chave: *cirurgia de Mohs; neoplasias cutâneas; retalhos cirúrgicos.*

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INTRODUCTION

Trichoblastoma is a slow-growing and well-circumscribed rare adnexal tumor. It was initially described by Headington[1] in 1970 as a well-circumscribed tumor of follicular origin. The word trichoblastoma was later defined by Ackerman and colleagues [2] as a generic term for benign cutaneous neoplasms with well-defined borders that present a predominance of follicular germinative cells. It is clinically characterized by symmetrical solitary nodules, usually on the head and neck, with smooth and well-defined borders, generally smaller than 3 cm. These tumors typically affect patients in their 50s and 60s.[3]

Trichoblastomas are histologically characterized by well-delimited clusters of basaloid cells with follicular differentiation, which affect the dermis and can reach the subcutaneous tissue. These clusters are of different sizes, with palisade cells in the periphery, surrounded by a fibrocellular stroma that mimics the follicles' sheath. There is an absence of clefts , mucin, and significant cellular atypia.[4]

The differential diagnosis of trichoblastoma versus basal cell carcinoma (BCC), which is mainly based on the degree of follicular differentiation of those neoplasms, is challenging. The main characteristics that distinguish trichoblastoma from BCC include the absence of clefts between basaloid cells blocks and

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the stroma, the absence of mucin, the presence of a characteristic fibrocellular stroma, and structures that the mimic follicular papillae and the bulb. However, distinguishing BCC cases with extensive hair differentiation from trichoblastoma is difficult, and often requires an immunohistochemical study to be sure. Among the markers used are CD34 and CD10 (positive in trichoblastomas' stroma and negative in BCCs' stroma). Another important marker is BCL2, which is distributed on the periphery of trichoblastomas' epithelial blocks, and presents a diffused distribution in BCCs' epithelial blocks.[5]

Although trichoblastomas are considered benign neoplasias, some tumors present clinical and histological features with aggressive development. Distinguishing such cases as trichoblastomas with aggressive behavior or BCCs with extensive hair differentiation is still considered a major challenge. This paper reports a case of a trichoblastoma with aggressive behaviour treated with Mohs Micrographic Surgery (MMS).

Case report

A 66-year-old female patient was referred to our practice by her local clinic after the recurrence of a tumor in the right nasal wing. The patient said the lesion had been growing continuously. The anatomical pathology diagnosis was that of a nodular BCC (Figure 1).

A review of the histological sections revealed the following features: basaloid cell blocks with peripheric palisade, cellular stromal around the epithelial blocks with an absence of normal dermis, absence of clefts between the epithelial blocks and the stroma, an absence of mucin and the presence of structures that mimic the follicular papillae and the bulb (Figure 2). The same material underwent immunohistochemical analysis, which tested positive for CD34 and CD10 in the stroma and positive for BCL-2 in the periphery of the epithelial blocks (Figure 3).

The lesion was diagnosed as trichoblastoma, and due to its location and aggressive behavior, MMS was performed. The lesion was divided into four fragments to evaluate the lateral margins and two fragments to evaluate the deep margins. In the first stage of MMS, all lateral margins were free of cancer, however the two deep fragments were positive for tumor cells. The depth was increased in the second MMS stage, after which all margins were free of the tumor.

The final wound reconstruction was carried out using a malar advancement flap followed by a transposition flap of the nasolabial fold for reconstructing the nasal ala; excess supralesional skin was removed without a cartilage graft (Figures 4 and 5). There were no complications during or after the surgery. Nine months after the surgery, the patient did not show clinical signs of tumor recurrence.

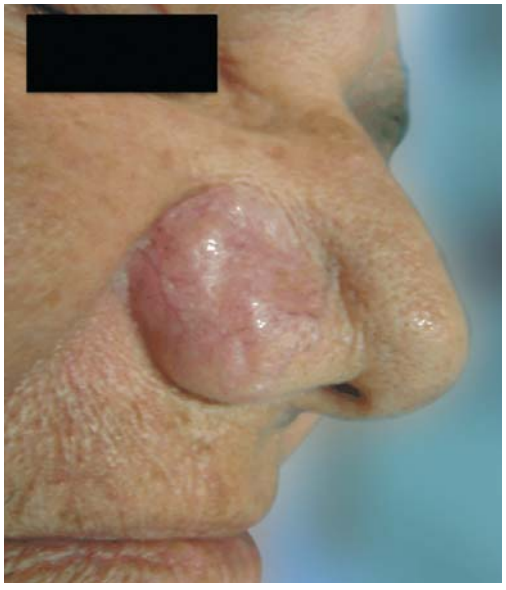

Figure 1: Tumor in the right nasal wing

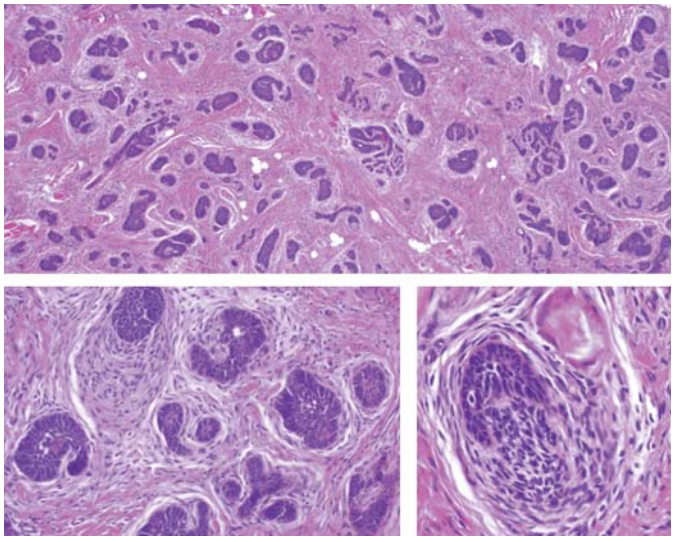

Figure 2: Histopathology of the lesion

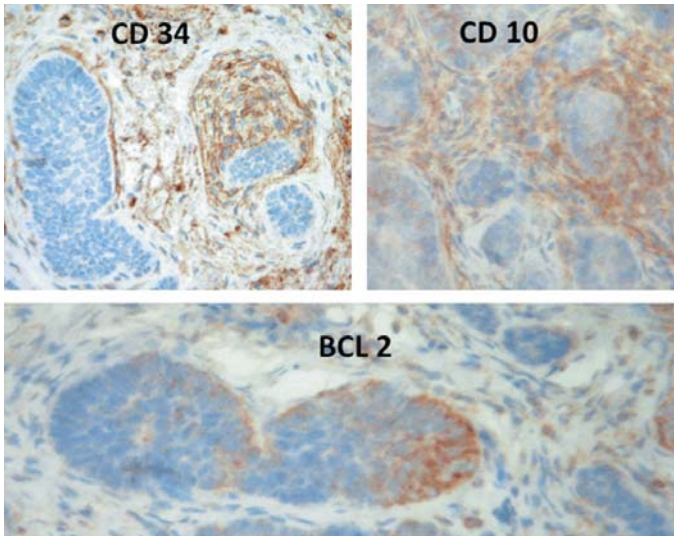

Figure 3: Immunohistochemical analysis

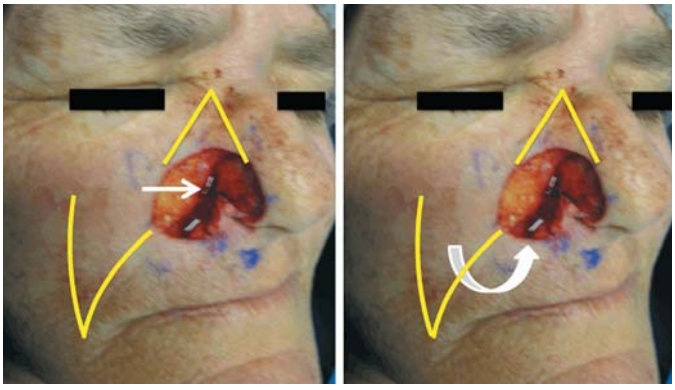

Figure 4: Final defect after two MMS stages, and layout for the reconstruction using a malar advancement flap and a transposition of the nasolabial fold

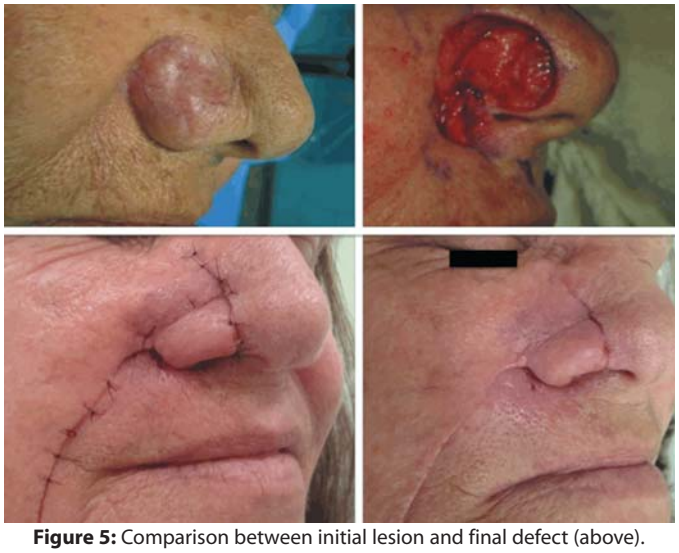

Figure 5: Comparison between initial lesion and final defect (above). Patient on the 7th day and 14th day after the procedure

DISCUSSION

Trichoblastoma is a rare, slow-growing and well-circumscribed adnexal tumor. Although they are benign, there are reports of trichoblastomas with more aggressive development.[6-8] Despite the classical histological differences distinguishing trichoblastomas from BCCs is extremely difficult, especially when the latter presents hair differentiation. Moreover, although rare, malignant transformation can occur, especially in elderly patients.[9] Thus strict clinical monitoring and prudence is necessary in the surgical management of such cases.

In the case study described, the patient had a tumor in the right nasal wing, which had histological features and an immunohistochemical profile compatible with those of trichoblastoma, however the study patient's tumor was recurrent and exhibited continuous growth.

MMS was chosen since the neoplasia affected a large part of the nasal ala, which carries with it a significant risk of functional and aesthetic compromise, and due to the possibility that the tumor was an aggressive trichoblastoma, given that it was a recurrent tumor in an elderly patient.

The closure of the surgical wound was performed using a malar advancement flap followed by the transposition of skin from the nasolabial fold for the reconstruction of the nasal ala. Other options considered at the time of the surgery were a frontal flap, or a composite graft of skin and ear cartilage. The frontal flap would have been a good option, given that the aesthetic and functional results are usually quite satisfactory.[10] However, in addition to the need for two or more surgeries for the correction of the pedicle, the procedure was performed under local anesthesia, and the front flap approach would have increased the patient's discomfort. A composite graft was ruled out due to the defect's depth, for even with cartilaginous support, it would likely have eventually led to a local retraction, with significant aesthetic and functional compromise.

There is only one case of aggressive trichoblastoma described in the literature 6, possibly du to the difficulty in distinguishing aggressive trichoblastomas from trichoblastic carcinomas (a BCC originated in a trichoblastoma).[11]

The authors of the present paper classified the studied tumor as a trichoblastoma after taking into account its histological features (absence of clefts between the basaloid cells blocks and the stroma, absence of mucin, presence of a characteristic fibrocellular stroma, and of structures that mimic the follicular papillae and the bulb), and the immunohistochemical results (positive for CD34 and CD10 in the stroma and for BCL-2 in the periphery of the epithelial blocks). The clinical history of recurrence with destruction and local infiltration suggests that this is a rare case of an aggressive trichoblastoma.

In the literature, there are only two cases of trichoblastomas operated using MMS 3,6. In one case, MMS was chosen due to the location of the tumor on the eyelid, a site where it is desirable to preserve as much healthy skin as possible to improve the functional and aesthetic results. In the second case, the choice of MMS was due to the aggressive nature of the neoplasm. The present case demonstrates the usefulness of MMS in the treatment of aggressive trichoblastomas, highlighting the need for clinical monitoring and appropriate surgical indication in cases of potential aggressiveness of this adnexal tumor.

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