

Scalp reconstruction after resection of trichilemmal cyst. A case report

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BACKGROUND. Trichilemmal tumors are benign neoplasms, derived from the outer root sheath of the hair follicle, that occur infrequently on the scalp. Clinically they present with insidious presentation, slow growth, painless and progressive. Wide resection is the surgical treatment of choice. We present the case of a 72-year-old female patient with multiple trichilemmal cysts in the occipital region of the scalp, treated with wide surgical resection and advancement flap reconstruction. Currently 1 month after surgery with favorable clinical evolution.

KEY WORDS: Trichilemmal cyst, Scalp reconstruction

Case Report

Plastic Surgery



Introduction

Trichoepithelioma is a benign appendicular skin tumor that arises from the hair follicles, classically there are three clinical forms: a small solitary form, a small multiple form, which obeys an autosomal dominant inheritance pattern with mutations in chromosome 9p21, and a giant tapeworm (diameter ≥ 2 cm). The coexistence of the multiple and solitary giant forms has been documented in the literature.^{1,2}

The mean age of presentation is around 60 years, with greater frequency in older adults, affecting both sexes equally, however, it presents a greater predilection for the female sex in multiple presentation.^{1,3}

Due to their appearance and rapid growth, isolated trichoepitheliomas are commonly excised and submitted for histopathological study, due to gross similarity to basal cell carcinoma.²

There are different therapeutic alternatives, however surgery is the primary treatment of choice.

We present the case of a 72-year-old patient with multiple trichilemmal cysts treated with wide resection and reconstruction with an advancement flap. He is currently 1 month after surgery with favorable postoperative evolution.

Case report

A 72-year-old female. Important antecedents: Systemic arterial hypertension of 2 years of evolution in adequate control with Enalapril. He refers to the appearance of a tumor at the level of the scalp in the occipital region for 34 years, which has been growing gradually associated with the appearance of more lesions at this level, which is why a study protocol is carried out.

Chest tomography reports multiple calcified nodules in soft tissues of the occipital region, brain with normal characteristics by this study method.

At the soft tissue level, multiple nodular lesions are identified in the suboccipital region with a density of up to 750 HU. In the right frontal region another nodule is identified which measures 8.5 mm. Intraoperative scalp measuring approximately 11x4 cm with 18 fibrous nodular lesions on the surface measuring between 0.5 and 2.8 cm

Histopathological report: Scalp tumor corresponding to traumatized epidermal inclusion cysts with reaction to a totally excised foreign body. Negative malignancy lesion corresponding to Trichoepitheliomas.

The postsurgical evolution is satisfactory, graduating on the 3rd day. Currently a patient with a successful clinical evolution 1 month after the surgical procedure.

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Figure 1. Pre operative planning of trichilemmal cyst excision.

Discussion

The trichilemmal tumor of the head and scalp is a tumor that originates from the external root sheath of the hair follicle, it was described for the first time by Wilson-Jones in 1966 as "proliferation of epidermoid cyst", its frequency of presentation is rare and there are few cases reported in the literature.

Isolated tumors with sporadic appearance are more common and the presence of multiple lesions raises the suspicion of a genetic / hereditary component. Some quite rare cases of exuberant presentation like the one previously described here have been reported in the literature.¹

This condition is characterized by the progressive development of trichoepitheliomas on the face, nasolabial folds, nose, upper lip, forehead, eyelids, scalp, and occasionally on the neck and upper trunk.³

Trichoepitheliomas usually present initially as pink, firm, rounded, translucent, and well-defined papulo-nodular lesions. Lesions are regularly grouped, often inconspicuous, being generally symmetrical on the face. Trichoepitheliomas gradually increase in size, producing significant cosmetic disfigurement, however, the patient is generally asymptomatic.^{3,4}

Telangiectasias may be seen on the surface of larger lesions, mimicking basal cell carcinoma, however, unlike basal cell carcinoma, ulceration occurs rarely. Although trichoepitheliomas are not associated with malignant diseases, several authors have reported an association with basal cell carcinoma.^{3,4}

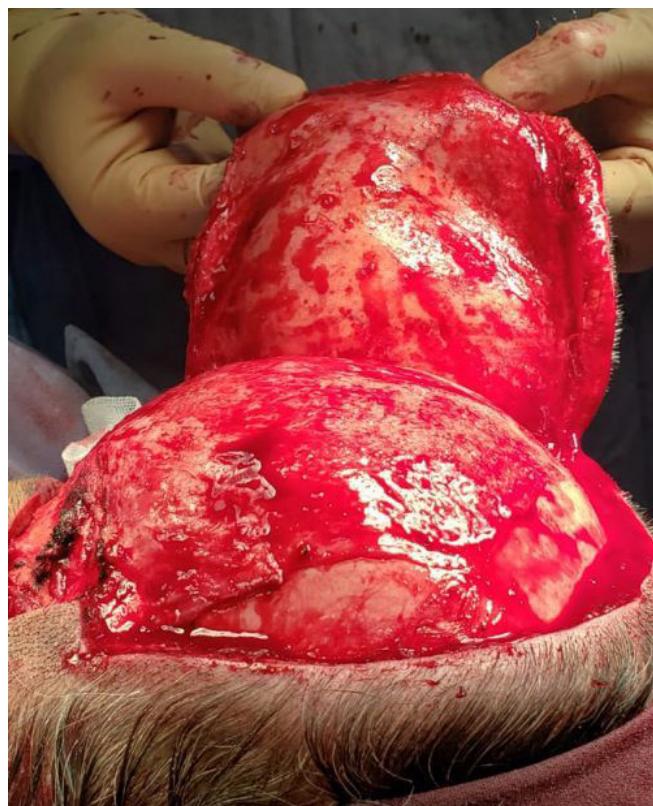


Figure 2. Intra operative photograph sowing cyst excision and raise of scalp flap.

The main differential diagnoses are keratotic basal cell carcinoma, trichoblastoma, and microcystic adnexal carcinoma; low mitotic activity and apoptotic cells favor the diagnosis of trichoepitheliomas.²

Trichoepitheliomas can pose cosmetic and functional difficulties, especially when affecting the ear canals or eyelids. Treatment for multiple trichoepitheliomas includes excision, electrodesiccation, dermabrasion, cryotherapy, radiation therapy, argon, CO₂ laser. Surgical excision with or without a flap used by most authors is the standard treatment for most cases.^{2,5}

Scalp defects have presented a challenge for surgeons due to their limited elasticity: however, its abundant irrigation, robust anastomotic network and ability to support the entire scalp in its single vascular pedicle, allows the design of a series of large flaps. By identifying what percentage of the scalp the defect corresponds to, the surgeon quickly has an idea of the area to rebuild and how much tissue is available to do so.⁷

The reconstruction of the scalp using flaps allows the closure of large defects in a relatively simple surgery and with unapparent scars that are hidden under the hair. There are several reconstruction options, however, flap reconstruction is the best treatment alternative.⁸



Figure 3. Final appearance at post operative surveillance.

Conclusion

Trichoepitheliomas are rare tumors that present with a painless clinical behavior, which condition important changes at the aesthetic level, however, carrying out an adequate and timely study protocol is essential to rule out malignancy.

The diagnosis is based on imaging studies and histopathology studies, which the latter will give us the guideline to determine the size of the tumor resection and the complementary treatment.

The primary treatment of choice is wide resection, which allows us local control and greater disease-free survival if malignancy is confirmed. There are several reconstruction options, however, flap reconstruction is the best treatment alternative and we recommend its use due to its reliable results when technical principles are followed, in this case we perform advancement flap reconstruction.

Currently, the patient has a favorable postoperative evolution 1 month after her surgery.

Conflicts of interests

There was no conflict of interest during the study, and it was not funded by any organization.

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