Eyelid trichoadenoma: surgical treatment associated with aesthetic blepharoplasty

Tricoadenoma palpebral: tratamento cirúrgico associado à blefaroplastia estética

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ABSTRACT

Trichoadenoma is a benign cutaneous tumor that is asymptomatic, rare, and slow growing. There are few cases reported in the literature, and we could only identify one description of trichoadenoma occurring in the eyelid area. We describe the case of a patient with trichoadenoma in the outer corner of the lower eyelid that we treated with surgical excision associated with blepharoplasty.

Keywords: Neoplasms, basal cell/surgery. Skin neoplasms/surgery. Blepharoplasty. Eyelids/surgery.

RESUMO

O tricoadenoma é um tumor cutâneo benigno, assintomático, raro e de crescimento lento. Existem poucos casos relatados na literatura e identificamos apenas um descrito na região palpebral. Apresentamos o caso de uma paciente portadora de tricoadenoma no canto externo da pálpebra inferior direita, tratada com excisão cirúrgica associada a blefaroplastia.

Descritores: Neoplasia de células basais/cirurgia. Neoplasias cutâneas/cirurgia. Blefaroplastia. Pálpebras/cirurgia.

INTRODUCTION

Trichoadenoma, first described by Nikolowski in 1958, is a rare, asymptomatic, slow-growing, benign cutaneous tumor. It originates in the cells of the pilous follicle and most commonly presents on the face, trunk, or buttocks, typically during the fourth decade of life. It presents with more maturation than trichoepithelioma and with less differentiation than trichofolliculoma[1] and desmoplastic trichoepithelioma[1-4]. Some authors[2,5-10] believe that it is intermediate between trichoepithelioma and trichofolliculoma in terms of its differentiation towards the infundibular portion of the pilosebaceous canal. Trichoadenoma mainly affects adults of both genders, and has no malignant potential[1]. Clinically, it presents with a single, well-delimited nodular lesion or in confluent minuscule papules of similar coloration to the adjoining skin (usually yellowish or grayish), covered by telangiectasias and measuring from a few millimeters to 1.5 cm. On dermatoscopic examination, it may appear to be a basocellular carcinoma.

On histopathologic examination, the trichoadenoma presents with multiple cysts containing keratin, surrounded by squamous dermal cells. Although trichoadenomas usually appear in isolation, association with other cutaneous lesions like sebaceous nevus[11] and melanocytic nevus[12] has been described. Despite the fact that the diagnosis of trichoadenoma is made histologically, some authors doubt its existence and consider it a form of trichoepithelioma or keratinizing basalioma[2], for which histological characteristics and evolution are needed for a correct diagnosis.

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There are only a few cases described in the literature and only one case in the eyelid area has been identified to date[13].

In view of the rarity of this tumor, there is no defined algorithm for its treatment. However, to date, all published cases have been treated by surgical excision, either for aesthetic reasons, due to lack of knowledge concerning the tumor's behavior if left untreated, or because of tumor enlargement. There are no reports of relapse after resection of these lesions.

This article describes the case of a patient with trichoadenoma in the external corner of the bottom right eyelid, treated with surgical excision associated with blepharoplasty.

CASE REPORT

The patient, a 48-year old woman, observed a small, hard, pink tumor on her right lower eyelid 3 years ago. Excision of the lesion was performed on that occasion and histological analysis led to the diagnosis of hemangioma.

Six months ago, the patient noticed a small acne-type lesion in the same place as the excision; topical administration of fusidic acid and betamethasone valerate did not resolve the lesion.

After 2 months, the lesion was still asymptomatic but progressing; a new biopsy resulted in a diagnosis of trichoepithelioma. Afterward, worried about the appearance of the lesion and fearing malignancy, the patient sought advice from another service. Detailed dermatological examination revealed a slightly erythematous plaque of approximately 1.3 cm in diameter in the same place, with multiple cystic-appearing, often translucent, white-yellowish papules. The papules were not itchy; they were hard, appeared shiny with small, thin vessels on the surface of the grouped cysts, and had a scabby surface (Figure 1). On the same occasion and upon request, the specimen was reanalyzed by an independent pathologist who confirmed, as suspected, the diagnosis of trichoadenoma with extensive squamous metaplasia of the sudoriferous epithelium.

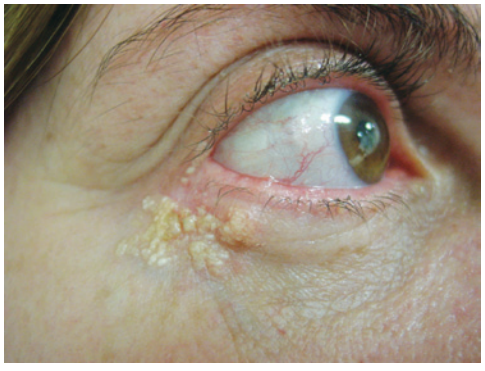

Figure 1 *– Preoperative appearance of the trichoadenoma.*

After a conclusive diagnosis was obtained, the treatment strategy consisted of surgical resection of the lesion with narrow margins, followed by cryomicroscopy in the operating room. Before treatment, the patient had also expressed her wish to correct the aging-related changes in her eyelids (Figure 2). Therefore, it was proposed that aesthetic blepharoplasty would be performed during the same surgical procedure as tumor excision and reconstruction.

Surgical Procedure

The surgical procedure was performed under local anesthesia with bupivacaine hydrochloride 0.5%, using a vasoconstrictor, along with intravenous sedation. The lesion was totally resected with narrow margins, keeping the integrity of the underlying plane of the orbicular muscle. During the operation, the resected piece was forwarded for pathological cryoanalysis, which showed clean, tumor-free margins. The resection created an irregular defect with a horizontal diameter of approximately 15 mm and a vertical diameter of 12 mm (Figure 3).

Next, a myocutaneous graft of the orbicular muscle of the upper eyelid was performed, laterally pedunculated in its preseptal portion (Figure 4). The size of the graft was planned to be not much larger than the defect caused by the resection of the trichoadenoma in the lower eyelid. Canthopexy was subsequently performed, slightly elevating the lateral corner using "U" stitches with multifilament polyester 4-0 thread (Ethibond – Ethicon, São José dos Campos, SP, Brazil) between the periosteum of the orbital margin/rim and the lateral retinaculum. The donor area was sutured in planes: the muscle portion was sutured using interrupted sutures with 6-0 monofilament nylon thread, and the cutaneous portion, with the same thread but using a continuous suture. Next, the myocutaneous graft was transposed and sutured to the surgical area in the lower eyelid with 6-0 monofilament nylon thread (Mononylon – Ethicon) using interrupted sutures in

Figure 2 *– Preoperative appearance showing aging of the eyelid.*

its lower portion (Figures 5 and 6). During the same surgical procedure, a small amount of excess skin in the middle two-thirds of the lower eyelid was resected; after hemostasis was achieved, a continuous suture was placed, using the same thread used in the infraciliary area, in a similar manner as in the blepharoplasty with cutaneous graft. The same suture also attached the ciliary margin of the lower eyelid to the higher part of the myocutaneous graft.

On the contralateral side, blepharoplasty was performed using the same technique, and a segment of the preseptal orbicular muscle was also resected together with the skin in the upper eyelid, associated with the canthopexy (Figure 7). Palpebral bags of all four eyelids were treated with conservative resection, followed by hemostasis.

Cefazolin (2 g) was administered 60 minutes before surgery for antibiotic prophylaxis. Saline compresses and the

Figure 5 *– Transposition of the myocutaneous graft.*

Figure 3 *– Defect after tumoral resection.*

Figure 6 *– Suture in the area of the upper eyelid defect.*

Figure 4 *– Myocutaneous graft in the upper eyelid with lateral peduncle.*

Figure 7 *– Immediate postoperative image after contralateral symmetry achieved.*

usual painkillers were prescribed during the postoperative period, and the sutures were removed after 5 to 7 days.

Histopathology of the specimen revealed multiple cysts, covered with stratified, interconnected, cornified epithelium without atypical features, and dilated sudoriferous glands covered with a double layer of epithelial and myoepithelial cells, replaced by stratified metaplastic epithelium (Figures 8 and 9).

With the technique used in this case, the results were both functionally and aesthetically satisfactory. The patient was followed up for 9 months after the surgery and showed no signs of relapse, retraction, or malocclusion of the eyelid, and was pleased with the appearance of her eyelids (Figures 10 to 12).

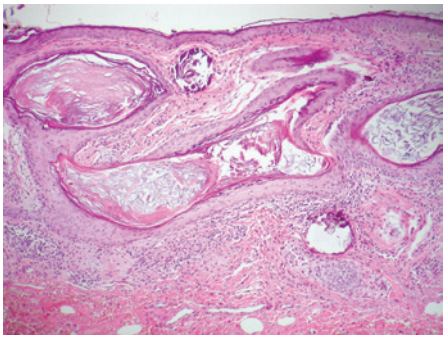

Figure 8 *– Histopathologic appearance: multiple cysts covered by stratified cornified interconnected epithelium, without atypical features (200×, H&E).*

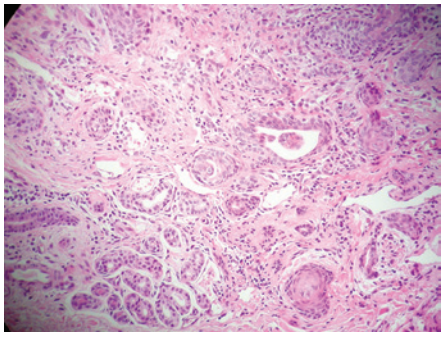

Figure 9 *– Histopathologic appearance: dilated sudoriferous glands (in the lower third) covered by double layer of epithelial and myoepithelial cells, replaced by stratified metaplastic epithelium (in the two upper thirds) (200×, H&E).*

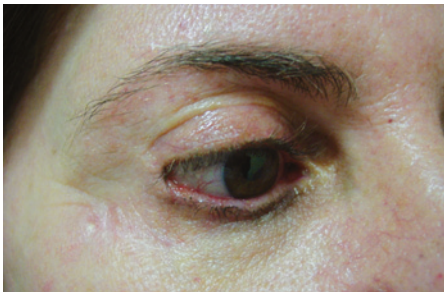

Figure 10 *– Appearance 9 months post surgery.*

DISCUSSION

Given that trichoadenoma is a rare, benign tumor, there is no consensus or defined algorithm regarding the best treatment. The few cases described in the literature have been treated through surgery without a detailed protocol for excision or reconstruction. There are no described cases of relapse.

With regard to the case described in this article, as soon as the diagnosis of trichoadenoma was confirmed, the choice to treat the neoplasia and perform aesthetic blepharoplasty simultaneously was motivated by the benign nature of this type of tumor and by the aesthetic complaints of the patient. The margins of the lesion were narrow because of its benign nature. The reconstruction of the defect and the aesthetic treatment of the eyelids were combined by performing blepharoplasty of the upper right eyelid so it would aid in

Figure 11 *– 9 months post surgery: bipalpebral appearance.*

Figure 12 *– 9 months post surgery: bipalpebral appearance with good occlusion.*

the reconstruction of the lower eyelid. The upper right eyelid showed excessive skin and prominent fat pockets. Making and transposing the graft laterally pedunculated allowed the reconstruction of the defect resulting from resection of the neoplasia in the lower eyelid, as well as the treatment of the upper eyelid's excess sagging skin.

In the surgical plan, a graft only slightly larger than the defect was chosen to compensate for secondary cicatricial retraction, common in these cases. This special consideration aimed at avoiding scleral show or lower eyelid ectropion. The graft donor area also allowed easy access to the fat pockets, the excess of which was removed, besides facilitating canthopexy aimed at discretely elevating the lower eyelid, in addition to improving the lateral tarsal-ligament tension. On the contralateral side, a classical cutaneous blepharoplasty was performed, aiming at achieving symmetry with the side affected by the lesion. A segment of the orbicular muscle was removed, also for the sake of symmetry.

This strategy enabled us to obtain a satisfactory result with regard to both the treatment of the neoplasia and the patient's aesthetic concerns about her eyelid area. It is known that neighboring grafts offer interesting results because they are similar to the recipient site in texture and coloration, a decisive fact in the planning of our strategy.

CONCLUSIONS

Simultaneously performing aesthetic blepharoplasty and surgical treatment of benign, or even not-very-aggressive malignant cutaneous lesions affecting the eyelid area, may be safe. For this to be achieved, the usual technical safety criteria related to the resection margins and exchange of the surgical material used in tumor resection; the tumor etiology; and mostly, the surgeon's common sense concerning the indication must be followed. Besides, aesthetic blepharoplasty may aid in the reconstruction of defects generated by the resection of the lesions, as in the case described here.

Obviously, the decision to simultaneously perform the blepharoplasty should be based on the firm conviction that it will not harm the patient by making it more difficult to detect an eventual relapse or by decreasing neighboring skin donor areas that could possibly be needed in future reconstructions.

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