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Case Report

Incidence of a Giant Trichilemmal Cyst. A Case Report

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Abstract

The trichilemmal cyst, also known as trichilemmal, pillar and hairy, is characterized by presenting itself as a smooth, firm nodule, approximately 0.5 to 5 cm in diameter that affects 5-10% of the population, appearing more frequently in the scalp (90%). It is autosomal dominant inherited, although it has also been reported associated with the occlusion of a pilosebaceous follicle; The objective of the study was to present the surgical management of a long-standing giant trichilemmal cyst; It was a 64-year-old female patient, who presented an asymptomatic occipital region volume increase, slow but progressive growth, with 3 years of evolution, sessile base, firm on palpation, approximately 8 cm x 10 cm, the patient was taken to the operating table under balanced general anesthesia, where total exeresis of the lesion was performed and the specimen was sent for histopathological study, resulting in a histopathological result of a trichilemmal cyst with severe dysplastic changes in its epithelium. Clinically, it must be differentiated from proliferating trichilemmal cyst, sebaceous cyst, clear cell hidradenomas, cutaneous metastases, squamous cell carcinoma, and angiosarcoma. Superinfection is not uncommon and usually occurs due to pressure and/or necrosis of the adjacent tissues secondary to the growth of the lesion. Although it generally presents as a benign pathology, a malignant transformation should be suspected when it is located outside the scalp, its size is greater than 5 cm, it presents a rapidly progressive growth or abundant atypia with mitotic activity under microscopy. The treatment consists of surgical extirpation, ensuring the complete elimination of the capsule to avoid recurrences. The case presented is an unusual pathology with a difficult differential diagnosis, so a correct diagnosis avoids inadequate treatment.

Keywords: Trichilemmal Cyst; Tricholemic; Excisional Biopsy

Introduction

Retention cysts of skin appendages are caused by proliferation of epidermal cells within the dermis. The most frequent cyst is the epidermoid (49%), and in second place is the trichilemmal cyst (27%), being also known as pilar cyst. It is characterized by presenting itself as a smooth, firm nodule, approximately 0.5 to 5 cm in diameter that affects 5-10% of the population, appearing more frequently on the scalp (90%), although it can also originate in other regions such as pectoral, pubic or vulvar. It affects middle-aged people, being more common in females. In most cases it is painless [1-3].

The trichilemmal cyst is of autosomal dominant hereditary character, although it is also reported associated with the occlusion of a pilosebaceous follicle (this is considered the most common origin), implantation of epidermal cells in the dermis due to

surgical or accidental trauma, and also due to the presence of epidermal cells along the planes of embryonic fusion. The cyst wall is characterized by being thick and consists of a polystratified squamous epithelium, with an outer palisade layer reminiscent of the outer root sheath of the hair follicle. The inner layer is undulated and lacks a stratum granulosum. It contains dense, homogeneous, pinkish or yellowish keratin, which is often calcified and contains traces of cholesterol [3,4].

The objective of the present study is to present the surgical management of a giant long standing trichilemmal cyst of the scalp.

Case Report

A 64-year-old female patient, with no relevant medical history, attended for presenting an asymptomatic volume increase in the occipital region of slow but progressive growth, with 3 years of evolution, without receiving previous treatment. The patient referred an increase in the speed of growth in the last 6 months. Clinical examination revealed a well-defined lesion in the occipital region, with a sessile base, firm on palpation, same color as the skin, without clinical signs of inflammation and no adjacent palpable adenopathies. The patient provided a lateral skull X-ray where a radiopaque image with well-defined borders was observed, of approximately 8 cm x 12 cm, which did not present corticalization or involve the adjacent bony tissue (Figure 1 and 2). Based on the clinical imaging findings, it was decided to opt for surgical management, which is why the Pertinent paraclinical tests were requested and the patient was taken to the operating table under balanced general anesthesia. Aspiration of the lesion was performed presurgically, obtaining approximately 20cc of brownish liquid content. Subsequently, a semilunar incision was made in the lower edge of the lesion, blunt dissection was performed exposing the capsule of the lesion which allowed its total exeresis (Figure 3) and the skin defect was reconstructed. The specimen was sent for histopathological study, observing a cavity lined by stratified squamous epithelium, hyperkeratinized, with palisade of basal cells, without granular layer. The keratin layer was markedly thick and the rest of the wall was made up of fibrous connective tissue. The histopathological result was a trichilemmal cyst with severe dysplastic changes in its epithelium (Figure 4). Currently, the patient is in her second post-surgical month, where the tissues are showing a healthy healing process without the presence of alopecia in the area or recurrence of the lesion (Figure 5).

Figure 1: Clinical characteristics of the lesion in the occipital region.

Figure 2: Radiographic characteristics of the lesion in the occipital region.

Figure 3: Capsule and intralesional content.

Figure 4: Histopathological study by optical microscope.

Figure 5: Tissue healing, two months after surgery.

Discussion and Conclusion

The trichilemmal cyst is a rare dermal neoplasm that derives from the external root sheath of the hair follicle. In most cases, it can transform to a proliferating trichilemmal cyst. It predominates in adult women and is usually located on the scalp, although it can also originate in other regions such as the pectoral, pubic or vulvar regions. Macroscopically, the lesion is an exophytic, multinodular, soft, solid or cystic tumor with slow growth, located in the deep dermis that can extend to the subcutaneous cellular tissue. Histologically, it presents as a solid-cystic mass, non-infiltrating, with well-defined borders, with squamous epithelium that presents trichilemmal-type keratinization. At the periphery, a palisade of basal cells may stand out. Characteristically, there is no layer of granular cells. Keratin deposits can calcify and generate a foreign body giant cell reaction. Occasionally discrete epithelial atypia and even mitotic figures can be found, but limited to the basal layers [5-7]. In our case, it presented histopathological characteristics compatible with that described in the literature, likewise, pleomorphism and nuclear hyperchromatism were evidenced throughout the thickness of the epithelium, as well as a markedly thick keratin layer.

Clinically, it must be differentiated from proliferating trichilemmal cyst, sebaceous cyst, clear cell hidradenomas, cutaneous metastases, squamous cell carcinoma and angiosarcoma. Secondary infection is not uncommon and usually occurs due to pressure and/or necrosis of the adjacent tissues secondary to the growth of the lesion. Although it generally presents as a benign pathology, a malignant transformation should be suspected when it is located outside the scalp, its size is greater than 5 cm, it presents a rapidly progressive growth or abundant atypia with mitotic activity under microscopy [7,8]. In our case, the patient presented severe dysplastic changes in the epithelium, which are mandatory for periodic controls for a reasonable time.

Currently, there are few published cases of retention cysts of cutaneous appendages in the head and neck larger than 5 cm, which is the maximum average size that they usually reach and which, according to these reports, are classified under the term giant cysts [9]. Therefore, the case hereby presented can be included within this sub-classification since the lesion exceeded 5cm in size.

Diagnostic methods are essential to determine the intracranial or extracranial origin, or communication between them. The lesions are characterized by a large volume increase in the subcutaneous

volume of the scalp, as it was in this clinical case presented. Computed tomography and magnetic resonance imaging help establish the diagnosis and implement the treatment plan [10-12].

The treatment of choice consists of surgical extirpation, ensuring the complete elimination of the capsule to avoid recurrences. Although there is no defined standard regarding the margin in proliferating trichilemmal cysts, there is consensus in considering wide local excision with a 1-cm margin as the appropriate therapy. In the case of malignant proliferating trichilemmal cysts, excision with an oncological margin greater than 1 cm, adjuvant therapy and radiotherapy, in order to prevent recurrences is recommended [7,13,14].

The case presented represents an unusual pathology with difficult differential diagnosis. Likewise, its scientific importance lies in the size of the lesion (8 cm x 12 cm), due to the fact that the cases previously reported in the literature are generally of a smaller size. A correct diagnosis avoids inadequate treatment.

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Conflicts of Interests

None.

Ethical Approval

This study was approved by the Servicio Autónomo Hospital Universitario de Maracaibo IRB.

Patient Consent

Written consent was obtained for publication.

Bibliography

1. López ZI., *et al*. "Quiste epidérmico gigante". *Dermatología Revista Mexicana* 51 (2007): 287289.
2. Calonje E. "Mckee's Pathology of the skin". 4.ª ed. Saunders Elsevier 2 (2012): 1456-1458.
3. Kim C., *et al*. "Giant epidermoid cyst of the posterior neck". *Journal of Craniofacial Surgery* 22 (2011): 1142-1144.
4. Ramaswamy AS., *et al*. "Morphological Spectrum of Pilar Cysts". *North American Journal of Medicine and Science* 5 (2013): 124-128.
5. Gaivas S., *et al*. "Intradiploic epidermoid cyst of the skull. Case report". *Romanian Neurosurgery* (2011): 18.
6. Alam K., *et al*. "A large proliferating trichilemmal cyst masquerading as squamous cell carcinoma". *Indian Journal of Dermatology* 60 (2015): 104.
7. Kim UG., *et al*. "Trichilemmal carcinoma from proliferating trichilemmal cyst on the posterior neck". *Archives of Craniofacial Surgery* 18 (2017): 50-53.
8. Sharma R., *et al*. "Proliferating trichilemmal tumor of the scalp: Benign or malignant, A dilemma". *Journal of Cutaneous and Aesthetic Surgery* 5 (2012): 213-215.
9. Yoko F., *et al*. "Proliferating trichilemmal tumor-like neoplasm in the external auditory canal: A case report". *Otolaryngology Case Reports* 21 (2021): 100354.
10. Kearns-Turcotte Theriault and Blouin. "Malignant proliferating trichilemmal tumors arising in patients with multiple trichilemmal cysts: A case series". *JAAD Case Report*s 22 (2022): 42-46.
11. Ediel V., *et al*. "Proliferating trichilemmal cyst with clinical, radiological, macroscopic, and microscopic correlation". *Anais Brasileiros de Dermatologia* 94.4 (2019): 452-454.
12. Jan H., *et al*. "Dermatofibroma associated with a sweat duct skin cyst". *Human Pathology Reports* 27 (2022): 300588.
13. OP Sangüeza., *et al*. "Benign tumours with apocrine and eccrine differentiation". in: Elder DE, Massi D, Scolyer RA, Willemze R, editors. WHO Classification of Skin Tumours. Fourth edition. Lyon: IARC 183 (2018).
14. Rao S., *et al*. "Malignant proliferating trichilemmal tumour presenting early in life: an uncommon feature". *Journal of Cutaneous and Aesthetic Surgery* 4 (2011): 51-55.