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### RESEARCH ARTICLE

#### TRICHILEMMAL CYST OF THE SCALP: A CASE REPORT

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#### Abstract

Trichilemmal cysts are dermal epithelial cysts that develop at the expense of the hair follicle. Histologically, they are characterized by the presence of trichilemmal keratinization, defined by the absence of the granular layer usually present between the spinous and horny layers. A 48 years old female had found a scalp lump for 15 years, the lump gradually increased. Physical examination found 2 protruding lesions. Surgical excision was performed and histopathological examination of the specimen confirmed a trichilemmal cyst. The wound healed well after resection with no recurrence after one year follow up.

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#### Introduction:-

Trichilemmal cysts are rare benign skin adnexal tumors arising from the isthmic portion of the hair follicle. It is frequently localized to the scalp. [1]

This lesion was first described in 1966 by Wilson Jones as a proliferative epidermoid cyst, and is also known by other terms: proliferative trichilemmal cyst, trichocholemyocarcinoma, proliferative pilar tumor, malignant pilomatricoma, keratinizing trichilemmoma. Trichilemmal tumors occur preferentially on the scalp of elderly women, more rarely on the forehead, eyelid, neck, thorax and abdomen. [1] Other rare localizations reported include the vulva, back of the hand, fingertip, toes, and back heel. [2] Trichilemmal cysts are usually benign and slow-growing tumors, but proliferating trichilemmal cysts may show either local recurrence, or more rarely malignant transformation. [1]

#### Case Report

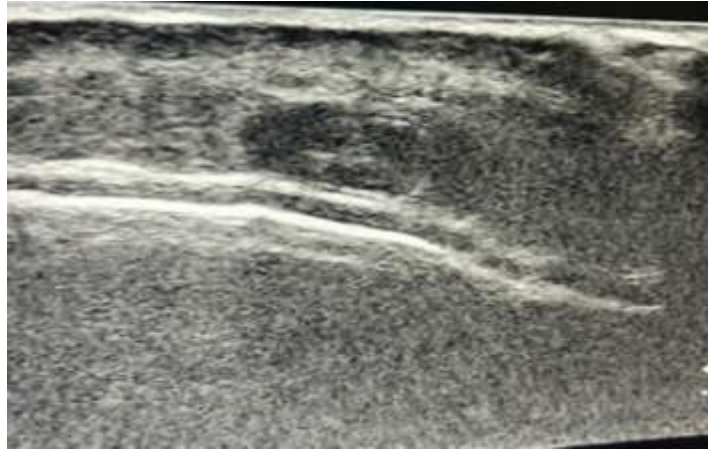
We report the case of a 48 years old female, with history of type 2 diabetes, and 15-year history of 2 cysts on her scalp.

Over a year, a cyst localized on the occiput had become painful and grown in size. Physical examination revealed 2 cystic-like tumors on the scalp.

We performed an ultrasound, which showed 2 hypoechoic masses (2\*1,6 cm and 3\*2 cm) of heterogeneous content, with no flow on color Doppler.

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**Figure 1:-** Ultrasound examination of the scalp showing the cystic mass.

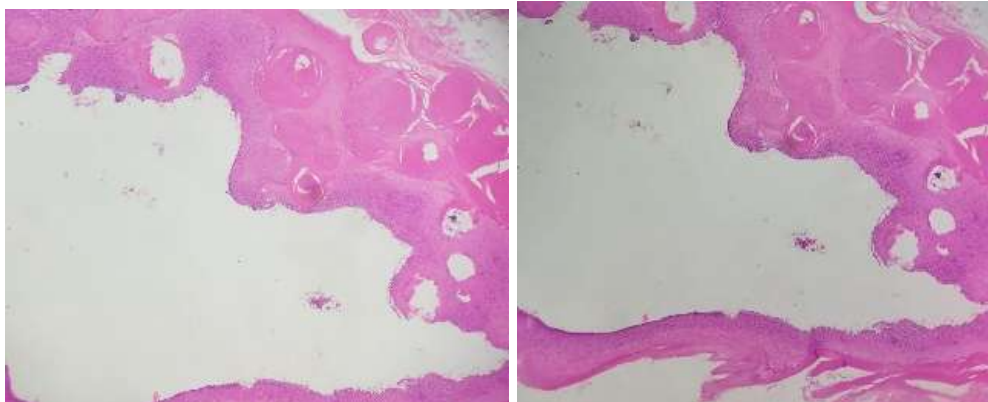
Tumor excision was performed under local anesthetic, through a thin incision at the top of each cyst. Surgical exploration revealed a hard cystic lesion. Dissection was carried on around the cyst, and suturing of the scalp was performed.

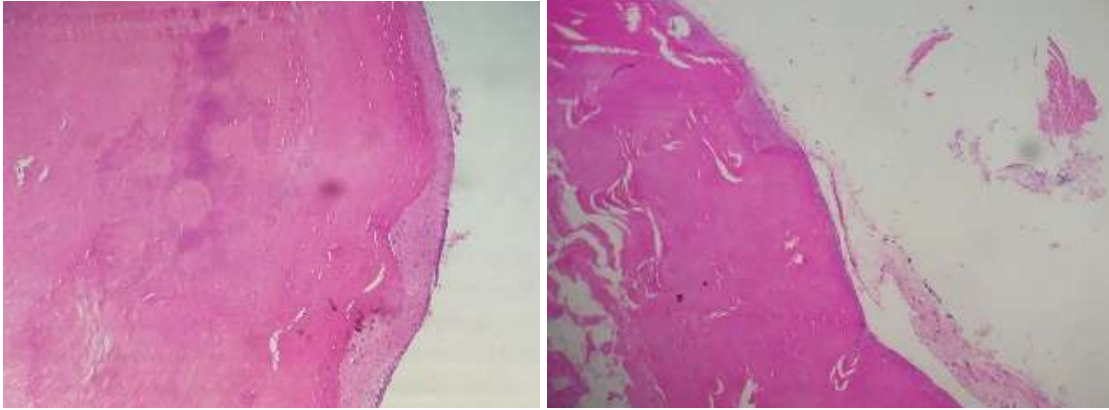
The postoperative course was uneventful, and the patient was discharged at postoperative day 1.



**Figure 2:-** Macroscopic view of the 2 cysts.

Histopathological examination of the specimen identified a cystic formation bordered by a regular squamous epithelium, with trichilemmal maturation.





**Figure 3:-** Microscopic view of the trichilemmal cyst.

### **Discussion:-**

Trichilemmal cysts are a slow evolving benign lesion of the skin appendages that develop mainly on the scalp of an elderly women. [3]

Preoperative diagnosis of trichilemmal cyst is challenging, and is often confirmed by histopathological examination of the excised specimen. [3]

Histologically, the development of trichilemmal cysts are classified into three stages: the adenomatous trichilemmal cyst, the epitheliomatous proliferative trichilemmal cyst and then the malignant carcinomatous proliferative trichilemmal cyst. [5]

The differential diagnosis of trichilemmal cysts are often epidermoid cysts, which present clinical similarities. Both entities are keratinocytic lesions, and histological exam is the only way to distinguishes between these two entities. Epidermoid cysts often present conventional epidermoid keratinization, whereas trichilemmal cysts present with trichilemmal keratinization, which is a form of cell maturation observed in the outer layers of the hair follicle. [5]

Surgery by tumor excision is the mainstay of treatment for trichilemmal cyst. [7]

Trichilemmal cysts may develop into multiple lesions, which may require extended surgical excision, and complex reconstruction by skin flap. [3]

Histological characteristics of trichilemmal cysts are well defined. Gross examination shows a well-limited cystic mass with no vegetations, no necrosis and no connection with the epidermis. Microscopic examination reveals a cyst lined with well-differentiated squamous epithelium with trichilemmal keratinization, corresponding to the transition between stratum spinosum and stratum corneum due to the absence of stratum granulosum. This keratinization is devoid of atypia and mitoses in the benign proliferative cyst. [4]

Proliferative trichilemmal cysts may in some cases, transform into a malignant carcinoma. And management of these cases may be particularly challenging, with a high rate of recurrence. Trichilemmal carcinoma are painful, and ulcerated lesions, and some patients may develop regional and distant metastasis, including intracerebral which could be fatal. [6]

### **Conclusion:-**

Trichilemmal cyst is a rare benign skin tumor, which occurs in elderly women. Scalp localization is the most common site.

Usually, trichilemmal cysts do not require further investigations because of their frequency and obvious clinical presentation. Conventional imaging may help to confirm the cystic nature of the lesion, and to identify other localizations. Radical excision is the treatment of choice, and the diagnosis is mainly established by histopathological exam of the excised cyst.

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