Multiple proliferating trichilemmal cysts of the skalp: a case report. Multiple proliferating pilar tumors of the scalp

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Abstract. Proliferating trichilemmal cyst, also known as proliferating pilar scalp tumor, is a rare benign tumor of the hair follicle. While trichilemmal cysts are common intradermal or subcutaneous cysts, occuring in 5–10% of the population, only 2% will develop into proliferative trichilemmal cyst. The differential diagnosis should include lesions such as malignant proliferating trichilemmal tumor and squamous cell carcinoma. Surgical treatment is the only effective method for treating these rare cysts. We present a case report of a 78-years-old female patient who has entered the Neurosurgery clinic of "St. Marina" University Hospital with clinical manifestation of rapidly growing from several months subcutaneous formation on the head and the presence of two smaller ones. MRI scan discovered three subcutaneous tumor formations suspicious for trichilem cysts, one of which was gigantic in size. After clinical discussion, under general anesthesia an operative treatment was performed with total extirpation of the cysts. Postoperatively, surgery-related complications were not observed. The patient was mobilized and verticalized on the day after intervention and discharged on the 5th day. As a result, a good cosmetic effect was obtained. Proliferating trichilemmal cyst is an uncommon neoplasm, and reporting of these lesions are important due to the good clinical evolution compared to the malignant macroscopic and microscopic feature of these tumor formations.

Key words: skin, pilar tumor, skin lesion, tumor trichilemmal

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Introduction

Proliferating trichilemmal cyst (PTC) is a very rare benign tumor of the skin, which is related to the isthmus of the hair follicle. [1,2] It was first reported in 1966 as „proliferating epidermoid cysts" by Wison-Jones. [3] These lesions also known as pilar tumors, are slow-growing and lobular masses localized on the scalp of elderly women and are believed to arise due to complication of trauma and inflammation. PTC affect 5–10% of people, and are more frequently seen in women over 50 years. [4] Proliferating trichilemmal cysts may be misinterpreted as squamous cell carcinoma because of the cellular atypia seen in this tumor. Usually proliferating trichilemmal cysts are benign although they can reach massive in size. [5]

Case Report

We present a case report of a 78-years-old female patient who has entered the Neurosurgery clinic of „St. Marina" University Hospital with clinical manifestation of rapidly growing from several months subcutaneous formation on the head and the presence of two smaller ones. MRI scan discovered three subcutaneous tumor formations suspicious for trichilem cysts, one of which was gigantic in size (Figure 1). Under general anesthesia an operative treatment was performed with total extirpation of the cysts. Histology comfirmed the diagnosis (Figure 2). Postoperatively, surgery-related complications were not observed. The patient was mobilized and verticalized on the day after intervention and discharged on the 5th day. As a result, a good cosmetic effect was obtained (Figure 3).

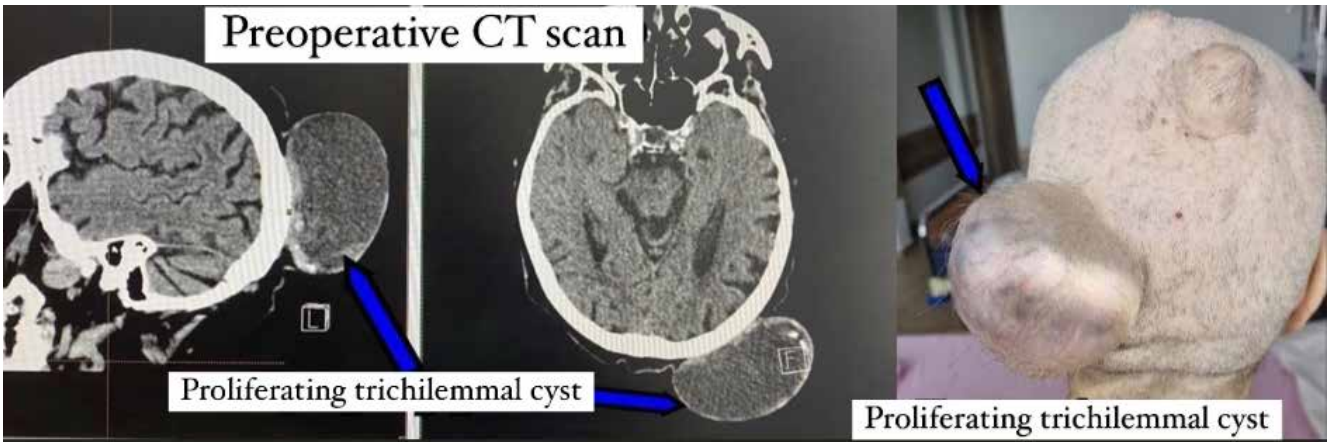

Figure 1. Preoperative status; MRI has found evidence of three subcutaneous tumor masses suspicous for trichilemmal cysts.

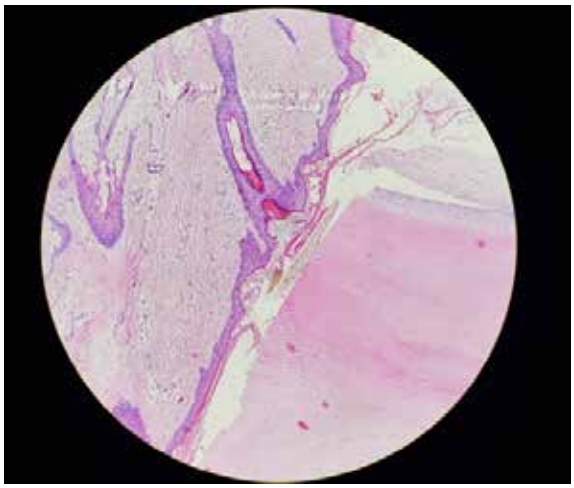

Figure 2. Microscopic photograph of the specimen (HE); The pathology comfirmed the diagnosis.

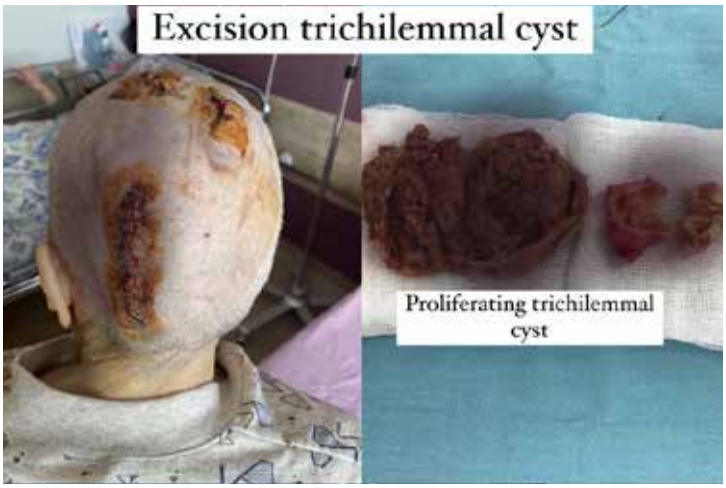

Figure 3. Postoperative status; Total extirpation of the tumor formations

Discussion

TCs are rare benign tumors which occur in 5-10% of the population with only 2% developing into proliferating trichilemmal cysts (PTCs) and malignant proliferating trichilemmal cysts (MPTC) even being rarer. PTC and MPTC occur from foci of proliferating epithelial cells in TCs which are secondary to trauma or inflammation. They have a female-male preponderance of 6% to 1%. Usually 90% of the lesions are located on the scalp, as well as the one in this case. Satyaprakash et al [6] report complete surgical excision is warranted for TCs, PTCs with a local recurrence rate of 3.7% after local excision. Rao et al [7] reports a patient with a scalp PTC which was removed but reccured and

displayed characteristics of MPTC and that so was excised with a 2cm margin. Studies recommend wide local excision as treatment and local follow-up for recurrence. [8] Gross examination of removed lesions in other reported cases of PTC is similar to our case, with the lesion presenting as nodular and encapsuled mass with homogenous grey cut surface containing foci of necrosis and hemorrhage. [6] Histologically, PTCs are characterised by "trichilemmal keratinisation" which involves a transition of nucleated to anucleated keratinised epithelium without a granular layer. [6] PTC can evolve into MPTC by invading surrounding tissue with the propensity to metastasise intracranially. [9] Histologically, they demonstrate markers of malignancy such as atypical mitosis, nuclear polymorphism and foci of single cell necrosis. [10] MPTC can arise de novo, but the most commonly occur due to malignant transformation of pre-existing PTC. [11] Studies [6,11] report that the treatment of choise is wide local surgical excision with clear margins of at least 1cm. Surgery may provide a good cosmetic effect but with equivalent recurrence rates as with wide excision. Further cases need to be published to provide a evidence based protocol for the management of PTCs. [12]

Conclusion

The diagnosis and treatment of a patient with multiple PTCs is reported. Multiple benign lesions were diagnosed in the presented case justifying a surgical approach that allowed aesthetic restoration of the head shape and achieving good cosmetic effect. However, phenotypically similar lesions can arise from PTCs and TCs that show an uncertain biological behavior [13] or may even develop transformation into malignant tumors, which require radical surgical treatment. [14]

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