

PROLIFERATING TRICHILEMMAL CYST OF SCALP –A CASE REPORT

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ABSTRACT

Trichomonas proliferating cyst is an rare tumour that develops from the follicular isthmus and has trichilemmal keratinization as its histological signature. The case of a growing trichilemmal cyst in a 41-year-old lady is described, along with a correlation of the clinical, radiographic, macroscopic, and microscopic findings.

KEYWORDS: Cysts, Diagnostic imaging, Histopathology, proliferating trichilemmal cyst.

INTRODUCTION

The proliferating pillar tumor, or proliferating trichilemmal cyst (PTC), is a benign adnexal tumour that most frequently affects older women's scalps. Notable histological characteristics include a trichilemmal keratinization pattern linked to growing squamous epithelial cell lobules. Rarely, a proliferating trichilemmal cyst (PTC) might progress to become cancerous. Here, we present the instance of a patient whose scalp PTC was growing quickly. (1) The topics covered in this essay include differential diagnosis, pathological, with suitable care.

CASE REPORT

The dermatology department received a referral for a 41-year-old female patient who complained of an 8-year-old nodule at the back of her head that was causing pain that was radiating to her ipsilateral ear and face. A varied, well defined solid and cystic lesion with a measurement of 3.5x3.5x0.5 mm with hyperechoic areas was seen on an ultrasonography (USG). The cystic swelling along with overlying alopecia. Regional lymphadenopathy was absent. The results of the systemic examination seemed normal. CT head revealed well defined cystic lesion approx 3.5x1.3 in subcutaneous tissue of the left occipital region bulging exophytically likely suggestive of epidermal inclusion cyst. underlying bone appeared to be normal. Differential diagnosis of epidermal inclusion cyst, lipoma and liposarcoma, metastasis were kept in mind. It was decided to remove the cyst surgically. Our department received the excised tissue for histological analysis. (1)

Grossly we received a single gray -white to gray-brown soft tissue piece altogether measuring 3.5x3.5x0.5cm .Skin ellipse measuring 2x1cm .Outer surface was gray-white to gray brown. Cut surface showed pultaceous material with haemorrhagic area and gray-white solid area measuring 0.5cm. Representative sections were taken ,tissue was processed and stained with H&E stain. Tissue sections were examined and showed epidermis and dermis. The epidermis is lined by keratinized stratified squamous epithelium. A well-defined tumour with varying size lobules of squamous epithelium, dense eosinophilic to transparent cytoplasm, and a central nucleus was visible in the underlying dermis. Few lobules showed palisading of the peripheral cell layers with central amorphous keratin. No features of anaplasia was seen in the section examined. It was determined by histopathology that the cyst was a growing trichilemmal cyst.



Fig.E 1- Single Soft Tissue Piece Altogether Measuring 3.5x3.5x0.5cm

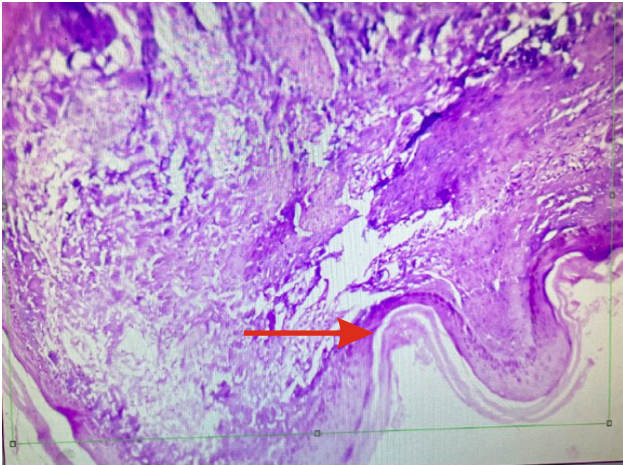


Fig. 2: The cyst is lined by a squamous epithelium devoid of a granular layer and swollen cells near the cyst cavity, which is filled with homogenous keratin.

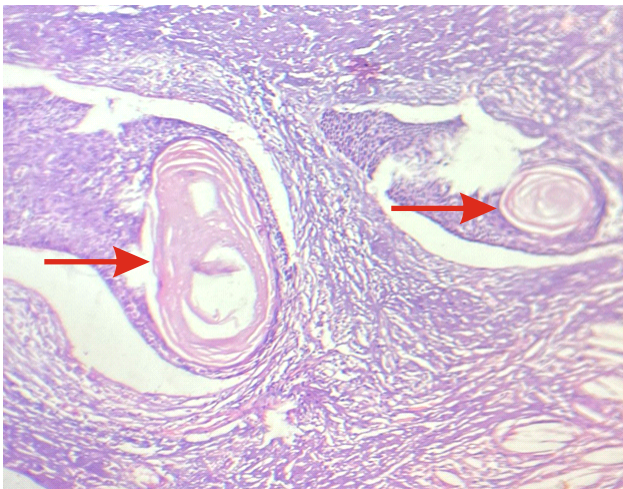


Fig 3: Squamous Lesion that was mostly made up of Squamous Cells with Abrupt Keratinization and Trichilemmal Keratinization.

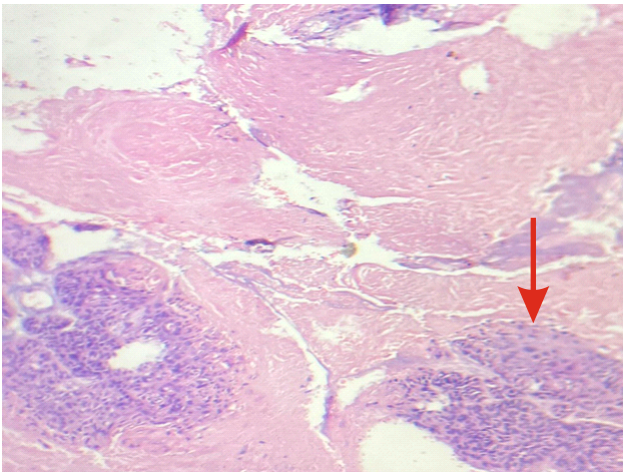


Fig. 4: Proliferating area with Trichilemmal Differentiation, with Focal Calcification and cholesterol clefts .

DISCUSSION

We report a case of proliferating trichilemmal cyst (PTC) in this study, demonstrating the link between radiological, clinical, microscopic, and macroscopic imaging. Trichilemmal cyts are clinically indistinguishable from epidermal cysts ,about 90% occur in scalp . (1)

Its keratinization method and the presence of transparent cells allow it to be distinguished from squamous cell carcinoma. Additional differential diagnoses include basal cell cancer, angiosarcoma, trichilemmal carcinoma, epidermoid cyst, sweat gland tumor, and keratoacanthoma. (2)

Sometimes different presentation of trichilemmal cyst is also seen commonly on histopathology such as proliferating area with trichillemal differentiation with focal calcification and cholesterol clefts. sometimes microscopically it shows tumor cells, showing some degree of nuclear atypia,as well as individual cell keratinization . It can occasionally display an area of calcification and a large cell reactivity to a foreign substance .(5)

Different clinical presentation are usually on scalp, back of head ,submandibular area .(6)

PTC may develop into trichilemmal carcinoma if it has large squamous component areas, dyskeratotic cells, cellular pleomorphism with atypical mitosis, and infiltrative borders with adjacent tissue invasion. Approximately one-fourth of trichilemmal cysts have foci of calcification, whereas epidermal cysts do not have focal calcification of the cyst substance. When a trichilemmal cyst's wall ruptures, a foreign-body reaction occurs, and the cyst may either partially or completely disintegrate.. As seen in a trichilemmal cyst that is proliferating, trichilemmal cysts frequently reveal small, solid-looking acanthotic foci in their walls. On occasion, a proliferating trichilemmal cyst's tumour lobules will be associated with a trichilemmal cyst. (11,12). PTC appears to have a clearly defined simple trichilemmal cyst profile. Certain clinical and histological characteristics could serve as prognostic indicators of aggression. Investigations using immunohistochemistry and histology are essential for management. The only way to ensure complete remission without recurrence or metastases remains a wide resection .(13)

HISTOPATHOLOGY

The epithelial cells that make up the wall of trichilemmal cysts have no apparent intercellular bridges. A characteristic palisade architecture can be detected in the peripheral layer of cells that is not present in epidermal cysts. The epidermal cells that are

close to cystic look inflated and have pale cytoplasm inside of them. The cysts are made entirely of eosinophilic material.(3)Surgery is used to remove PTC with normal tissue margins.(2)

Unlike the case of Denise Graffiti, wherein a woman aged 56 complained of an enlarging nodular lesion on her anus, ours involved a trichilemmal cyst located in the perianal region. The scalp, neck, trunk, pubis, vulva, and upper lip are the usual locations for these cysts. In (2)Ediel reported(11) that a 57-year-old female patient had a developing trichilemmal cyst with a history of metastatic liposarcoma to the liver. El Benaye documented nine instances of PTC of the scalp in a mean age group of sixty-two years (12). Dong Joon documented an instance of a trichilemmal cyst invading the submandibular gland. (10). Bruno reported a malignant growing trichilemmal tumor that was ulcerated and widespread, resulting from many massive, degraded trichilemmal cysts. (12) Surgical excision with normal tissue margins is the treatment for PTC. (5)

CONCLUSION

PTC are rare benign lesions, and few cases have been reported before so far around the world. A careful histopathological examination is crucial for making accurate diagnosis. PTC is still misdiagnosed, and there aren't many documented cases. Future research would make it possible to identify immunohistochemistry, histology, and malignancy predictive variables.

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