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Case Report

An Interesting Case Of Proliferating Trichilemmal Cysts And Lipoma Of The Scalp

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ABSTRACT

A 60 year old male patient presented with multiple slow growing lesions on scalp for past 25years. Patient was evaluated with radiographs and computed tomography (CT). Patient underwent simple excision of the lesions and the diagnosis was confirmed on histopathology as proliferating trichilemmal cysts and lipoma of the scalp. KEY WORDS:

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1. Introduction

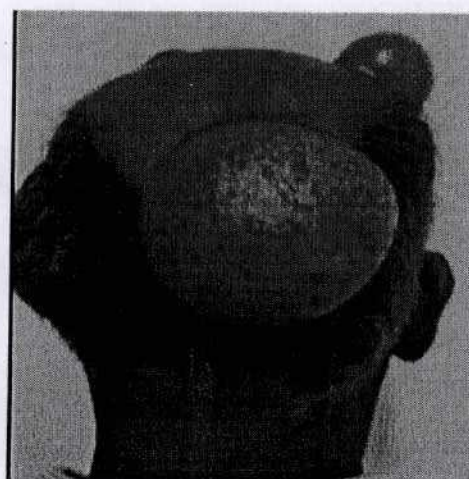
Proliferating trichilemmal cysts(PTCs) also known as pilar cyst is a benign adnexal tumor of skin, related to the isthmus of the hair follicle¹. They are keratin-filled cysts with a wall resembling the external root sheath of a hair follicle. These cysts affect 5% to 10% of the population, with a female predominance, and can be inherited in an autosomal-dominant fashion². Trichilemmal cysts can undergo transformation into proliferating trichilemmal cysts when tumor like proliferation of cells arises from the epithelial-lined wall. Lipomas have been described in virtually in every tissue of the body

Clinical history and physical examination findings:

A 60 year old male patient presented with multiple slow growing lesions on scalp for past 25years. No history of similar complaints in family.

On physical examination the patient's scalp is studded with multiple masses, mostly in the parietal and occipital regions. The masses are varied in consistency from solid to fluctuant and are not covered by hair (figure 1).

Figure 1- photograph of patients scalp with multiple soft tissue swelling



Imaging findings:

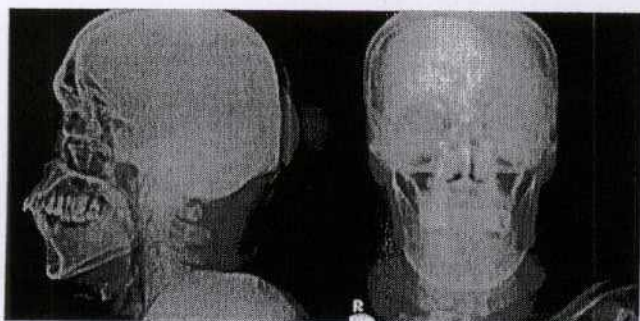
X-ray skull lateral view showed multiple soft tissue swellings with varied sizes and densities noted in parietal and frontal region on scalp (Fig 2a & 2 b).

CT of the brain (is done to rule out any invasion to local calvaria, meninges etc) showed multiple soft tissue lesions in scalp in right posterior-parietal region (measuring 8.2 x 4.1 x 7.2cms), right fronto parietal region (measuring 4.5 x 3.8 x 4.3cms) these lesion shows density value of 25 to 28 HU and small lesions are

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noted in left high parietal region (measuring 1.3 x 1 cms, 1.6x 1.2 cms) with density value of 70- 80 HU. The lesion in right parietal and posterior parietal region shows peripheral calcification. Overlying skin is continuous with hypodense lesion (figure 2a and 2b).

Figure 2a and 2b - X-ray X-ray skull lateral and AP view view showing multiple soft tissue swellings with varied sizes and densities multiple soft tissue swellings with varied sizes and densities

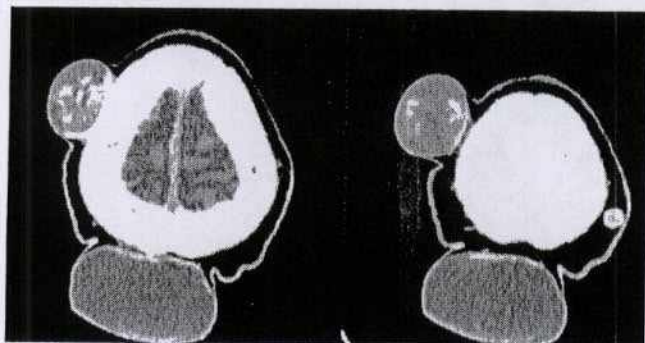


A well circumscribed oval hypodense lesion (-90HU -110 HU) was noted in soft tissue of scalp in left posterior parietal region. Overlying skin is separately delineated. No surrounding fat stranding (figure 3a and 3 b)

No erosion of underlying bone noted.

The brain parenchyma appears to be normal in its attenuation.

Figure 3a and 3b ct scan of the brain showing multiple soft tissue scalp lesions with calcifications in one of the lesions in high parital region



Surgical findings:

Multiple scalp swellings noted were widely excised completely 1cm margins of normal tissue owing to their locally aggressive potential and malignant transformation, subsequently the excised mass sent for histopathological analysis.

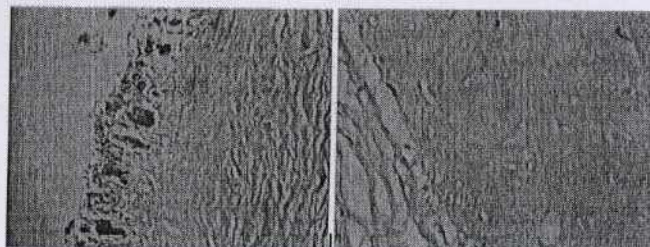
Histopathology:

A single capsulated soft tissue mass measuring 3 x 2 x 1 cms whose cut surface viewed yellow lobulated structure with greasy oil material the histology sections showed features of lipoma.

The four skin covered nodules measuring 8.2 x 4.1 x 7.2 cms, 4.5 x 3.8 x 4.3 cms, 1.3 x 1 cms & 1.6 x 1.2 cms whose cut surface showed a cystic cavity with variable wall thickening.

The histologic sections composed of lobules with squamous cells and central trichilemmal keratinization the cyst cavities are filled with amorphous eosinophilic material with focal basophilic calcification. A histopathology diagnosis of multiple proliferating trichilemmal cysts was made (figure 5a and 5b).

Figure 5a and 5b - The histologic sections showing lobules with squamous cells and central trichilemmal keratinization the cyst cavities, filled with amorphous eosinophilic materia



Discussion

Proliferating trichilemmal tumors (PTTs) are localized in dermis or subcutaneous tissue, may become exophytic, sometimes exhibits ulceration, and are solid or partially cystic. The size of which ranges from 2 to 15 cm. Ordinarily, the lesion is encountered on the scalp; but wrist, elbow, mons pubis, vulva, buttock, and chest are other locations where it can be found. Duration of lesion ranges between 4 to 50 years in the literature. Trauma and inflammation are among the theories for the transformation of a traditional to a proliferating cyst.

Histopathologic examination confirms the diagnosis of a presumed trichilemmal cyst. At the periphery is a fibrous capsule, which surrounds a rim of dark-staining basal cells. More centrally, pale-staining, squamous keratinocytes increase in height until they transform abruptly into solid, eosinophilic-staining keratin. For the most part, the epithelial lining does not form a granular-cell layer. Approximately 25 percent of lesions contain calcification regardless of age, and some may show ossification as well.

In the differential diagnosis, Brooke-Spiegler syndrome, cylindroma, dermoid cyst, squamous cell carcinoma. Brooke-Spiegler syndrome exhibits variable expression and penetra

presenting with multiple cylindromas and trichoepitheliomas and is a rare autosomal dominant disorder⁸. Although it is seldom, malignant transformation to cylindrocarcinomas and metastasis can occur in cylindroma⁹. Squamous cell carcinoma is the second leading cause of skin cancer in whites and accounts for 20% of cutaneous malignancies¹⁰. Squamous cell carcinomas of head and neck region are locoregional, but pilar tumors are primarily and solely local. So they can be managed with wide local excision. Although the role of adjuvant radiation therapy in pilar tumor, especially in the malignant variant, is not very clear; adjuvant radiotherapy is justified considering the aggressive nature of the malignant variant and distant failures in previous series¹¹. Dermoid cysts are rare subcutaneous cysts of ectodermal origin occur mostly on the face, forehead, neck, or scalp¹². Clear-cell hydroadenocarcinoma¹³ and cutaneous metastasis of renal cell carcinomas¹¹ can be considered for the differential diagnosis of PTT

Simple trichilemmal cysts are often easily enucleated, in contrast to proliferating trichilemmal cysts, which require wide local excision to prevent recurrence.² Because of the malignant potential of proliferating trichilemmal cysts, management includes wide local excision with continued long-term surveillance.⁶

References:

- [1] Kumar P, Chatura KR, Haravi RM, Chandrasekhar HR. Proliferating Trichilemmal Cyst Mimicking Squamous Cell Carcinoma. Indian J Dermatol Venereol Leprol 2000;66:149-50.
- [2] MacKie RM. Tumours of the skin. In: Rook A, Wilkinson DS, Ebling FJG, et al, eds. Textbook of dermatology. Vol. 3. 4th ed. St. Louis: Blackwell Mosby Book Distributors; 1986:2405-06.
- [3] Elder D, Elenitsas R, Ragsdale B: Tumours of the epidermal appendages. Lever's histopathology of the skin Philadelphia: Lippincott-Raven Elder D, Elenitsas R, Jaworsky C, et al, 8 1997, 749-799.
- [4] Brownstein MH, et al. Proliferating trichilemmal cyst: a simulant of squamous cell carcinoma. Cancer 1981; 48: 1207-14.
- [5] Scott GA. Cutaneous cysts and related lesions. In: Barnhill RL, et al., eds. Textbook of Dermatopathology. 2nd ed. Philadelphia: McGraw-Hill; 2006: 562
- [6] Lopez-Rios F, Rodriguez-Peralto JL, Aguilar A, et al. Proliferating trichilemmal cyst with focal invasion: report of a case and a review of the literature. Am J Dermatopathol 2000;22:183-87.
- [7] Sau P, Graham JH, Helwig EB: Proliferating epithelial cysts. J Cutan Pathol 1995, 22:394-406.
- [8] Kazakov DV, Soukup R, Mukensnabl P, Boudova L, Michal M: Brooke-Spiegler syndrome: report of a case with combined lesions containing cylindromatous, spiradenomatous, trichoblastomatous, and sebaceous differentiation. Am J Dermatopathol 2005, 27:27-33
- [9] Gerretsen AL, Putte van der SCJ, Deenstra W, van Vloten WA: Cutaneous cylindroma with malignant transformation. Cancer 1993, 72:1618-1623.
- [10] Johnson TM, Rowe DE, Nelson BR, Swanson NA: Squamous cell carcinoma of the skin (excluding lip and oral mucosa). J Am Acad Dermatol 1992, 26:467-484
- [11] Siddha M, Budrukhar A, Shet T, Deshpande M, Basu A, Patil N, Bhalavat R: Malignant pilar tumor of the scalp: A case report and review of literature. J Cancer Res Ther 2007, 3:240-243.
- [12] Weedon D: Cysts, sinuses and pits. Skin Pathology New York: Churchill-Livingstone Weedon D, 2 2002, 503-520.
- [13] Lee JY, Tang CK, Leung YS: Clear cell carcinoma of the skin: a trichilemmal carcinoma? J Cutan Pathol 1989, 16:31-39.