

PROLIFERATING TRICHILEMMAL CYSTS

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Summary: Proliferating trichilemmal cyst (PTC) is an uncommon lesion which most commonly occurs on the scalp of elderly women. Its importance lies in the fact that which they are misdiagnosed both clinically and histologically as epidermoid carcinoma. In this paper, we present two cases of PTC who had been initially thought to have epidermoid carcinoma.

Key Words: Proliferating trichilemmal cyst, trichilemmal cyst.

Proliferating trichilemmal cyst (PTC) or pilar tumor (PT) is an uncommon lesion which most commonly occur on the scalp of elderly women. Its diameter ranges 1 to 5 cm. but may be greater than 25 cm. The smaller lesions clinically resemble ordinary trichilemmal cysts which are generally misnamed as "sebaceous cysts" while the larger lesions tend to be multilobular and are frequently fungating and ulcerated, resembling epidermoid carcinoma (3).

PTC consists of the tumor cells which resemble those of trichilemmal cyst and show characteristic trichilemmal keratinization. Histologically, cellular atypia, occasional mitosis, premature keratinization (individual cell keratinization) and invasion into the deep dermis, may be present, and for this reason the lesions resemble a well differentiated epidermoid carcinoma (2).

An extensive review of literature in plastic surgery revealed only a few reports about PTC (4,9,10,12). Two cases of PTC are presented in this paper.

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Case reports

Case 1: A 35 year old women first noticed with a 15 to 20 year history of a number of cystic lesions on the scalp. The lesions gradually increased in size and number. In 1982 one of them is excised by a neurosurgeon in our hospital. The pathological report was read as "epidermal inclusion cyst". In 1983 she had an operation for excision of some cysts on her scalp and lymph node biopsy in the right side of the neck in another hospital. Pathological evaluation of these specimens were not available to the patient. She was first seen by us on March 23, 1988. The physical examination revealed multiple small sized cystic nodules on the scalp and forehead in addition to three large tumors on her scalp. Two of them were fungating bleeding lesions located on the right temporal (4x2.5x2 cm. in size) and parietal region (3x2x0.5 cm. in size). The third one was a large , multilobular, cyst like lesion located on right occiput. No lymph nodes were found in neck region. The rest of the physical and the routine laboratory findings were unremarkable. Clinical diagnosis was "sebaceous cyst" for cystic lesion and epidermoid carcinoma for the bleeding lesions. The incisional biopsies were reported as epidermoid carcinoma of the scalp. The lesions were widely excised including the periosteum or galea and some cysts on the neighbour skin. The defects were covered with transposition flap and skin graft alone.

The pathology reported a well differantiated epidermoid carcinoma of scalp and pilar cysts.

After a review of the literature and consultation, and revaluation with the pathologist, it was felt the lesions and the histologic appearance in this case represented the proliferating trichilemmal cyst. She has been followed up to day with no recurrence (Fig.1).



Figure 1. Preoperative and postoperative apperance of the lesions in first case.

Case 2: A 60 year old man was seen by us February 14 ,1989. Examination on the head and neck skin releaved three lesions; one on the left outer canthal region which diagnosed as basal cell carcinoma, one on the right side of the neck , and one on the back of scalp which diagnosed as epidermoid carcinoma, clinically (Fig.2). Incisional biopsies were made and pathological reports confirmed the diagnosis. The lesions were excised by frozen section examination, although they were read as previously, the diagnosis was made as "giant hair matrix tumor"on the paraffin block examination, for scalp lesion. After with consultation with pathology department, the diagnosis was made as PTC. The patient is free of the tumors up to day.

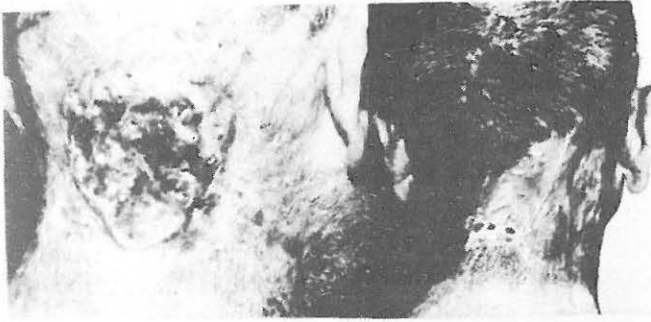


Figure 2. Preoperative and postoperative appearance of the lesions in second case.

Pathologic features: Grossly, the tumors were well circumscribed, lobulated and sharply demarcated from the surrounding tissues. On cut sections the tumors had usually both solid and small cystic areas, and tan-white in colour. Microscopically, the tumors consisted of well demarcated stratified squamous epithelia, supported by fibrous connective tissue. Occasional cells had atypical nuclei and there were sparse mitotic figures (Fig.3). Many sections showed cystic spaces filled with homogenous, eosinophilic keratin. Some of the epithelial cells had clear, foamy cytoplasm which stained strongly with the PAS method. Prior digestion with diastase gave negative staining. Calcification was observed within the keratinous material (Fig.4).

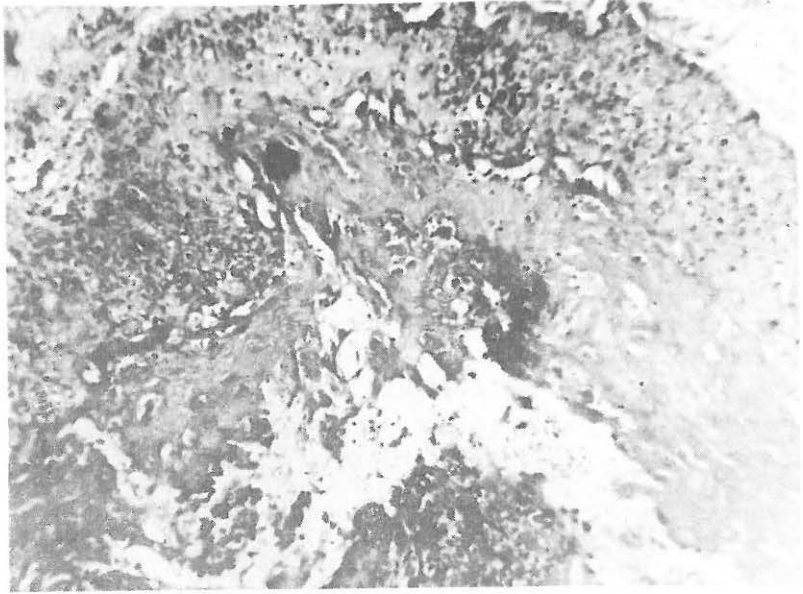


Figure 3. Case 1. Photomicrograph showing the "unique" features of the proliferating trichilemmal cyst -the abrupt mode of keratinization and calcification (H&E X 75).



Figure 4. Case 2: Photomicrograph showing epithelial clear cells and the abrupt mode of

Discussion

PTC has been reported under a variety of names including epidermoid carcinoma arising in sebaceous cyst, proliferating epidermoid cyst, invasive hair matrix tumor of the scalp, invasive pilomatrixoma, giant hair matrix tumor, pilar tumor, etc. (2). These all synonyms for the same lesion, refer to proliferative changes of trichilemmal cyst. The tumor origin is not clear. It is suggested that they arise from ruptured trichilemmal cyst by trauma. If the marsupialization does not occur after trauma the proliferation produces pseudoepitheliomatous changes which can be confused with a well differentiated epidermoid carcinoma (8).

Others believe in one original tumor for both trichilemmal cyst and PTC (5). The importance of PTC lies in the frequency with which they are misdiagnosed as epidermoid carcinoma both clinically and pathologically. Although a similar mistake was made in the evaluation of these patients as others (9), fortunately the wide excision of the tumors has been enough to cure them as advocated (10). The local recurrence is very rare and in only a few cases, metastasis to local lymph node have been reported (7).

In general PTC are considered as benign lesions or pseudo malignancies of the skin (3). Recently an additional report of metastasis to the regional lymph nodes (11) and local invasion to the deep tissues such as periosteum, calvaria and venous sinuses of the brain have been reported in the cases with large PTC (1,4,6). Therefore a more cautious evaluation of PTC, both clinically and pathologically should be done with taking into consideration that the biological behavior of the tumor is not always benign (6). Finally we agree with the others, on the conclusion that the clinical terms "sebaceous cyst" which misnamed for trichilemmal cyst, and "wen" which applies to wide range of scalp swellings (4) are not appropriate and they may cause a diagnostic and surgical dilemma when both the surgeon and pathologist are not experienced in PTC.

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