

## Pilar Sheath Acanthoma

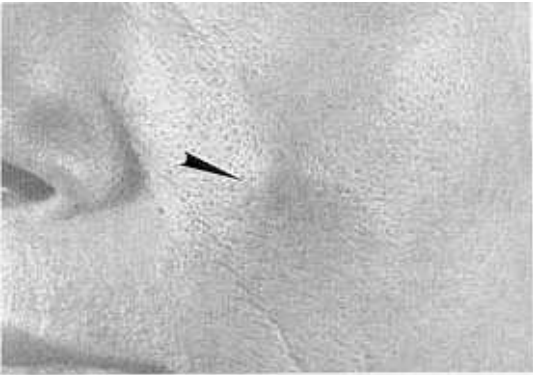
### —Report of a Case with Review of the Literature—

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*A 52-year-old male presented with a solitary asymptomatic, skin-colored nodule with a central pore on the skin of the left cheek of one year duration. An excisional biopsy was performed. The skin biopsy finding showed the typical histological picture of pilar sheath acanthoma. A description of the lesion and a review of the literature are given.*

**Key Words:** Pilar sheath acanthoma

Pilar sheath acanthoma is a rare, benign follicular hamartoma. Mehregan and Brownstein (1978) first reported nine cases of asymptomatic, skin-colored nodules mainly on the upper lip having a central cavity filled with keratin, and thereafter, 3 additional cases were reported (Bhawan 1979; Smolle and Kerl 1983; Vakilzadeh 1987). The lesion has a certain similarity to trichofolliculoma and dilated pore of Winer. The clinical and microscopic characteristics of a case of pilar sheath acanthoma are reported here.



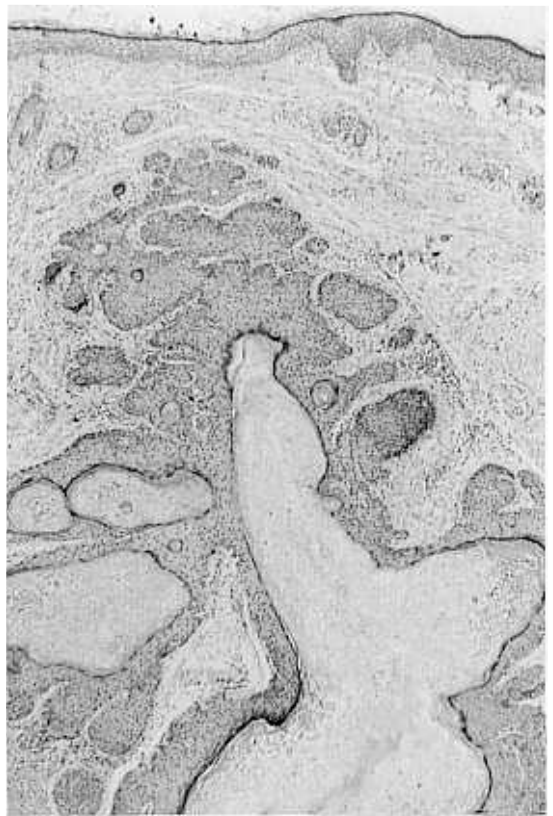
**Fig. 1.** Ill defined, slightly elevated, skin-colored nodule with a central punctum (arrowhead) on the left cheek.

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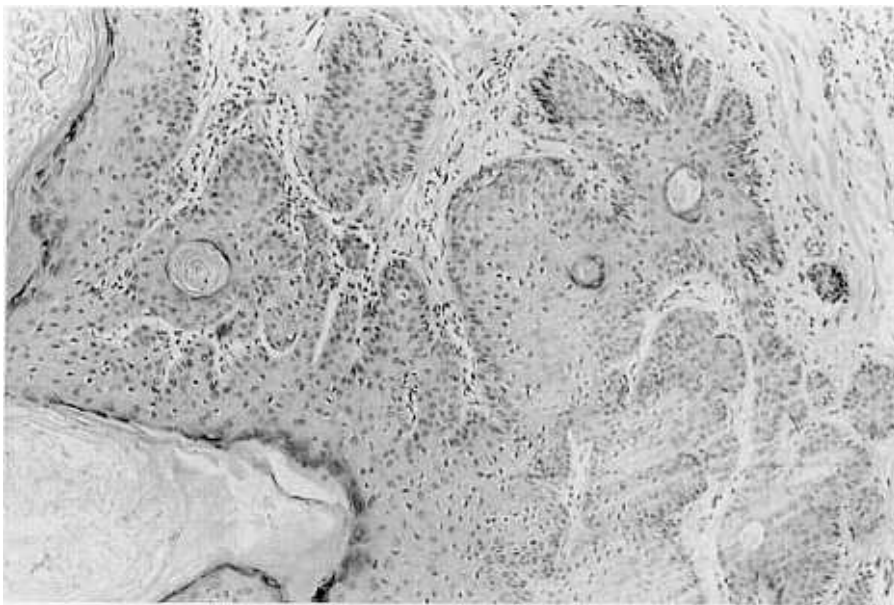
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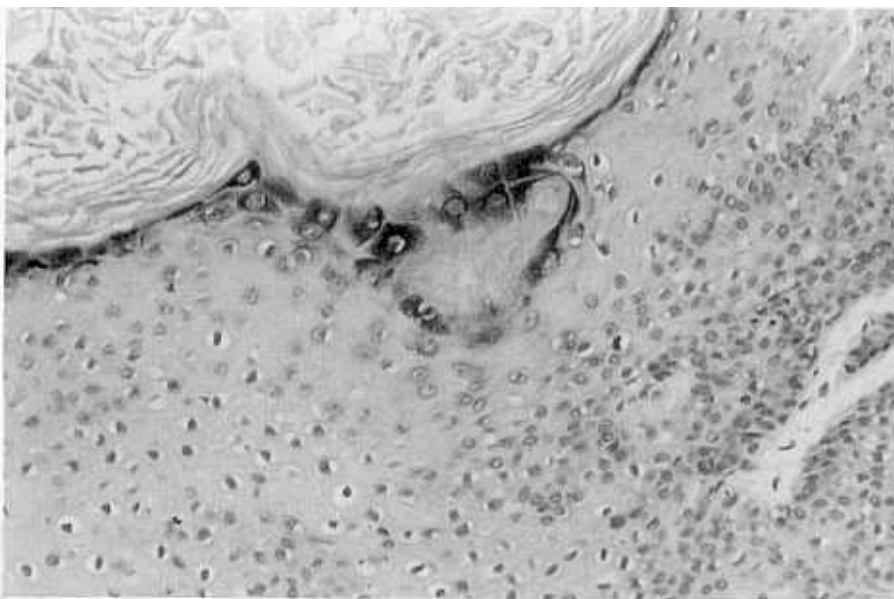
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**Fig. 2.** A branching central cystic cavity with keratin was seen in the dermis, and lobules of tumor cells extend radially from the cavity deep into the dermis (H & E stain,  $\times 40$ ).



*Fig. 3. The cyst wall is a stratified squamous epithelium, which is composed of numerous, well defined lobulated tumors (H & E stain,  $\times 100$ ).*



*Fig. 4. The cells which contained varying amounts of glycogen were polyhedral with peripheral palisading, and keratinization of the tumor epithelium was of the epidermoid type accompanied by keratohyaline granules (H & E stain,  $\times 400$ ).*

### CASE REPORT

A 52-year-old male presented with a solitary,

asymptomatic nodule on the left cheek that had been present for 1 year (Fig. 1). On clinical examination, a skin-colored nodule measuring 1cm in diameter was seen. It had a central pore-like opening plugged with

keratin. Under the clinical impression of epidermoid cyst, comedo or dilated pore, an excisional biopsy was performed. A central branching cystic cavity with keratin was seen in the center of the lesion. A communication between the cavity and the surface epidermis was observed. The cavity was lined with numerous well defined lobulated tumor masses that radiated from the wall of the central cystic cavity into the deep dermis (Fig. 2, 3). The cyst wall was composed of stratified squamous epithelium including the granular layer. The cells were polyhedral with peripheral palisading and on the PAS stain, variable amounts of glycogen were seen. Keratinization of the tumor epithelium was of the epidermoid type accompanied by keratohyaline granules (Fig. 4).

No organized fibrovascular stroma was seen around the tumor islands and mitotic activity and pleomorphism were not seen.

## DISCUSSION

Pilar sheath acanthoma usually presents on the upper lip in middle-aged patients of either sex but rarely on the forehead and the nasolabial fold. Clinically, solitary, asymptomatic, skin-colored nodules with a central porelike opening are seen for more than one year. Our case is compared with previously reported cases (Table 1).

In this case, a 52-year-old male presented with a solitary asymptomatic skin-colored nodule with a central pore on the skin of the left cheek of one year duration. This lesion shares some features with

trichofolliculoma and dilated pore and therefore should be differentiated from these (Table 2). The common histopathologic feature of these tumors is a central sinus, which contains keratinous material, lined by epithelium that is continuous with the surface epidermis.

In trichofolliculoma, small hair follicles radiate from the wall of the central cystic structure. Some of the small hair follicles are well differentiated and produce fine colorless hairs, and the lesion may have

**Table 2. Histopathological differential diagnosis**

Pilar sheath acanthoma	Dilated pore of Winer	Trichofolliculoma
Central cavity with branching	Central cavity	Central cavity
Acanthosis of cystic wall	Acanthosis of cystic wall with finger-like branching	Numerous secondary hair follicles
Absent	Hair & sebaceous glands	Hair & sebaceous glands
Absent	Well organized stroma	Well organized stroma
Mitosis & pleomorphism	Absent	Absent

Modified from Vakilzadeh, 1987

**Table 1. Summary of reported cases: Clinical and histologic data**

Authors	Number of reported cases	Age/Sex (years)	Site	Duration (years)	Histopathology
1978 Mehregan AH.	9	46-75/F(5) M(4)	Upper lip(8) forehead(1)	1-8	• Variable amount of glycogen
1979 Bhawan J.	1	42/M	Upper lip		• Variable amount of glycogen • Minimal mitotic activity & pleomorphism
1983 Smolle J.	1	69/F	Forehead		• Variable amount of glycogen • Small cyst
1987 Vakilzadeh F.	1	43/M	Nasolabial fold	1	• Mitosis & pleomorphism • Lymphohistiocytic infiltrate
1987 Present case	1	52/M	Lt. cheek	1	• Variable amount of glycogen • Focal foreign body reaction

sebaceous glands and a well organized stroma which surrounds the epithelial structures. In pilar sheath acanthoma, abortive hair follicle-like structures are present but do not show a high degree of differentiation; hair shafts are absent within the central cavity, a prominent fibrovascular stroma is lacking and a few small cysts within the mass of the cyst wall are seen. Dilated pore of Winer is a patulous follicle containing hair. Numerous small digitate projections radiate from the follicular epithelium into the surrounding connective tissue. This lesion can have hair or sebaceous glands and a well organized stroma is seen.

Five neoplasms may arise from the infundibular portion of the pilar apparatus. These include the tumor of follicular infundibulum, trichilemmoma, inverted follicular keratosis, dilated pore, and pilar sheath acanthoma. The infundibular nature of these neoplasms is supported by the following histologic features; 1) the superficial nature of the growth; 2) connection with the epidermis; 3) a pore-like opening; 4) proliferation of the outer sheath epithelium; 5) infundibular (epidermoid) keratinization and 6) connection with pilosebaceous structures (Mehregan 1984).

Based on the degree of maturation, a general classification of follicular tumors is ordered as hyperplasia, adenomatous and epitheliomatous. All of the five neoplasms arising from the infundibular por-

tion of the pilar apparatus are classified as the adenomatous type. Mehregan (1985) insisted that pilar sheath acanthoma was less mature than dilated pore of Winer, but more mature than the tumor of follicular infundibulum.

## REFERENCES

- Bhawan J: Pilar sheath acanthoma. *J Cutan Pathol* 6:438-440, 1979
- Chang MS, Cho BK, Houh W: A case of dilated pore of Winer. *Kor J Dermatol* 26:602-604, 1988
- Jang JC, Kim SC, Yoon MS, Chun SI: A case of dilated pore of Winer. *Kor J Dermatol* 27:108-111, 1989
- Mehregan AH, Brownstein MH: Pilar sheath acanthoma. *Arch Dermatol* 114:1495-1497, 1978
- Mehregan AH: Infundibular tumors of the skin. *J Cutan Pathol* 11:387-395, 1984
- Mehregan AH: Hair follicle tumors of the skin. *J Cutan Pathol* 12:189-195, 1985
- Mehregan AH: The origin of the adnexal tumors of the skin: a viewpoint. *J Cutan Pathol* 12:459-467, 1985
- Smolle J, Kerl H: Das pilar sheath acanthoma. *Dermatologica* 167:335-338, 1983
- Vakilzadeh F: Haarscheidenakanthem. *Hautarzt* 38:40-42, 1987