A Case of Trichoblastoma

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Trichoblastoma includes all benign follicular germinative cell tumors in skin. We presented a case of trichoblastoma which occurred on the scalp as a large pedunculated tumor. The tumor was composed of lobular aggregations of basaloid epithelial cells and numerous primitive papillary mesenchymal bodies. Stromal retraction was observed between the stroma adjacent to epithelial nests and surrounding normal dermis. Focal connection to the overlying epidermis was observed. The classification and terminology for the benign neoplasms with follicular differentiation was discussed. (Ann Dermatol 11(4) 286~288, 1999).

Key Words : Follicular germinative cell, Pedunculated tumor

In tumors with follicular differentiation, the terminology of histopathologic definition of these tumors are both complex and confusing. No single scheme has been universally accepted.

According to Headington's classification of hair germ tumors[1], they are divided into epithelial and mesenchymal trichogenic tumors. Epithelial trichogenic tumors are further subdivided into those which are purely epithelial (trichoblastoma), and into mixed epithelial-mesenchymal neoplasms which may show an early phase of stromal induction (trichoblastic fibromas), or a complete hair follicle formation (trichogenic trichoblastoma). Mesenchymal trichogenic tumors are refered to as trichogenic myxoma.

In 1993, Ackerman et al[2] introduced the term "trichoblastoma" as an inclusive term for all benign follicular germinative cell tumors. The definition encompassed all of the neoplasms refered to by Headington as trichoblastoma, trichoblastic fibroma, trichogenic trichoblastoma, and trichogenic myxoma.

Elder et al[3] described trichoblastoma as a synonym of trichoblastic fibroma.

In this report, we relied on the terminology of Ackerman et al[2]. We presented a case of trichoblastoma, and histologic classification of hair germ tumors is discussed.

CASE REPORT

A 77-year-old Korean woman was presented with a slowly growing 4 × 4 × 5-cm mass on the occipital scalp of 15 years duration.On physical examination, the mass was firm and covered by intact normal skin without hairs (Fig.1). The tumor was removed easily with a simple surgical excision.

Histological examination revealed a well-circumscribed deep dermal and subcutaneous tumor nodule. The lobular aggregation was composed of numerous basaloid epithelial nests and multiple primitive papillary structures with distinct peripheral palisading of nuclei (Fig. 2). These epithelial islands were embedded in an abundant fibrous stroma. Retraction clefts were frequently observed between whorling and encircling stroma adjacent to epithelial nests and the surrounding normal dermis (Fig. 2). In a portion of the tumor, focal connection to the overlying epidermis was observed

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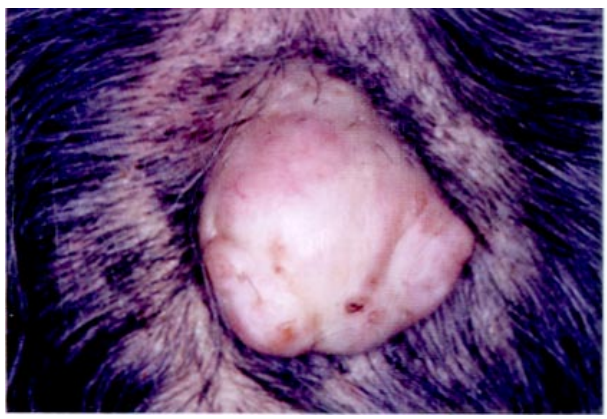

Fig. 1. Pedunculated tumor covered by hairless skin on the occipital scalp.

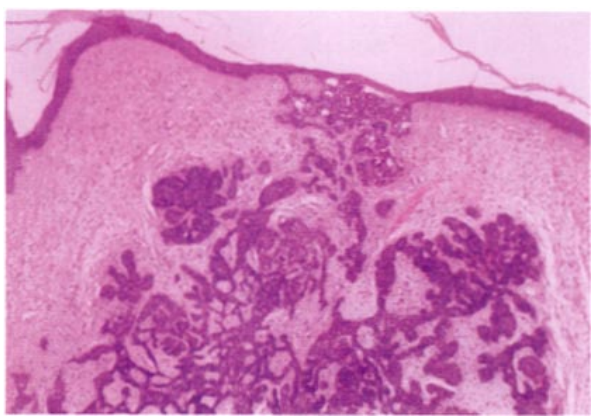

Fig. 3. Focal connection of tumor nests to the overlying epidermis (H & E stain, 40).

(Fig. 3). There was no connection to the epidermis in the other parts of the tumor. Tumor necrosis or stromal retraction between epithelial nests and adjacent stroma were not found. Trichoblastoma was diagnosed from the clinical and histologic findings.

DISCUSSION

Trichoblastoma was defined as all benign cutaneous neoplasms of various follicular differentiation by Ackerman et al[2]. The two common denominators for histologic diagnosis of trichoblastoma are: first, a benign neoplasm, as judged by its silhouette and second, composition mostly of follicular germinative cells.

Trichoblastoma occurs most commonly on the

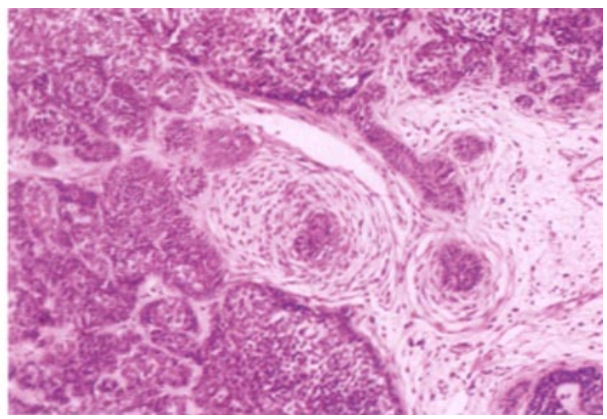

Fig. 2. Basaloid epithelial nests, strands and papillary mesenchymal bodies embedded in an abundant fibrous stroma (H & E stain, 100). Characteristic clefts are seen between the whorling stroma adjacent to the tumoral island and surrounding normal dermis.

scalp and face[2]. Clinically it is presented as small exophytic and endophytic, skin-colored nodules without ulceration. It is often greater than 1.0 cm at the time of surgical removal, and tends to "pop out" or to "shell out". This case was also located on the scalp and the tumor was shell out during operation. Histologically it is characterized by symmetrical growth, smooth borders, and sharp circumscription. The neoplastic cells were named follicular germinative cells because the palisaded columnar cells look similar to the cells of the germ or developing hair follicles. The stroma consists of many fibrocytes, thick or fibrillar collagen, and some follicular papillae. Characteristic retraction clefts are observed within their stroma rather than between stroma and epithelial tumor nests in paraffin-processed tissue sections. Histopathologic findings in our case met these criteria and trichoblastoma was diagnosed. In our case, tumor nests showed focal connection with the overlying epidermis. Ackerman et al[2] described that many of trichoblastoma are continuous with one or more infundibula although not all of them connect directly to the surface epithelium. It seemed that the epidermal connection was still an unusual finding in a recent review of 30 cases[4].

We used the term "trichoblastoma" according to Ackerman et al's definition[2] because it was considered to be more appropriate to describe the histologic findings of our case. Trichoblastic fibroma of Headington's classification1 could be the initial

diagnosis from the histological findings of follicular differentiation with minimal mesenchymal induction and formation of follicular papillae. But, trichoblastic fibroma is defined as a tumor which lacks epidermal connection1,[5-8]. Elder et al's description[3] adds confusion in diagnosing this case. They viewed trichoblastoma and trichoblastic fibroma as identical tumors. Although we diagnosed this case initially as a trichoblastic fibroma with unusual epidermal connectiona[7], trichoblastoma was suggested to be appropriate term.

In Korean literature, a few cases of trichoblastic fibroma[8,9] and trichoblastoma[10,11] have been reported. Trichoblastic fibroma[8,9] were described under the criteria of Headington's classification1 and epidermal connection was not observed also in these cases.

Nodular basal cell carcinoma (BCC) may resemble trichoblastoma because both tumors show palisaded basaloid columnar cells at the periphery of aggregations[2]. In this case, BCC was excluded by the presence of many follicular differentiations and clefts between adjacent stroma and surrounding normal dermis, and absence of clefts between aggregated neoplastic basaloid cells and stroma[2]. Well-circumscribed smooth borders, prominent stroma, and absence of necrosis en masse and lymphocytic infiltrates also suggested trichoblastoma, not BCC.

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