A Case of Trichogerminoma

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Trichogerminoma is a rare neoplasm which was first described in 1992 and there is still controversy over its inclusion into the spectrum of trichoblastoma. A 79-year-old woman presented with a 5-year history of an asymptomatic nodule on the left posterior neck. Histologically, the lesion revealed a well-demarcated deep dermal nodule surrounded by a pseudocapsule. The tumor was composed of lobules with basophilic cells and some of the lobules displayed a distinctive pattern of densely packed 'cell balls' with peripheral condensation. Immunohistochemically, the tumor cells showed zonal CK5/6 immunoactivity in contrast with the negatively stained 'cell balls'. These characteristics were compatible with the diagnosis of trichogerminoma. We report here on a rare case of a hair germ tumor called trichogerminoma. (Ann Dermatol 22(4) 431~434, 2010)

-Keywords-
Cell ball, Hair germ tumor, Trichoblastoma, Trichogerminoma

INTRODUCTION

Tumors with hair follicular differentiation are difficult to differentiate due to the variety and similarity of the lesions. Trichogerminoma is an uncommon tumor that originates from hair germ cells and it was first reported on by Sau et al.\(^1\) in 1992. Kazakov et al.\(^2\) showed the immunohistochemical uniqueness of trichogerminoma and the tumor was confirmed as being a unique entity, yet there is still controversy about this. Therefore, additional observation and research are needed to clarify its features.

CASE REPORT

A 79-year-old woman presented with a 5-year history of an asymptomatic solitary nodule on the left posterior neck. It was a non-ulcerated, hemispheric, well-demarcated, movable nodule with no subjective symptoms (Fig. 1). The clinical diagnosis was epidermal cyst. Excisional biopsy was performed and the lesion was totally removed. The gross examination of the surgical specimen demonstrated the mass to be 10×10 mm in size with a maximum depth of 8 mm. There was no internal necrosis or hemorrhage. Histological examination revealed a sharply demarcated, deep dermal and subcutaneous tumor surrounded by a pseudocapsule (Fig. 2A). The tumor had no connection to the overlying epidermis and the tumor consisted of variously sized nodules separated by a fibrocytic stroma. There was no cleft between the tumor nodules and stroma. The nodules were composed...
of smaller lobules that were made up of basophilic cells. Characteristically, within most of lobules, round nests or cell balls formed by dense, concentrically arranged basaloid cells were seen. Pale cells with prominent large nuclei and dispersed chromatin occupied the central area of the nests (Fig. 2B). Typical mitoses were frequently present in these areas. The outer layer of the lobules was composed of undifferentiated columnar basophilic cells that displayed peripheral palisading. In some areas, cords of germ cells extended from the periphery of the lobules and formed buds into the stroma. In other areas, the basaloid cells showed keratinization with pyknotic nuclei and nuclear debris near the center of the lobule that resembled infundibular epithelium and these cells had developed keratinous microcysts (Fig. 2C). On the immunohistochemical examination, the tumor cells showed CK5/6 and p63 immunoreactivity, and they stained negatively for carcinoembryonic antigen (CEA). The peripheral rims of the cell balls were prominently stained with anti-CK5/6, whereas the center of the cell balls showed weaker staining with anti-CK5/6 (Fig. 2D). Most of the tumor cells were strongly stained with anti-p63 (data not shown). The dendritic cells scattered within the lobules and the stroma showed reactivity for S-100. The peripheral tumor cells and the hyaline-like thin membrane around some lobules were positive on periodic acid-Schiff staining. There was no recurrence of tumor during 6-months follow up after complete excision.

**DISCUSSION**

Trichogerminoma is a rare tumor of hair germ epithelium, and it was first described by Sau et al.¹ in 1992. Most