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Journal

Dermatology Online Journal, 27(1)

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Publication Date

2021

DOI

10.5070/D3271052039

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Peer reviewed

Apocrine hidrocystoma: a slowly growing postauricular translucent nodule

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Abstract

Apocrine hidrocystoma is a benign, cystic proliferation of the apocrine sweat gland that may present commonly on sun-exposed areas of the head and neck. However, given its location and features, apocrine hidrocystomas may often be confused with malignant tumors such as basal cell carcinomas or primary cutaneous mucinous carcinomas. Herein, we present an unusual case of an apocrine hidrocystoma presenting in the postauricular region and highlight the importance of histopathological examination of cystic tumors on the periauricular area.

Keywords: apocrine hidrocystoma, dermatology, postauricular, nodular lesions, surgery, sweat glands

Introduction

Apocrine hidrocystoma is a benign, cystic proliferation of the apocrine sweat gland. Typically, it presents as single, adenomatous, dome-shaped, translucent, 3-15 millimeters nodule, with a gray or bluish pattern and firm composition. The most common location is on the eyelid in individuals 30 to 70 years of age [1,2]. Apocrine hidrocystomas are rarely reported in the postauricular region [3]. Since they are more common on sun-exposed areas of the head and neck, apocrine hidrocystomas may be confused with malignant tumors such as basal cell carcinoma (BCC) or primary cutaneous mucinous carcinoma (PCMC), [4]. This case highlights the

importance of histopathological examination of cystic tumors on the periauricular area.

Case Synopsis

A middle-aged previously healthy woman presented with an asymptomatic right postauricular lesion, that progressed to a nodule over 10 years (**Figure 1A**). Physical examination demonstrated a translucent, blue-gray nodule with three rounded projections and a fibroelastic consistency in the right postauricular region measuring 2.3×2cm in diameter. The well-defined nodule was not adherent to deep planes. A similar papule was present superiorly. A biopsy was performed and histopathological examination revealed a cystic, multiloculated nodule, covered by two cell layers, an internal layer of cuboidal cells and an external layer of myoepithelial cells (**Figure 1B**).

Case Discussion

To differentiate apocrine hidrocystoma from cystic BCC, epidermal inclusion cyst, and PCMC, histological and physical characteristics must be considered. Characteristic histological examination of an apocrine hidrocystoma reveals a cystic lesion contained within a fibrotic layering and between an inner layer of secreting cuboidal cells as well as an outer layer of myoepithelial cells [1,2]. Immunohistochemically, this entity may also be positive for periodic acid-Schiff, human milk fat



Figure 1. **A)** A translucent, blue-gray nodule in the right postauricular area. **B)** A cystic nodule with an internal layer of cuboidal cells and an outer layer of myoepithelial cells in the dermis. H&E, 40 \times . **C)** Closer magnification reveals an inner layer of cuboidal cells with basally placed nuclei and flattened outer myoepithelial layer, consistent with a mature apocrine epithelium. H&E, 400 \times .

globules, gross cystic disease fluid protein 15, cytokeratin 7 (CK7), and cytokeratin 18. It is negative for S-100 protein staining, as opposed to eccrine hidrocystomas [5,6]. Primary cutaneous mucinous carcinoma may also stain positively for CK7, and uniquely, p63, helping to make the diagnosis of PCMC versus metastatic lesions from a gastrointestinal primary tumor. However, atypical basaloid cells “floating” in “lakes of mucin” are diagnostically seen in PCMC and not in hidrocystomas [7,8]. With the clinicopathologic diagnosis in our case, the pathologist deemed special stains unnecessary. Presence of epithelial hyperplasia with intracystic papillary proliferation can also help differentiate this lesion from eccrine hidrocystomas [1].

Location and histopathology can help differentiate epidermal inclusion cysts from apocrine hidrocystomas. For example, epidermal inclusion cysts often arise from areas with hair follicles and from epithelium between the sebaceous gland and

arrector pili muscle [9]. Histopathology may demonstrate basal epithelial cells in a palisading pattern with staining of keratin in epidermal inclusion cysts. When comparing cystic BCC with apocrine hidrocystomas, histopathology is useful. Cystic BCC is a rare variant of nodular BCC that is characterized by peripheral basaloid cells, fibro-myxoid stroma, and mucin-filled cysts on histology [10]. The lack of basaloid cells and fibro-myxoid stroma in our patient’s histology ruled out BCC. A clinical pearl that helps pre-biopsy diagnosis is that when hidrocystoma is biopsied, the papule or nodule deflates and shrinks as soon as the biopsy blade touches it, whereas BCC, cysts, and PCMC tend to stay firm and gelatinous during biopsy.

Treatment of apocrine hidrocystomas can be approached medically or surgically. Excision, incision and drainage, or carbon dioxide laser are potential avenues for the management of these lesions [2]. Less commonly used therapy options include trichloroacetic acid injection and aspiration after cyst perforation, hypertonic glucose sclerotherapy after cyst perforation, electrodesiccation, and radiofrequency ablation [1]. Surgical excision with narrow margins was performed for our patient to complete the removal of the tumors.

Conclusion

Although histological presentation of this lesion was typical for an apocrine hidrocystoma, the atypical location added several other entities to the differential diagnosis. Thus, dermatologists, when appropriate, should consider additional histopathological examination with immunohistochemistry to narrow the differential diagnoses.

Potential conflicts of interest

The authors declare no conflicts of interests.

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