Scalp Nodule With Copious Fluid

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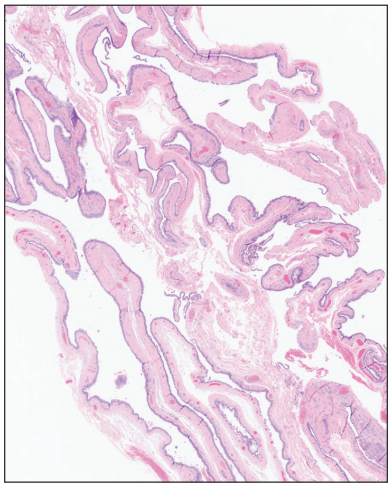

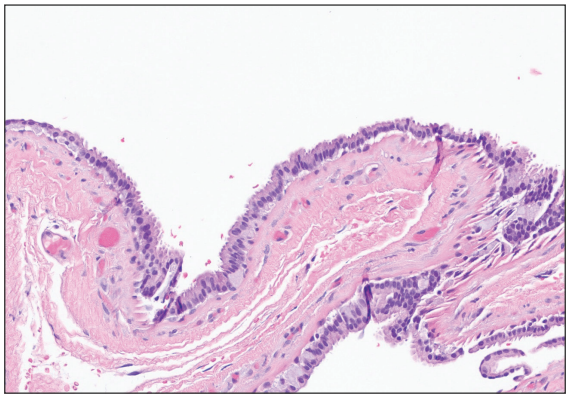

H&E, original magnifications ×2 and ×20.

A 48-year-old woman presented to the dermatology clinic with a suspected cyst on the occipital scalp. The patient noted that the lesion had been present for years and denied any pain, pruritus, or drainage from the site. Physical examination revealed a soft, flesh-colored, subcutaneous nodule measuring 4.2×3.2 cm on the midline occipital scalp. During excision, the lesion drained a copious amount of thin yellowish fluid.

THE BEST **DIAGNOSIS IS:**

a. apocrine hidrocystoma
b. epidermal inclusion cyst
c. lipoma
d. pilar cyst
e. tubular apocrine adenoma

PLEASE TURN TO PAGE 199 FOR THE DIAGNOSIS

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THE **DIAGNOSIS:** Apocrine Hidrocystoma

Histopathology of the excised nodule revealed a partially collapsed, multiloculated dermal cyst lined with apocrine cells, which was consistent with a diagnosis of apocrine hidrocystoma. Apocrine hidrocystomas are cysts that range from flesh-colored to blue-black and most commonly manifest as solitary lesions on the face, particularly near the eyelids.[1,2] Apocrine hidrocystomas typically range from 1 to 10 mm in diameter and contain fluid that can be colorless, yellow-brown, or blue-black.[1,2] Apocrine hidrocystomas usually are reported between the ages of 30 and 70 years and have no sex predilection.[3]

Apocrine hidrocystomas are thought to develop from adenomatous growth of apocrine sweat gland coils.[4] The term *apocrine hidrocystoma* has been used interchangeably with *apocrine cystadenoma*, though some investigators have recommended using the latter term only for lesions with true papillary projections.[5] Definitive diagnosis is obtained through histopathology, which typically shows unilocular or multilocular cystic spaces in the dermis lined by an apocrine secretory epithelium. These secretory cells often demonstrate decapitation secretion and apical snouting. The cyst wall may send pseudopapillary projections into the cystic cavity.[1,2] While apocrine and eccrine hidrocystomas previously were recognized as separate entities, it has been suggested that so-called eccrine hidrocystomas are truly apocrine in nature, with a cyst wall that is compressed by the cyst contents.[4]

Apocrine hidrocystomas are benign and do not require treatment; however, they may be removed for cosmetic purposes, most commonly via surgical excision. Lesions treated with needle puncture as monotherapy frequently recur. Other successful methods for removal include cyst puncture followed by hypertonic glucose sclerotherapy, trichloroacetic acid injection, botulinum toxin A injection, or CO_2 laser treatment.[3,6]

Several clinical and histopathologic findings can distinguish between apocrine hidrocystomas and other diagnoses in the differential. Lipomas are common benign tumors composed of mature fat that typically manifest as solitary, painless, soft nodules with a normal overlying epidermis. They frequently are distributed on the neck, arms, legs, and buttocks. While the differential for our patient initially included lipoma, these lesions do not contain or release fluid, which was present in our patient. On histopathology, lipoma shows a uniform population of mature fat cells with small, uniform, and eccentric nuclei (Figure 1).[7]

Epidermal inclusion cysts are derived from the follicular infundibulum and commonly are found on the face and upper trunk. They manifest as flesh-colored dermal nodules and may have a visible punctum. As opposed to the cystic cavities lined with apocrine cells seen in apocrine hidrocystomas, epidermal inclusion cysts are lined with a stratified squamous epithelium, are filled with laminated keratin, and have a visible granular layer (Figure 2).[8]

Pilar cysts, also known as trichilemmal cysts, clinically resemble epidermal inclusion cysts but are derived from the outer root sheath of hair follicles, manifesting as flesh-colored dermal nodules almost always found on the scalp. On histopathology, pilar cysts are lined with stratified squamous epithelial cells without a visible granular layer and are filled with compact eosinophilic keratin (Figure 3).[8]

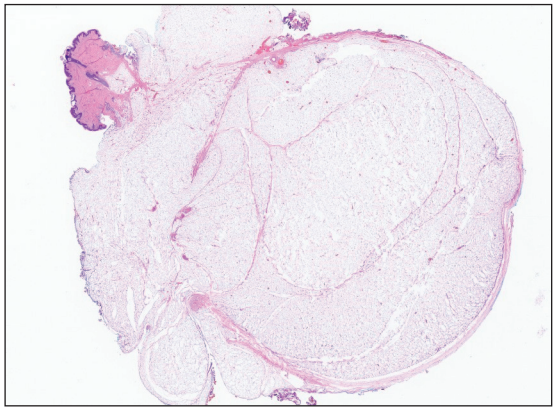

FIGURE 1. Proliferation of mature adipocytes in a lipoma (H&E, original magnification ×4).

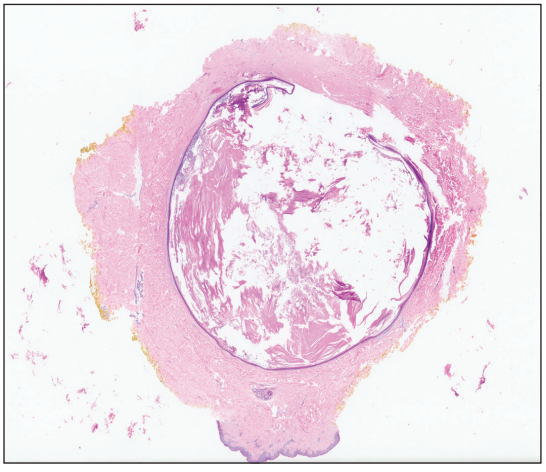

FIGURE 2. Epidermal inclusion cysts are filled with laminated keratin and are lined with a stratified squamous epithelium (H&E, original magnification ×4).

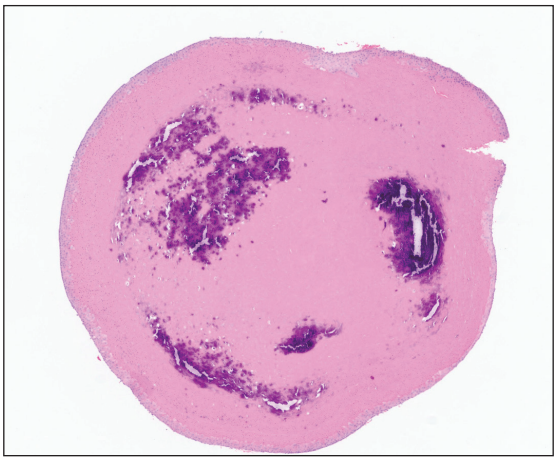

FIGURE 3. Compact eosinophilic keratin with some foci of calcification in a pilar cyst (H&E, original magnification ×4).

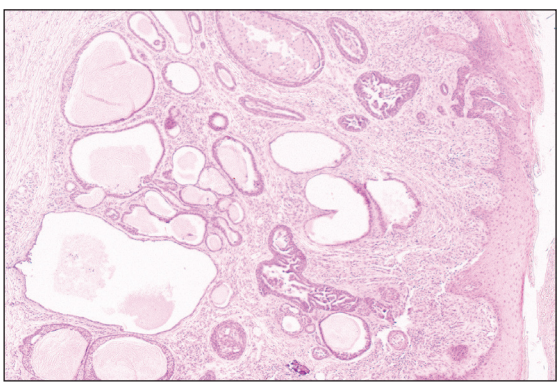

FIGURE 4. Tubular apocrine adenoma demonstrating tubular structures in the dermis lined with apocrine cells (H&E, original magnification ×4).

Tubular apocrine adenomas are benign neoplasms of the apocrine glands that manifest as smooth nodules. They are within the same spectrum as papillary eccrine adenomas, appearing more frequently on the legs and less frequently on the face and scalp.[9] Histopathology generally demonstrates well-circumscribed lobules of tubular structures in the dermis. Similar to apocrine hidrocystomas, tubular apocrine adenomas will demonstrate an inner layer of columnar apocrine cells with decapitation secretion, but the tubular architecture helps differentiate it from other adnexal tumors (Figure 4).[10]

The clinical manifestation of the apocrine hidrocystoma in our patient was unusual due to its size and location. Apocrine hidrocystomas rarely are found on the scalp, with few other cases found in the literature. To our knowledge, this is the largest apocrine hidrocystoma found on the scalp to date, although there is at least 1 other published case of an apocrine hidrocystoma on the scalp measuring at least 3 cm in diameter.[11] Our case highlights the importance of recognizing atypical manifestations of apocrine hidrocystomas, as a lesion on the midline scalp that discharges a thin fluid might raise initial concern for an intracranial connection. Awareness of atypical manifestations of common lesions can expand dermatologists' differential diagnoses and help them to reassure patients.

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