

Multiple eccrine axillary hidrocystomas



Divya Khosla, BA, Roberto A. Novoa, MD, Miesha Merati, DO, Kord Honda, MD, and Meg R. Gerstenblith, MD
Cleveland, Ohio

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INTRODUCTION

Hidrocystomas are small, thin-walled, benign cystic growths of the sweat glands, typically found on the face, and most often occurring on the periorbital and malar skin. These lesions may proliferate and increase in size in summer months and warm conditions. We report a case of multiple hidrocystomas of an eccrine morphology located on the axillae.

CASE REPORT

A 72-year-old white woman with an unremarkable medical history presented with a 7-month history of a cutaneous eruption that started in the left axilla and progressed to involve her right axilla. She reported mild irritation at the involved sites but denied other symptoms. Examination found several yellow papules (Fig 1). Dermoscopy found a homogeneous yellow appearance. A punch biopsy found several thin-walled cysts composed of predominantly 2 layers of small, cuboidal epithelial cells present in the mid- and reticular dermis consistent with hidrocystomas (Fig 2, A and B). Step sectioning of the tissue block found a consistent eccrine morphology throughout the lesion.

DISCUSSION

Ranging from 1 to 6 mm in size, eccrine hidrocystomas are benign cystic tumors that may present as either solitary brown-blue dome-shaped papules or as multiple confluent skin-colored papules typically arising on the periorbital and malar skin. The multiple variant worsens in hot weather and occurs more often in women. Given the number of lesions, exacerbation with perspiration, and rapid improvement with treatment, the multiple variant may



Fig 1. Axillary eccrine hidrocystomas. Involving the patient's bilateral axillae are dozens of confluent, smooth, yellow- to flesh-colored papules.

represent dilation and ectasia rather than neoplasia. Solitary hidrocystomas tend to be larger, affect both genders equally, and do not fluctuate as rapidly with climate changes. The presence of multiple hidrocystomas has been associated with focal dermal hypoplasia and in Graves' disease has been theorized to be secondary to hyperhidrosis owing to hyperthyroidism.^{1,2} The most common dermoscopic patterns of solitary hidrocystomas are homogenous blue-gray lesions, and those of multiple hidrocystomas are symmetric homogenous areas, often with serpentine branched vessels.³

Histologic examination finds small, tense unilocular blue cysts lined by cells displaying either an eccrine or apocrine morphology. Controversy exists regarding the distinction between eccrine and apocrine hidrocystomas, with retrospective studies finding tumors previously thought to be eccrine hidrocystomas to display apocrine features on step sectioning.⁴ Additionally, immunohistochemical

From the Department of Dermatology, University Hospitals Case Medical Center, Case Western Reserve University School of Medicine.

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Correspondence to: Meg R. Gerstenblith, MD, Department of Dermatology, 11100 Euclid Avenue, Lakeside 3rd Floor, Cleveland, OH 44106. E-mail: meg.gerstenblith@uhhospitals.org.

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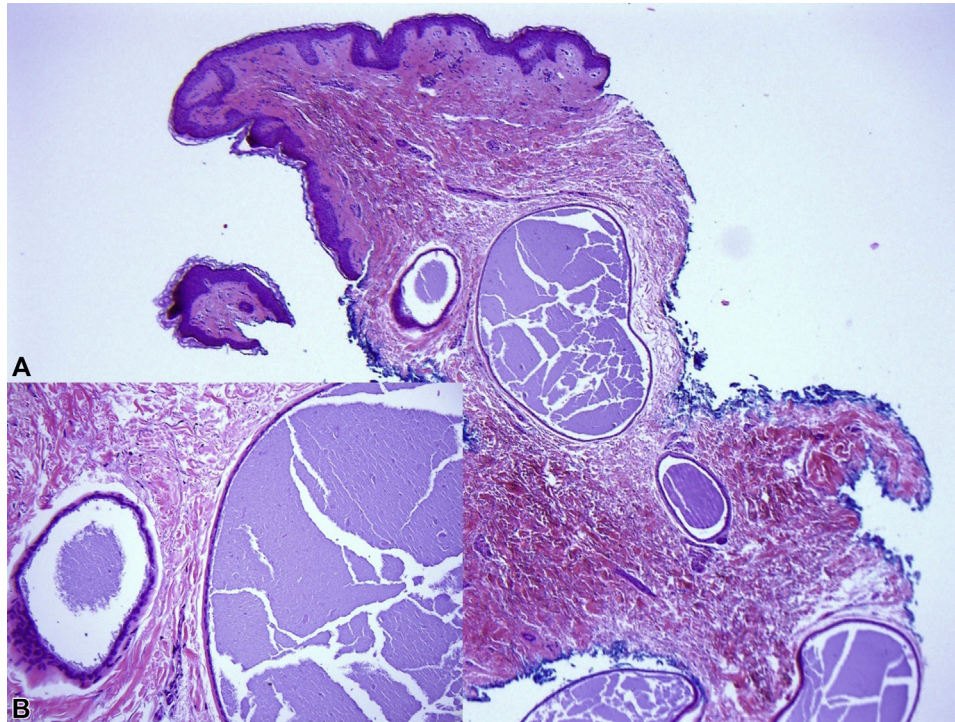


Fig 2. **A** and **B**, Eccrine hydrocystomas. Histologic examination found several thin-walled cysts predominantly composed of 2 layers of small, cuboidal epithelial cells in the mid- and reticular dermis, consistent with eccrine hydrocystomas. Step sectioning of the lesion found a consistent eccrine appearance with no apocrine differentiation. (Hematoxylin-eosin stain; original magnifications: **A**, $\times 2$; **B**, $\times 10$.)

studies of some purported eccrine hydrocystomas have displayed keratin staining more consistent with the secretory coil of apocrine sweat glands.⁵

Although solitary hydrocystomas may be treated with drainage or excision, treatment of multiple hydrocystomas begins with either aluminum chloride or anticholinergic topical medications and the avoidance of hot, humid environments. Other modalities such as oral anticholinergic agents, pulsed dye and carbon dioxide laser, botulinum toxin, electrodesiccation, and excision have also been used.⁶ Results of thyroid function testing in our patient were unremarkable. Given her symptoms, the patient was treated with aminolevulinic acid and pulsed dye laser, which did not result in significant improvement. She declined further treatment.

CONCLUSION

Here we describe multiple hydrocystomas with an eccrine morphology occurring in the axillae. There are fewer than 10 reported cases of eccrine hydrocystomas presenting in unusual locations, including the external ear canal, middle ear in association with a pre-auricular fistula, leg, scalp, and vulva.^{7,8} There was 1 previously reported case of

axillary hydrocystomas, but these were of an apocrine morphology.⁹

REFERENCES

1. Kim YD, Lee EJ, Song MH, Suhr KB, Lee JH, Park JK. Multiple eccrine hydrocystomas associated with Graves' Disease. *Int J Dermatol.* 2002;41:295-297.
2. Haro-Garcia M, Corzon-Pereira T, Morales-Puebla JM, et al. Eccrine hydrocystoma of the external auditory canal. *Acta Otorrinolaringol Esp.* 2015;66(4):241-242.
3. Zaballos P, Serrano P, Flores G, et al. Dermoscopy of tumours arising in naevus sebaceous: a morphological study of 58 cases. *J Eur Acad Dermatol Venereol.* 2015;29(11):2231-2237.
4. Simón RS, Sánchez Yus E. Does eccrine hydrocystoma exist? *J Cutan Pathol.* 1998;25:182-184.
5. de Viragh PA, Szeimies RM, Eckert F. Apocrine cystadenoma, apocrine hydrocystoma, and eccrine hydrocystoma: three distinct tumors defined by expression of keratins and human milk fat globulin 1. *J Cutan Pathol.* 1997;24:249-255.
6. Smith DR, Mathias T, Mutasm DF. Multiple eccrine hydrocystomas treated with glycopyrrolate. *J Am Acad Dermatol.* 2008;59(5):S122-S123.
7. Wu KC, Lin HC, Chang KM. External auditory canal apocrine hydrocystoma. *Otol Neurotol.* 2011;32:e54-e55.
8. Lara-Sanchez H, Vallejo-Valdezate LA, Zegarra-Molina M, et al. Eccrine hydrocystoma in the middle ear associated with a preauricular fistula. *Otol Neurotol.* 2013;34(7):e109-e110.
9. Obaidat NA, Ghazarian DM. Bilateral multiple axillary apocrine hydrocystomas associated with benign apocrine hyperplasia. *J Clin Pathol.* 2006;59:779.