

Therapeutic treatment of multiple eccrine hidrocystomas with topical glycopyrronium tosylate 2.4% solution



Brianna Olamiju, BA,^a Guari Panse, MD,^b and Marcus McFerren, MD, PhD^c
New Haven and Orange, Connecticut

Key words: anticholinergics; eccrine hidrocystomas; glycopyrronium tosylate; topical; treatment.

INTRODUCTION

Eccrine hidrocystomas are uncommon cystic lesions that develop benign tumors in sweat glands, mostly in the malar, periorbital, chest, axilla, and neck areas. Ranging from 1 to 6 mm in diameter, they typically present in adults, with a predominance for women.¹ They can enlarge in hot conditions and their treatment may be especially challenging.² We report a case of multiple eccrine hidrocystomas on the periorbital area in a middle-aged woman successfully treated with topical glycopyrronium tosylate 2.4% solution in cloth towelette.

CASE REPORT

A woman in her late 40s with a history of hypothyroidism presented with an asymptomatic papular eruption over the left periorbital area that had been present for approximately 1 year. The patient reported that the lesions had recently expanded and were not treated previously. Physical examination revealed multiple, dome-shaped, flesh-colored, 1- to 2-mm papules (Fig 1, A). Histologic examination showed a cystic lesion within the dermis, lined by 1 to 2 layers of small, basophilic, cuboidal epithelial cells, consistent with the diagnosis of eccrine hidrocystoma (Fig 2). Treatment with topical glycopyrronium tosylate 2.4% solution in cloth towelette was tested, with instructions for the patient to apply the solution to the site every day sparingly until the papules faded. She reported significant clinical improvement within

1 week (Fig 1, B) and she tolerated the treatment well, without any adverse effects. The patient has maintained resolution of the hidrocystomas with a regimen of applying the topical solution to the affected site 2 to 3 times per week.

DISCUSSION

A variety of nonpharmacologic treatments have been used for eccrine hidrocystomas with varying rates of success, including needle puncture, electrodesiccation, carbon dioxide laser vaporization, and laser treatment.¹ Because eccrine activation is driven by cholinergic pathways,³ anticholinergic medications are reasonable treatment options for patients with eccrine hidrocystomas that are bothersome. Oral anticholinergic medications, including oxybutynin and glycopyrrolate, have been reported to treat hidrocystomas successfully.^{2,4} However, oral medications pose significant risk of systemic adverse effects, such as dry mouth, blurred vision, and vomiting.

Topical, rather than oral, anticholinergic medications may represent the safest long-term therapy for eccrine hidrocystomas because of the lower likelihood of systemic absorption. Sanz-Sánchez and colleagues³ performed a head-to-head study to compare the efficacy of 3 topical anticholinergic medications (1% atropine sulphate, 40% scopolamine butylbromide, and 1% ipratropium bromide) in patients with multiple hidrocystomas and found all to be well tolerated,

From the Yale University School of Medicine,^a and Departments of Dermatology and Pathology, Yale University School of Medicine, New Haven^b; and The Derm Group of Greater New Haven, Orange.^c

Funding sources: None.

Conflicts of interest: Dr McFerren has served on the Dermira speakers bureau. Dr Panse and Ms Olamiju have no conflicts of interest to declare.

Correspondence to: Marcus McFerren, MD, PhD, The Derm Group of Greater New Haven, Orange, CT. E-mail: marcus.mcferren@gmail.com.

JAAD Case Reports 2020;6:369-71.
2352-5126

Published by Elsevier on behalf of the American Academy of Dermatology, Inc. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

<https://doi.org/10.1016/j.jidcr.2020.02.015>



Fig 1. Multiple eccrine hidrocystomas on the left forehead and left cheek. **A**, Before therapy. **B**, Response after 1 week of daily application of topical glycopyrronium tosylate 2.4% solution.

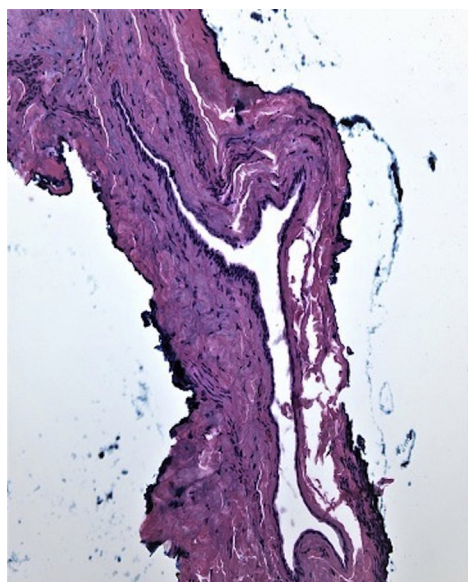


Fig 2. Lesional biopsy specimen showing a cystic lesion within the dermis, lined by 1 to 2 layers of bland ductal epithelium. (Hematoxylin-eosin stain; original magnification: $\times 200$.)

although topical ipratropium was the only medication to result in complete remission. Topical anticholinergic glycopyrrolate 0.5% in aqueous solution has been reported in the literature only once previously, in 2010, to successfully treat eccrine hidrocystomas in a patient with concurrent craniofacial hyperhidrosis.⁵

The topical glycopyrronium tosylate 2.4% solution in cloth towelette used by our patient was approved in June 2018 by the Food and Drug Administration as the first and only topical anticholinergic to treat primary axillary hyperhidrosis in adult and pediatric patients aged 9 years and older.⁶ To the best of our knowledge, this is the first case report to demonstrate resolution of multiple eccrine hidrocystomas with this novel application method of glycopyrronium

tosylate. Because this drug is a topical anticholinergic, there is a risk of blurred vision, mydriasis, and dry mouth with periorcular or perioral absorption.⁷ For this reason, use of disposable gloves has been proposed as a safety measure to reduce manual transfer.⁸ The patient described in this report has not noted any systemic anticholinergic adverse effects and continues to maintain clearance with targeted facial application 2 to 3 times per week.

Due to its clinical promise, accessibility, favorable safety profile, unique mechanism of action, and ease of application for patients, we believe that 2.4% topical glycopyrronium tosylate in cloth towelette should be considered by physicians treating this condition. It is our hope that the efficacy of this medication in our patient will prompt further study of this drug for treating multiple eccrine hidrocystomas in larger sets of patients.

We thank the patient for allowing us to include her photograph in the manuscript.

REFERENCES

1. Sarabi K, Khachemoune A. Hidrocystomas—a brief review. *MedGenMed*. 2006;8:57.
2. Smith DR, Mathias T, Mutasm DF. Multiple eccrine hidrocystomas treated with glycopyrrolate. *J Am Acad Dermatol*. 2008; 59(5):S122-S123.
3. Sanz-Sánchez T, Pérez-Álvarez M, Ortiz-del-Portillo A, Daudén E. Topical anticholinergic drugs in the treatment of multiple hidrocystomas: a cross-over, randomized, double-blind, placebo-controlled study. *J Eur Acad Dermatol Venereol*. 2017; 31:e90-e92.
4. Ayhan E. A case of multiple eccrine hidrocystoma successfully treated with oral oxybutynin. *Dermatol Ther*. 2015;28(3):107-109.
5. Garnacho Saucedo GM, Moreno Jimenez JC, Jimenez Puya R, Rodríguez Bujaldon A. Therapeutic hotline: topical glycopyrrolate: a successful treatment for craniofacial hyperhidrosis and eccrine hidrocystomas. *Dermatol Ther*. 2010;23(1):94-97.
6. Glaser DA, Hebert AA, Nast A, et al. A 44-week open-label study evaluating safety and efficacy of topical glycopyrronium tosylate in patients with primary axillary hyperhidrosis. *Am J Clin Dermatol*. 2019;20(4):593-604.

7. Lamb YN. Topical glycopyrronium tosylate in primary axillary hyperhidrosis: a profile of its use. *Clin Drug Investig*. 2019;39(11):1141-1147.
8. Siscos SM, Figenshau K, Rajpara A. Use of gloves when applying topical glycopyrronium for treatment of primary axillary hyperhidrosis. *J Am Acad Dermatol*. In press.