

# Clinical Pearl: Benzethonium Chloride for Habit-Tic Nail Deformity

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Treatment of habit-tic nail deformity is challenging, as it often requires both patient awareness and behavioral changes that may be long-standing. Many treatment options have been suggested, but limitations include inadequate supporting evidence and potential adverse effects. Herein, we describe the use of benzethonium chloride as a safe and effective treatment of habit-tic nail deformity.

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## Practice Gap

Habit-tic nail deformity results from repetitive manipulation of the cuticle and/or proximal nail fold. It most commonly affects one or both thumbnails and presents with a characteristic longitudinal midline furrow with parallel transverse ridges in the nail plate. Complications may include permanent onychodystrophy, frictional melanonychia, and infections. Treatment is challenging, as diagnosis first requires patient insight to the cause of symptoms. Therapeutic options include nonpharmacologic techniques (eg, occlusion of the nails to prevent trauma, cyanoacrylate adhesives, cognitive behavioral therapy) and pharmacologic techniques (eg, N-acetyl cysteine, selective serotonin reuptake inhibitors, tricyclic antidepressants, antipsychotics), with limited supporting data and potential adverse effects.<sup>1</sup>

## The Technique

Benzethonium chloride solution 0.2% is an antiseptic that creates a polymeric layer that binds to the skin. It normally is used to treat small skin erosions and prevent blisters. In patients with habit-tic nail deformity, we recommend once-daily application of benzethonium chloride to the proximal nail fold, thereby artificially recreating the cuticle and forming a sustainable barrier from trauma (Figure, A). Patients should be reminded not to manipulate the cuticle and/or nail fold during treatment. In one 36-year-old man with habit tic nail deformity, we saw clear nail growth after 4 months of treatment (Figure, B).

## Practice Implications

Successful treatment of habit-tic nail deformity requires patients to have some insight into their behavior. The benzethonium chloride serves as a reminder for patients to stop picking as an unfamiliar artificial barrier and reminds them to substitute the picking behavior for



A, Habit-tic nail deformity on the left great fingernail in a 36-year-old man after 1 application of benzethonium chloride solution 0.2% to the nail plate, cuticle, and proximal nail fold. B, After 4 months of daily treatment, the transverse ridges were absent from the proximal nail plate.

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another more positive behavior. Therefore, benzethonium chloride may be offered to patients as a novel therapy to both protect the cuticle and alter behavior in patients with habit-tic nail deformity, as it can be difficult to treat with few available therapies.

Allergic contact dermatitis to benzethonium chloride is a potential side effect and patients should be cautioned prior to treatment; however, it is extremely rare with 6 cases reported to date based on a PubMed search of

articles indexed for MEDLINE using the terms *allergic contact dermatitis* and *benzethonium chloride*,<sup>2</sup> and much rarer than contact allergy to cyanoacrylates.

#### REFERENCES

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