# Topical Tacalcitol for Family Occurrence of Follicular Keratosis of the Chin

Buechner, Aline Aniela ; Theiler, Martin ; Krayenbuehl, Barbara ; Weibel, Lisa

DOI: https://doi.org/10.1001/jamadermatol.2017.4418

# Letters

OBSERVATION

## Topical Tacalcitol for Family Occurrence of Follicular Keratosis of the Chin

Follicular keratosis of the chin (FKC) is a rare and poorly understood disorder of childhood with a characteristic presentation of multiple, closely set, hyperkeratotic follicular papules on the chin or jaw. We report 2 new cases of FKC in 2 brothers and propose topical tacalcitol as an effective treatment option.

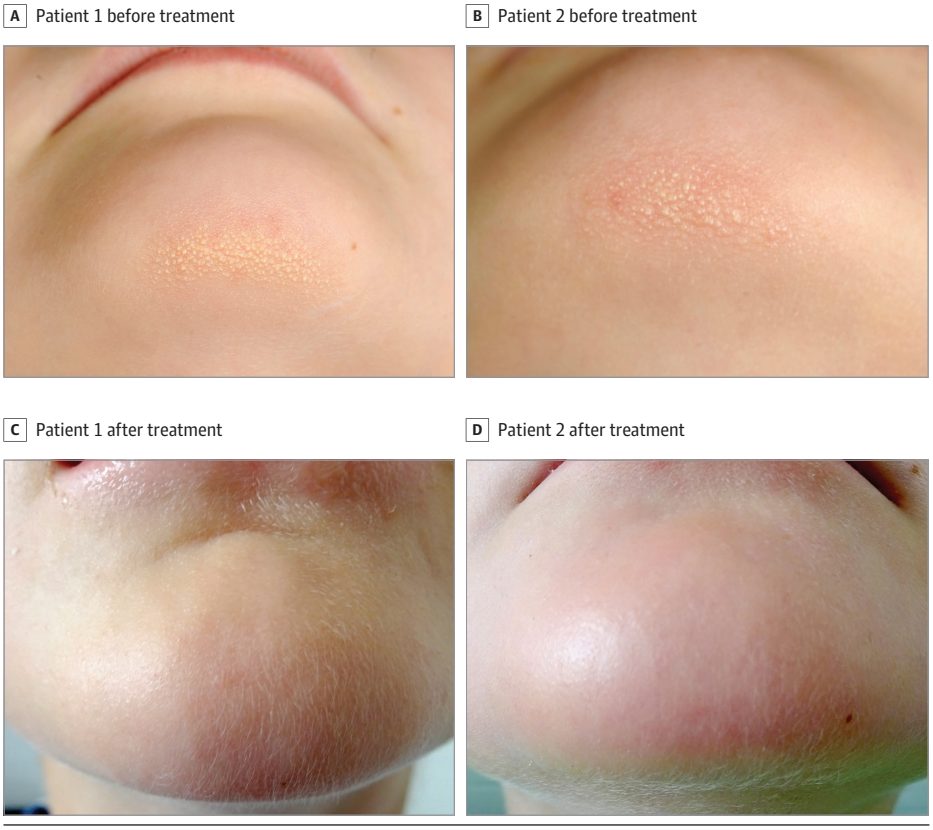
**Report of Cases** | A 7-year-old boy and his 5-year-old brother were seen for papular lesions on the chin that had occurred at age 4 years in both cases. On examination, both children had multiple whitish, follicular, hyperkeratotic, pinpoint papules on their chins, more pronounced in the older boy (**Figure 1**). The lesions were asymptomatic, and the boys were otherwise in good general health. A habit of rubbing or picking or any other physical trauma was denied. Because of the distinct clinical presentation, a diagnosis of FKC was made. Dermoscopy findings were also consistent with this disorder, showing well-demarcated yellow spindle bodies (**Figure 2**).[1]

Both patients were treated with topical tacalcitol (4.17 µg tacalcitolum monohydricum/g, Curatoderm ointment; Almirall) once daily, which was followed by complete clearance of the lesions in both boys within only 4 weeks. The treatment was continued for 3 months and thereafter stopped. There was no recurrence during further 12-month follow-up.

**Discussion** | The term *follicular keratosis of the chin* was first proposed by Kanzaki et al,[2] who described 2 unrelated boys with keratotic papules on their chins induced by resting their chin on their palms while reading or watching television. After they avoided this habit, the condition slowly resolved. To our knowledge, only 25 cases of FKC have been reported to date.[1] Usually boys are affected. Some of these patients developed the condition without any evidence of rubbing or friction.[3] This is in line with our observation.

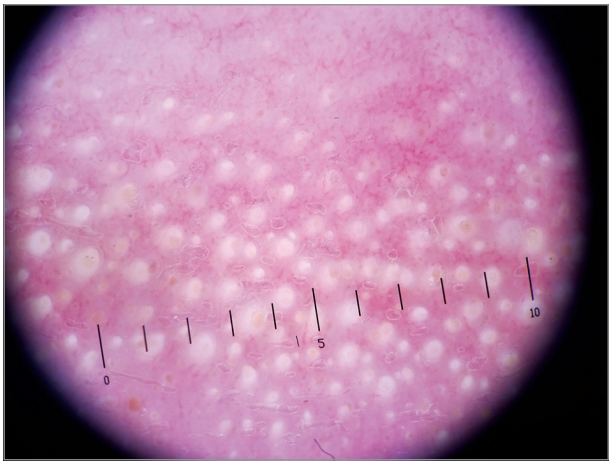
The pathogenesis of FKC remains unclear. Histopathological examination usually shows cystic dilated hair follicles containing keratotic basophilic material, positive to Kossa stain, without any inflammation.[1,2] The condition has been reported in 2 brothers previously,[3] and so the present case is at

Figure 1. Follicular Keratosis of the Chin in 2 Brothers, Aged 7 Years (Patient 1) and 5 Years (Patient 2), Before and After 4 Weeks of Treatment With Topical Tacalcitol




These images illustrate that follicular keratosis of the chin may occur in siblings and responds well to treatment with topical tacalcitol.

Figure 2. Dermoscopy Image Showing Well-Demarcated Yellow Spindle Bodies in the Lesion




This figure highlights the dermoscopic features of follicular keratosis of the chin, supporting a clinical diagnosis of the disorder (oil immersion, scale bar indicates millimeters).

least the second report of familial occurrence. We thus assume a genetic predisposition to develop FKC.

The clinical presentation of FKC is unique, particularly owing to its specific location on the chin. However, FKC can be confused with other disorders of follicular keratinization that have prominent keratin plugs within dilated follicles. These dermatoses are usually distinguished on the basis of the size, extent, and distribution of the keratotic lesions. An entity that may be considered in the differential diagnosis is keratosis pilaris, which is frequently associated with atopic dermatitis and ichthyosis vulgaris. However, keratosis pilaris is seen primarily on the lateral aspects of the upper arms and anterior thighs and on the lateral aspects of the cheeks but not on the chin.[4] In addition, in keratosis pilaris, a small rim of erythema may surround the involved hair follicles. Mucinosis follicularis is another entity that may be similar in appearance to that of FKC. Clinically, there are grouped, skin-colored papules or scaly plaques distributed primarily on the face, scalp, and neck in mucinosis follicularis.[5] Histopathologic analysis is usually necessary to confirm the diagnosis, clearly distinguishing it from FKC.

Without a history of external irritation, FKC is often resistant to treatments such as topical corticosteroids, keratolytic agents, and tretinoin, 0.05%.[1,6] Treatment of FKC with vitamin D analogues has been reported by Yanagihara et al,[1] who treated lesions twice daily for at least 3 months and reported clearing of the lesions; however, the lesions reappeared after discontinuation of treatment. In the present cases, topical tacalcitol was applied only once daily followed by rapid resolution of FKC in both patients. Importantly, we found a sustained treatment response with absence of FKC even 12 months after treatment cessation. We propose tacalcitol as a well-tolerated and effective treatment of FKC.

**Aline Aniela Buechner, MD**
**Martin Theiler, MD**
**Barbara Krayenbuehl, MD**
**Lisa Weibel, MD**

**Author Affiliations:** Division of Pediatric Dermatology, University Children's Hospital Zurich, Zurich, Switzerland (Buechner, Theiler, Weibel); Department of Dermatology, University Hospital Zurich, Zurich, Switzerland (Theiler, Weibel); Private dermatology practice, Zurich, Switzerland (Krayenbuehl).

**Corresponding Author:** Lisa Weibel, MD, Division of Pediatric Dermatology, University Children's Hospital Zurich, Steinwiesstrasse 75, 8032 Zürich, Switzerland (lisa.weibel@kispi.uzh.ch).

**Published Online:** November 29, 2017. doi:10.1001/jamadermatol.2017.4418

**Conflict of Interest Disclosures:** None reported.

**Additional Contributions:** We thank the patients and families for granting permission to publish this information.

**1**. Yanagihara M, Takeda K, Tanabe H, Abe S, Ishizaki H. Follicular keratosis of the chin treated with 1.24R-dihydroxyvitamin D3 ointment. *Pediatr Dermatol*. 2007;24(4):412-414.

**2**. Kanzaki T, Morita A, Takashima A. Follicular keratosis of the chin. *J Am Acad Dermatol*. 1992;26(1):134-135.

**3**. Brenner S, Brandsen R. Follicular keratosis of the chin. *J Am Acad Dermatol*. 1992;27(6 pt 1):1032.

**4**. Arnold AW, Buechner SA. Keratosis pilaris and keratosis pilaris atrophicans faciei [in German]. *J Dtsch Dermatol Ges*. 2006;4(4):319-323.

**5**. Alikhan A, Griffin J, Nguyen N, Davis DM, Gibson LE. Pediatric follicular mucinosis: presentation, histopathology, molecular genetics, treatment, and outcomes over an 11-year period at the Mayo Clinic. *Pediatr Dermatol*. 2013;30(2):192-198.

**6**. Nguyen S, Chiaverini C, Cardot-Leccia N, et al. Optical coherence tomography-assisted diagnosis of follicular keratosis of the chin. *J Eur Acad Dermatol Venereol*. 2016;30(5):861-862.