Milia en plaque of the Nose: Report of a Case and Successful Treatment With Topical Tretinoin

**abstract**

Milia are benign, superficial keratinaceous cysts that present as fine, small white papules. Milia en plaque is a rare, challenging-to-treat variant most often seen in the posterior auricular region. A total of 9 cases of milia en plaque have been reported in the pediatric literature to date. We report a case of milia en plaque of the nose in a 7-year-old boy, a novel site of involvement in the pediatric population, and successful treatment with the use of topical tretinoin. Topical retinoids offer an effective treatment option for the management of milia en plaque in the pediatric population. *Pediatrics* 2014;133:e1–e4
Milia are benign, superficial keratinaceous cysts that present as fine, small, white papules that may arise primarily or secondary to another underlying skin disorder.\(^1\) Milia en plaque is a rare variant of milia first described in 1903 by Balzer and Fouquet.\(^2\) The initial report described a patient presenting with plaques with confluent cysts over the bilateral posterior auricular area. The term “milia en plaque” was coined in 1978 by Hubler and colleagues who described 2 patients with milia on an erythematous edematous base.\(^3\)

The characteristic histology of milia en plaque consists of keratinaceous cysts with a surrounding mixed inflammatory infiltrate. Milia en plaque is usually asymptomatic. The most common site of involvement is the periauricular region,\(^2\) although cases have been reported involving the eyelids,\(^4\) trunk,\(^5\) nasal fold,\(^6\) cheeks,\(^7\) and forehead.\(^8\) We describe a case of milia en plaque occurring on the nasal tip of a healthy 7-year-old child and the successful treatment with a topical retinoid cream.

**PATIENT PRESENTATION**

A healthy 7-year-old boy presented with multiple papules on his nose, present for 2 months. No medications or topical creams or lotions had been applied to the nose. There was no family history of any similar skin lesions in his parents or siblings. He had no history of previous injury to the nose. His parents reported he had a recent mild upper respiratory infection with coryza before the onset of the skin lesions but denied any trauma to the nose.

The patient was Fitzpatrick skin type V. A \(15 \times 15\)-mm discrete, erythematous, edematous plaque was located at the midline nasal tip (Fig 1). The plaque was composed of numerous 0.5- to 1.0-mm white-yellow waxy nontender papules consistent with milia. Dermoscopic
evaluation confirmed the presence of multiple discrete white-yellow cystic papules of cutaneous milia. The papules were nontender. There were no similar milia located anywhere else on the body. The remainder of the cutaneous examination was unremarkable. A diagnosis of milia en plaque was made.

Superficial fungal and bacterial cultures were taken to exclude infection. He was treated empirically with 2 weeks of topical antifungal cream with no response; cultures excluded infection. The patient returned to clinic and was started on topical tretinoin 0.025% cream nightly. Six weeks after initiation of tretinoin, a significant decrease in the number of milia and clearance of the erythema was noted. Tretinoin was discontinued after full clearance was achieved at 8 weeks, and durable clearance was maintained 1 year after his initial presentation (Fig 2 A and B).

**DISCUSSION**

Milia en plaque is a rare cutaneous condition in the pediatric population. Most milia en plaque cases reported in the literature have been of adult patients. Zhang and Zhu9 reviewed a total of 7 previous cases in the pediatric population in addition to an eighth case more recently reported. An additional case described in the literature of a 16-year-old girl with bilateral eyelid milia en plaque has also been reported.4 Of the previous 9 cases in the pediatric population, all but 1 involved either the periorcular or periauricular regions, with the remaining case occurring on the left cheek. To the best of our knowledge, our case represents the first report of primary milia en plaque involving the nasal tip in the adult or pediatric population.

The presentation of milia en plaque may be unilateral or bilateral.10 Recent case reports have described milia presenting in a linear distribution on the central face in a Blaschkoid pattern11 and another involving the transverse nasal crease.12 Most cases reported in the literature classify the phenomenon as a spontaneous primary eruption, although reports exist of milia en plaque arising in sites of preexisting skin disease, such as discoid lupus erythematosus,13,14 and also in association with renal transplantation.15,16 Treatments for milia en plaque in the pediatric population that have been tried either alone or in combination include topical retinoids,9 electrodermabrasion,17 topical steroids,18 oral antibiotics,16 liquid nitrogen cryotherapy,18 and manual extraction,7 all with variable rates of success in small numbers of patients. Additional treatments that have been tried for milia en plaque in the adult population include CO2 laser,19 erbium: YAG laser,20 dermabrasion,21 and systemic retinoids.22

Our patient was treated successfully with a course of topical tretinoin cream 0.025% applied once nightly, with improvement noted at follow-up after 6 weeks of therapy. No adverse effects of treatment were noted by the patient or his parents. To date there is no evidence of scarring or atrophy in the area of involvement. He was seen again in follow-up at 1 year with durable, sustained response achieving complete resolution.

Previous cases of pediatric milia en plaque treatment with topical retinoids have reported use of tretinoin 0.05% cream. This case adds to the body of knowledge regarding milia en plaque describing a novel site of involvement and provides an example of a successful therapeutic option in a pediatric patient by using a lower concentration of topical retinoid than previously reported in the literature.

**REFERENCES**


17. Lee DW, Choi SW, Cho BK. Milia en plaque. 

18. Bridges AG, Lucky AW, Haney G, Mutasim DF. 

19. Pozo J, Castiñeiras I, Fernández-Jorge B. 


21. van Lynden-van Nes AM, der Kinderen DJ. 

Milia en plaque of the Nose: Report of a Case and Successful Treatment With Topical Tretinoin

Vinod E. Nambudiri, Nancy Habib, Kenneth A. Arndt and Kay S. Kane

Pediatrics; originally published online April 7, 2014;
DOI: 10.1542/peds.2013-1728
Milia en plaque of the Nose: Report of a Case and Successful Treatment With Topical Tretinoin
Vinod E. Nambudiri, Nancy Habib, Kenneth A. Arndt and Kay S. Kane
Pediatrics; originally published online April 7, 2014;
DOI: 10.1542/peds.2013-1728

The online version of this article, along with updated information and services, is located on the World Wide Web at:
/content/early/2014/04/02/peds.2013-1728

PEDIATRICS is the official journal of the American Academy of Pediatrics. A monthly publication, it has been published continuously since 1948. PEDIATRICS is owned, published, and trademarked by the American Academy of Pediatrics, 141 Northwest Point Boulevard, Elk Grove Village, Illinois, 60007. Copyright © 2014 by the American Academy of Pediatrics. All rights reserved. Print ISSN: 0031-4005. Online ISSN: 1098-4275.