

## Milia en Plaque in Pediatric Patients: An Overview with Dermatoscopic Insights

Julia Nowowiejska-Purpurowicz<sup>1</sup>, Mario Cutrone<sup>2</sup>, Dirk van Gysel<sup>3,4</sup>, Ramon Grimalt<sup>5</sup>,  
Carmen Salavastru<sup>6</sup>, Vincenzo Piccolo<sup>7</sup>

1 Department of Dermatology and Venereology, Medical University of Bialystok, Poland

2 Ambulatorio di Dermatologia Pediatrica, Centro di Medicina Mestre Venezia, Italy

3 Interdisciplinary Unit of Pediatric Dermatology, Vrije Universiteit Brussel (VUB), Universitair Ziekenhuis Brussel (UZ Brussel), Brussels, Belgium

4 Department of Pediatrics, O.L.Vrouw Hospital Aalst, Aalst, Belgium

5 Universitat Internacional de Catalunya, Barcelona, Spain

6 Pediatric Dermatology Discipline, Carol Davila University of Medicine and Pharmacy, Bucharest, Romania

7 Dermatology Unit, University of Campania, Naples, Italy

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**Corresponding Author:** Julia Nowowiejska-Purpurowicz, Department of Dermatology and Venereology, Medical University of Bialystok, Poland. E-mail: [julia.nowowiejska@umb.edu.pl](mailto:julia.nowowiejska@umb.edu.pl)

### Introduction

Milia en plaque (MEP) is an uncommon variant of primary milia in which small keratin-filled cysts are distributed on a localized plaque. Pediatric presentations are infrequent, with few reported cases in the literature [1,2]. Early recognition is critical to avoid misdiagnosis, especially as pediatric MEP can mimic other dermatoses [3]. Dermoscopy provides a non-invasive, detailed view of lesion morphology [3], making it an invaluable diagnostic aid in younger populations where invasive procedures may pose challenges.

### Case Presentation

We collected 6 cases of MEP in children. Basic characteristics are presented in Table 1 and the clinical as well as dermoscopic picture are presented in Figure 1 A-K.

All appeared in healthy individuals after trauma, usually a few months later, as whitish micropapules on an erythematous plaque. The most frequent location was the knee. Dermoscopy in all cases was similar – pearl-white globules located on a pink background. All patients were asymptomatic, hence in two cases only observation was continued, in

Table 1. Basic characteristics of patients' cases.

Case	Age and sex	Triggering factor	Time from the trigger to the onset	Localization	Management
1 (Figure 1. A,G)	4-year-old boy	trauma	2 months	chin	observation
2 (Figure 1. B,H)	2-year-old girl	trauma	4 months	knee	observation
3 (Figure 1. C,I)	5-year-old girl	trauma	6 months	knee	trifarotene
4 (Figure 1. D,J)	2-year-old girl	trauma	3 months	knee	topical isotretinoin
5 (Figure 1. E,K)	3-year-old girl	trauma	6 months	elbow	topical salicylic acid
6 (Figure 1 F, no dermoscopy available)	6-year-old boy	trauma	5 months	knee	topical salicylic acid

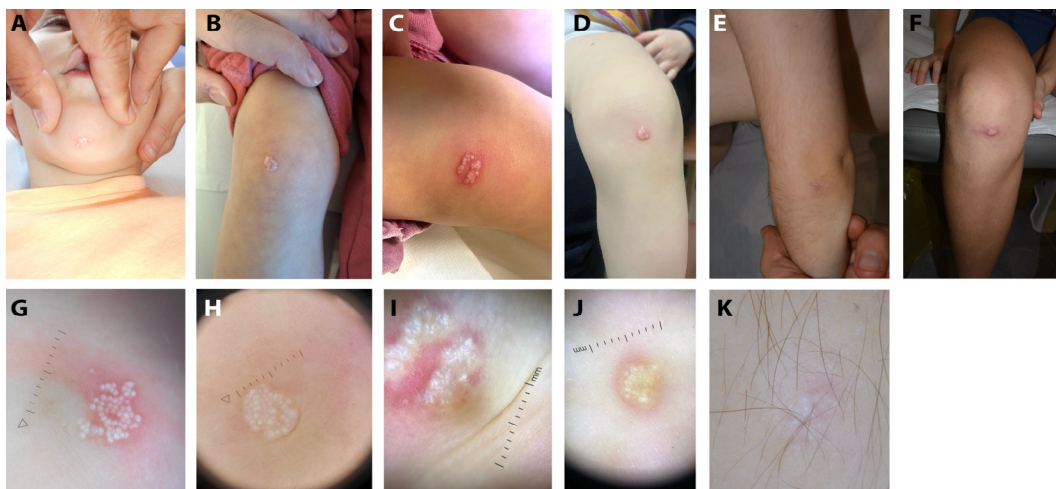


Figure 1. Six cases of milia en plaque in our patients; A-F – clinical presentation, G-K – dermoscopic presentation.

two salicylic acid was applied, and in two cases topical retinoid was administered.

## Discussion

Pediatric MEP is a rare entity, with fewer than 20 cases reported to date. Lesions often present in children aged 3–12 years, with no significant gender predilection. Common sites include the periorbital area, retroauricular regions, and cheeks [1]. The condition is benign, though its cosmetic impact and potential for misdiagnosis underscore the importance of accurate identification. In children, MEP typically manifests as clusters of small, white or yellowish papules resembling classic milia; erythematous or indurated plaque; surrounding the papules, varying in size and shape; or asymptomatic presentation, although mild itching or irritation may occur [2]. The plaques are often slow-growing and persistent without spontaneous resolution, distinguishing them from transient neonatal or primary milia. Pathology of MEP in children shows epidermal cysts containing keratin within

the dermis, and minimal inflammatory infiltrate surrounding the cysts [4].

While biopsy confirms the diagnosis, it is rarely necessary due to the non-invasive precision of dermoscopy. Dermoscopy has proven highly effective in diagnosing pediatric MEP, reducing the need for invasive procedures. Key dermatoscopic findings include: white-yellow globules, corresponding to keratin-filled cysts [3]. These are uniform in size and distributed across the plaque; erythematous background, indicative of vascularization or mild inflammation; peripheral scaling reflecting localized skin desquamation; telangiectasias, less pronounced than in adult cases but occasionally visible (personal observation). These features help differentiate MEP from other pediatric conditions such as syringomas, juvenile xanthogranulomas, or molluscum contagiosum.

In pediatric populations, the differential diagnosis includes: neonatal or infantile milia – they lack the plaque component characteristic of MEP; syringomas, which exhibit yellowish, translucent papules without cystic structures

on dermoscopy; molluscum contagiosum that shows central umbilication and a 'cheesy' plug under [5].

Treatment in pediatric MEP focuses on cosmetic improvement and minimizing psychological distress. Options include: topical retinoids, curettage or manual extraction, laser therapy (CO<sub>2</sub> or Er:YAG), and observation-appropriate for asymptomatic cases with mild cosmetic impact [1]. Treatment selection depends on lesion size, location, and the child's tolerance for intervention.

Milia en plaque is a rare, but recognizable condition in pediatric dermatology. Dermoscopy plays a critical role in its diagnosis, highlighting characteristic white-yellow globules and aiding in differentiation from other dermatoses. While the condition is benign, timely recognition and appropriate management can address aesthetic concerns and prevent unnecessary interventions. Increased awareness and reporting of pediatric MEP will enhance understanding of its presentation and optimize care strategies.

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