Scholars Journal of Medical Case Reports
Abbreviated Key Title: Sch J Med Case Rep
ISSN 2347-9507 (Print) | ISSN 2347-6559 (Online)
Journal homepage: https://saspublishers.com

OPEN ACCESS

Dermatology

A Case of Milia En Plaque Resembling Nevus Comedonicus

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DOI: https://doi.org/10.36347/sjmcr.2024.v12i12.012 | **Received:** 22.10.2024 | **Accepted:** 30.11.2024 | **Published:** 07.12.2024

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Abstract **Case Report**

Nevus comedonicus and milia en plaque are two rare conditions that can occur in children. While nevus comedonicus manifests as grouped dilated and plugged follicular ostia organized in a honeycomb pattern especially on the face; milia en plaques manifests as multiple yellow-white cysts grouped on an erythematous edematous preauricular or retroauricular plaque. Dermoscopy helps with the diagnosis of either entity. In nevus comedonicus, it shows homogeneous circular or oval light or dark brown areas with prominent follicular plugs and typically uninvolved interfollicular skin; while in milia en plaque it shows multiples yellowish-white cysts with peripheral whitish halo, sparse pigmentation and multiple telangiectatic vessels. Histopathology shows follicular ostia filled with keratin in nevus comedonicus, and epidermal or dermal cysts surrounded by a mild to dense inflammatory infiltrate in milia en plaque. Our case was an 8 year-old girl who presented with milia en plaque that could be confused clinically with nevus comedonicus but was characteristic dermoscopically and in histopathology.

Keywords: Milia en plaques – Nevus comedonicus – Dermoscopy – Histopathology.

INTRODUCTION

Nevus comedonicus and milia en plaques are two rare conditions. Nevus comedonicus is an epidermal nevus due to a loss of markers of follicular differentiation and ectopic expression of keratin 10 along with other mutations. It occurs at birth or in children under 10 years of age.

Milia en plaques is an unusual form of acquired milia in children, the pathophysiology of which is still unclear. Both conditions can occur on the face.

Hereby, we report a case of milia en plaques occurring on the right temporal region of an 8-year-old girl, with a differential diagnosis of nevus comedonicus. Dermoscopy followed by histopathology allowed us to differentiate these two conditions, which are treated in a similar manner.

CASE REPORT

An 8-year-old girl presented with a 2-year history of lesions on the right temporal region consisting of multiple whitish-yellow papules 1 to 2 mm in diameter on erythematotelangiectatic skin, organized in a plaque measuring 4 cm in long axis (Figure 1). There was no evidence of trauma, photosensitivity, burns, dermabrasion, or bullous dermatosis, and there were no similar cases in the family.

The lesions progressively increased in number, and examination of the remainder of the integument was unremarkable.

Dermoscopy revealed multiple rounded yellowish-white lesions with occasional cloudy whitish areas surrounding these rounded formations. These lesions were bright under polarized light. Telangiectatic vessels, brownish intercystic pigmentation, and a large central red area were also present (Figures 2 and 3).

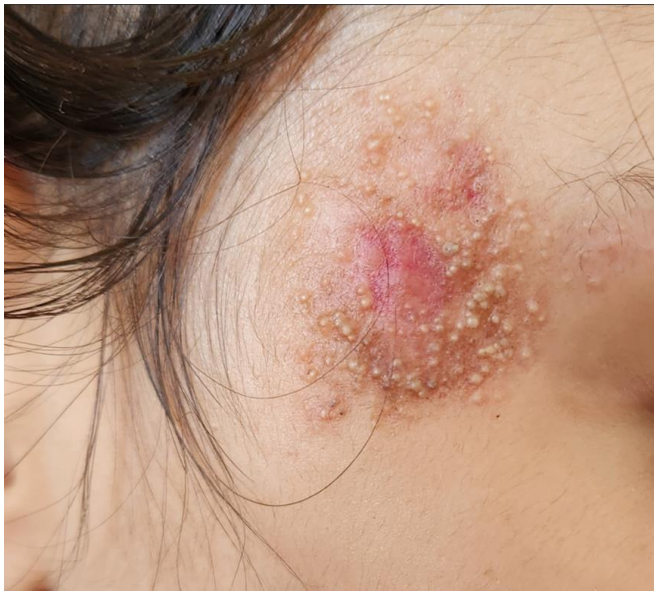

Figure 1: Clinical image showing multiple whitish-yellow papules on erythematotelangiectatic skin organized in a plaque measuring 4cm in long axis

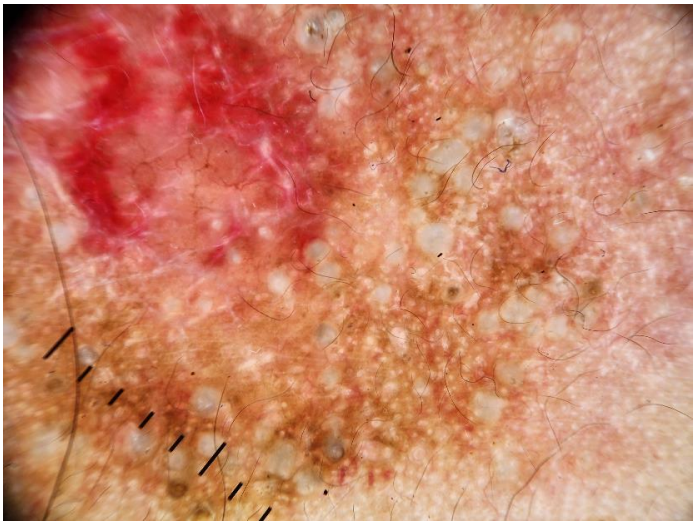

Figure 2: Dermoscopy revealing multiple rounded yellowish-white lesions surrounded occasionally by cloudy whitish areas; telangiectatic vessels, brownish intercystic pigmentation, and a large central red area (Dermlite DL4 polarized light)

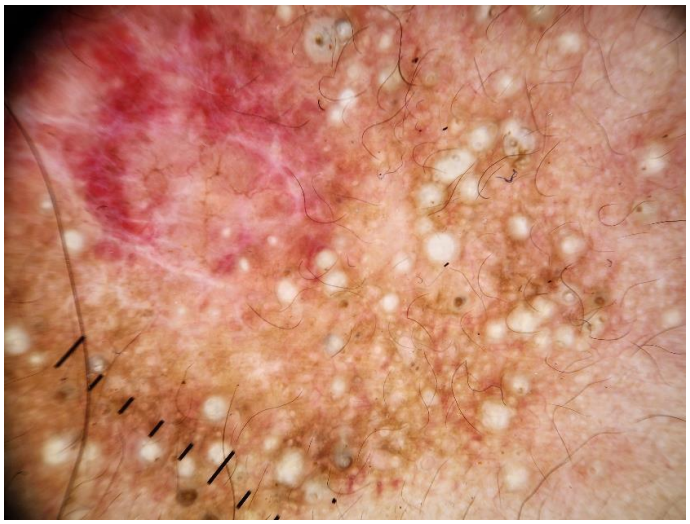

Figure 3: Dermoscopy showing bright yellowish-white lesion under non-polarized light (Dermlite DL4)

A biopsy was performed and revealed a hyperkeratotic epidermis along with epidermal et dermal cysts filled with keratin. In the dermis, a discrete lymphocytic infiltrate was present consisting of lymphocytes, histiocytes, and plasma cells (Figure 4).

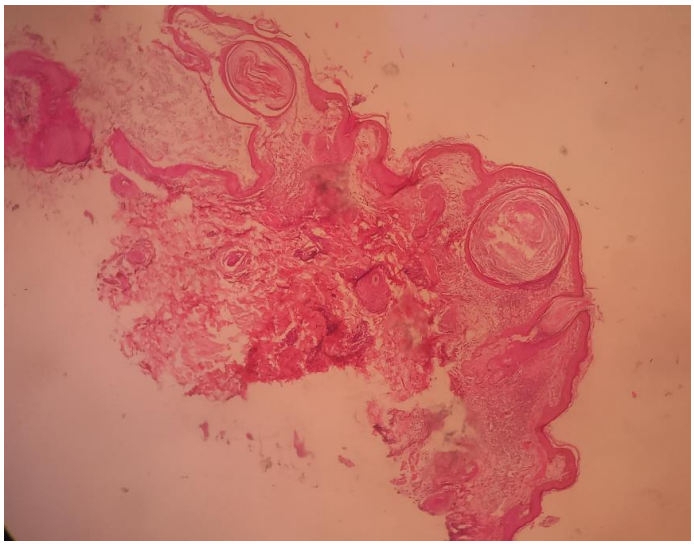

Figure 4: Histopathological image showing a hyperkeratotic epidermis, epidermal and dermal cysts and a discrete lymphocytic infiltrate around the cysts consisting of lymphocytes, histiocytes and plasma cells (Hematoxylin-Eosin under low magnification)

The diagnosis of milia en plaque was made and the patient received topical tretinoin followed by manual needle extraction. Clinical improvement was evident, with dermoscopy showing disappearance of most of the cystic lesions, involution of the central red area and telangiectatic vessels, and regression of the brownish pigmentation replaced by mild hypopigmentation (Figure 5).

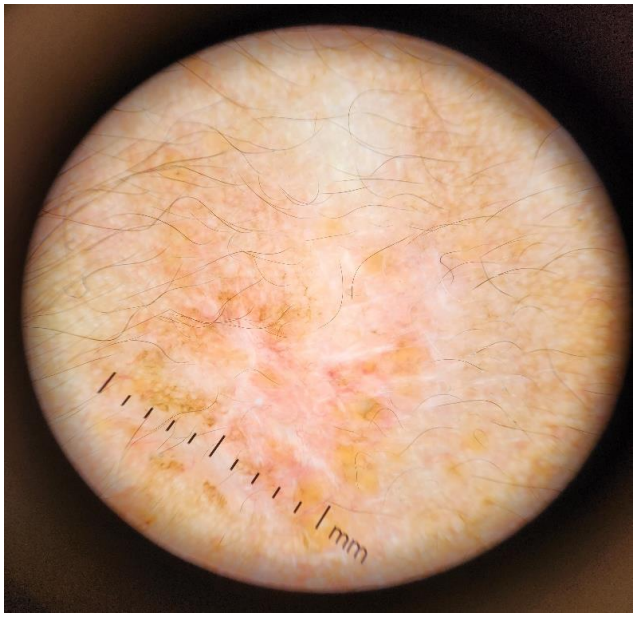

Figure 5: Dermoscopy showing disappearance of most of the cystic lesions, involution of the central red area and the telangiectatic vessels, and regression of the brownish pigmentation replaced by mild hypopigmentation (Dermlite DL4 polarized light)

DISCUSSION

Clinically, nevus comedonicus appears as clusters of dilated, plugged follicular ostia organized in a honeycomb pattern, particularly on the face (Kaliyadan *et al*., 2023).

Dermoscopically, nevus comedonicus appears as homogeneous circular or oval areas of light or dark brown with prominent follicular plugs and typically uninvolved interfollicular skin (Kayiran *et al*., 2018; Vora *et al*., 2017).

Histopathologically, it manifests as dilated follicular ostia filled with keratin.

Nevus comedonicus may occur in isolation or as part of a nevus comedonicus syndrome with extracutaneous manifestations involving the central nervous system, skeleton, teeth, and eyes. They may also be associated with hidradenitis suppurativa or rare systemic disorders such as Alagille syndrome.

Treatments for comedonal nevi may include topical or systemic retinoids with or without dermocorticoids, salicylic acid or ammonium lactate, lasers, with anti-EGFR, anti-IL1 alpha and anti-gamma secretase (Kaliyadan *et al*., 2023) as future therapeutic avenues.

Milia en plaque is a specific form of acquired milia presenting as multiple milia cysts grouped on an erythematous, edematous plaque located pre- or retroauricularly. It is uncommon in children (Barbarot *et al*., 2009).

Dermoscopy reveals multiple yellowish-white cysts with a peripheral whitish halo, sparse pigmentation, and multiple telangiectatic vessels (Wang *et al*., 2021; Zaouak *et al*., 2019).

Histopathologically, milia en plaques manifests as epidermal or dermal cysts surrounded by a mild to dense inflammatory infiltrate (Cota *et al*., 2009).

Milia en plaque is nosologically classified as acquired milia, along with simple milia granules and post-traumatic, post-scarring milia granules or those arising in the course of bullous diseases.

Milia en plaque can be treated with tretinoin or adapalene, manual extraction, Erbium-Yag laser for periorbital localizations, or minocycline, etretinate, photodynamic therapy, surgical excision, and physical treatments.

CONCLUSION

Dermoscopy in our patient showed characteristic signs of milia en plaque, which were confirmed by histology. In the future, clinical diagnosis and dermoscopy will enable us to spare our patients the need for biopsies and to initiate treatment without histopathological evidence.

Acknowledgements: None

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