Pediatric rosacea in a patient with a dark phototype: Clinical and dermoscopic features

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Abstract
Rosacea is rare in children and patients with dark phototype. Dermoscopy helps make the correct diagnosis. Positive family history of rosacea is reported in affected children, which suggests a strong familial inheritance of the disorder.

Key Words
dermoscopy, pediatric rosacea, phototype, Tunisia

1 | INTRODUCTION

Rosacea is commonly described in fair-skinned women and was rarely described in children with dark phototype. We report a case of a 10-year-old girl, with dark phototype who presented with rosacea. We highlight the clinical and dermoscopic findings of pediatric rosacea and emphasize the importance of positive family history.

Rosacea is a chronic inflammatory skin disease characterized by facial flushing, erythema, papules, pustules, and/or telangiectasias.¹,²

Rosacea is most commonly described in fair-skinned 30- to 50-year-old women and has rarely been noted in children and even rarer in patients with dark phototype.³ Some authors even doubt that rosacea can be observed in this age-group.⁴ Nevertheless, there are reports of pediatric rosacea in the dermatological and ophthalmological literature.⁴ It is probably under-recognized because parents tend to attribute flushing and erythema in children as a “healthy glow.”

We report herein a case of rosacea in a 10-year-old girl with dark skin type and discuss its pathogenesis and treatment.

2 | CASE REPORT

A 10-year-old girl, with type 4 phototype and no past medical history, presented with nonpruritic facial erythema evolving for 2 years. The eruption was exacerbated by sun exposure, and there was a tendency to flush at high temperatures. She denied the use of any topical treatment. Dermatological examination showed pronounced telangiectasias and scattered papules overlying symmetrical erythema on the cheeks (Figure 1A). The forehead, nose, and nasolabial folds were spared, and there were no pustules. Dermoscopy was performed showing linear and polygonal vessels (Figure 1B). Ophthalmological examination was normal. Physical examination was otherwise unremarkable. Results of laboratory tests, including complete blood count, 24-hour urine protein test, complements, and antinuclear antibody titer were within the normal range.

3 | DISCUSSION

In this patient, clinical and dermoscopic features were consistent with the diagnosis of pediatric rosacea. The facial
erythema associated with photosensitivity was suggestive of congenital erythropoietic porphyria and systemic lupus erythematosus. The latter were excluded on the basis of clinical and laboratory tests. Comprehensive questioning and examination of the patient's mother showed a history of erythemato-telangiectatic rosacea (Figure 2). The diagnosis of rosacea in our patient was reinforced by the dermoscopic findings and the positive family history. Treatment consisted of topical moisturizers and photoprotection.

The cutaneous manifestations described in children appear to be identical to those observed in adults, with the exception of phymatous rosacea which is only seen in the adult population.1,4 Hence, there are three subtypes of pediatric rosacea: vascular, papulopustular, and ocular. Other clinical forms such as granulomatous rosacea and pyoderma faciale have been reported in the pediatric population.1 Ocular rosacea and papulopustular forms appear to be the most common clinical findings in younger patients.1 Ocular symptoms must be systematically sought in every patient as they expose to serious complications such as ulceration or corneal perforation.2,4 In our patient, there were no pustules or signs of ocular involvement, and the diagnosis of vascular rosacea was made.

The diagnosis of pediatric rosacea is clinical, and biopsies are rarely performed.1 Dermoscopy is a noninvasive tool that is mainly used in the diagnosis of skin tumors.5 Its uses extend to hair and nail diseases, and infectious and inflammatory disorders.6 Dermoscopy can be very useful in the diagnosis of rosacea. Indeed, rosacea is characterized by a unique dermoscopic vascular pattern composed of linear and polygonal vessels.

The pathogenesis of rosacea remains unclear. Various factors are implicated including alteration of the innate immune response, vascular instability, and neurogenic inflammation.1,7 As in our patient, a family history of rosacea is sometimes reported in children with rosacea, which suggests a strong familial inheritance of the disorder.1,8 However, genetic mechanisms remain poorly understood.8

The treatment of pediatric rosacea is not consensual, but it appears to be very similar to treatment in adults. Trigger avoidance, sun protection, topical metronidazole, and age-appropriate oral antibiotics are the mainstay of management.1,2

Although there are little data in the literature regarding the prognosis for pediatric rosacea, it appears to be a chronic disorder and tends to persist into adulthood.1

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CONFLICT OF INTEREST
None declared.

AUTHOR CONTRIBUTIONS
IC: drafted the manuscript and performed literature search.
NL: drafted the manuscript and performed literature search and dermoscopy interpretation. FZ: performed literature search and analysis, and critically revised the manuscript.

ETHICAL APPROVAL
Informed consent was obtained from all individuals included in this article.

DATA AVAILABILITY STATEMENT
All relevant information and data could be available upon a reasonable request form the corresponding author.

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