IDIOPATHIC ERUPTIVE MACULAR PIGMENTATION: A CASE SERIES WITH CLINICODERMOSCOPIC AND HISTOPATHOLOGICAL CORRELATION

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Abbreviation **IEMP** = Idiopathic eruptive macular pigmentation.

Case reports. We report a series of four patients who presented with dark, asymptomatic hyperpigmented macules, well- or ill-defined, located on the trunk and proximal extremities; the detailed clinical features of all cases are summarized in table 1 and Figs. 1, 2. The dermoscopic findings are highlighted in Figs. 3, 4, 5. The histological picture is visible in Fig. 6.

TABLE 1: Clinical, dermoscopic and histological profile of patient.

Patient	*Duration*	*Distribution*	*Lesions*	*Dermoscopy*	*Histopathology*
13y/M	1 year	Bilateral thigh, right side of the chest, right shoulder.	Macules and patches. Largest: 4x5 cm.	Background: light brown to dark pigmentation, diffusely. Pattern: homogenous brown pigmentation with slightly darker central areas and lighter peripheral fading. Network: pigment network indistinct but preserved.	Orthokeratosis, pigmented papillomatosis. Superficial dermis: scattered melanophages with pigment incontinence.
10y/M	4 months	Face, neck, trunk, upper limbs.	Macules and patches. Largest: 0.8x1 cm.	Background: light brown pigmentation, distributed diffusely. Pattern: homogenous and ill-defined borders. Network: pigmentation of skin markings.	Basal cell layer hypermelanosis. Pigmented papillomatosis.
9y/M	6 months	Trunk, buttock, bilateral upper limbs and lower limbs.	Macules and patches. Largest: 0.5x5 cm.	Background: light brown to dark pigmentation, distributed diffusely. Pattern: homogenous pigmentation with ill-defined borders. Network: pigment network preserved and faint.	Increased melanin in basal keratinocyte. Melanin incontinence in papillary dermis. No inflammatory infiltrate.
19y/F	4 years	Neck, trunk, bilateral upper limbs.	Patches. Largest: 2x15 cm.	Background: light brown to dark pigmented, distributed diffusely. Pattern: slightly darker central area and peripheral fading. Hypopigmented dots and globules. Network: pigment network preserved.	Increased melanin in basal keratinocyte. Melanin incontinence in papillary dermis.

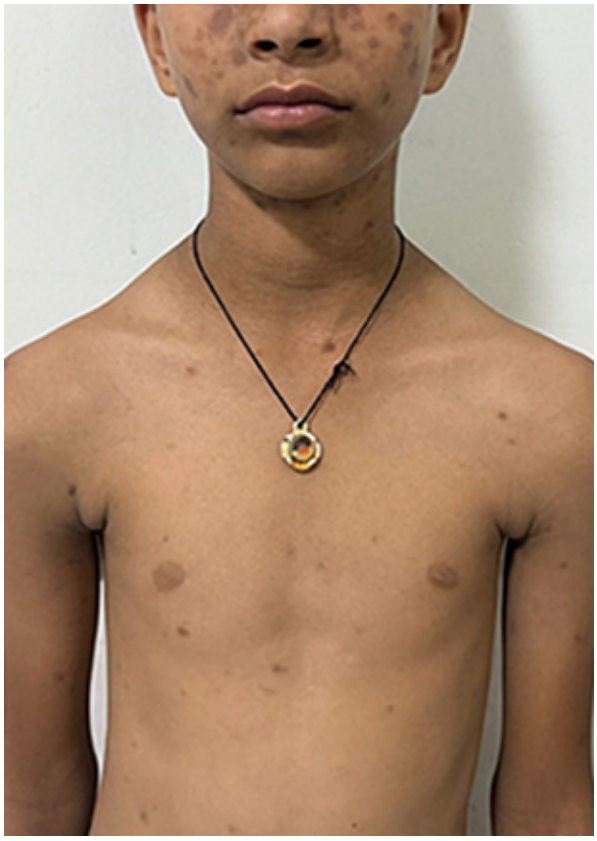

Fig. 1

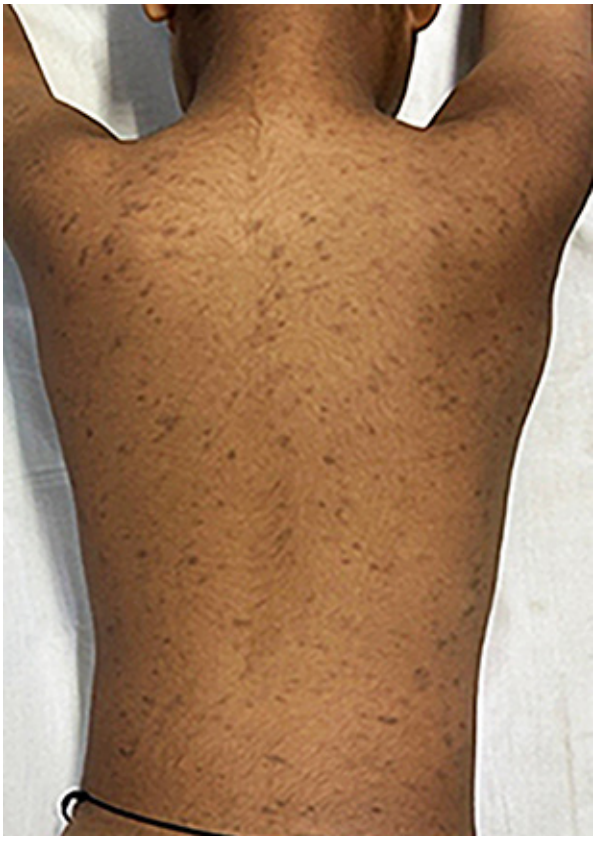

Fig. 2

Fig. 1, 2: Idiopathic eruptive macular pigmentation.

Discussion. Idiopathic eruptive macular pigmentation (IEMP) is a rare, benign, pigmentary disorder that mainly affects children and adolescents and is characterized by asymptomatic light- to dark-brown, non-confluent macules and patches, often involving the face, trunk, and extremities, and resolving spontaneously within months to years. Although the pathogenesis of IEMP has not yet been clarified, the predilection for peripubertal individuals suggests a possible influence of hormonal factors (1).

In this case series, patients aged 9-19 years presented with multiple asymptomatic hyperpigmented lesions, ranging from well-defined to ill-defined, distributed over various parts of the body. The lesions had an insidious onset, with no history of drug intake or topical medication use. Similar findings have been reported in other studies (3, 4).

The diagnostic criteria for IEMP, originally proposed by Sanz de Galdeano et al. in 1996, include the appearance of discrete, non-confluent, asymptomatic brownish-black macules on the neck, trunk, and proximal extremities in children and adolescents. Histologically, the condition is characterized by increased basal layer pigmentation with dermal melanophages, in the absence of basal cell damage or a lichenoid infiltrate. Additional diagnostic criteria include the absence of preceding inflammatory lesions or drug exposure and a normal mast cell count (2). In the present series, the clinical and histopathological findings in all patients were consistent with these criteria.

IEMP remains largely a diagnosis of exclusion and requires careful differentiation from other acquired macular hyperpigmentary disorders with overlapping clinical and histological features, includ-

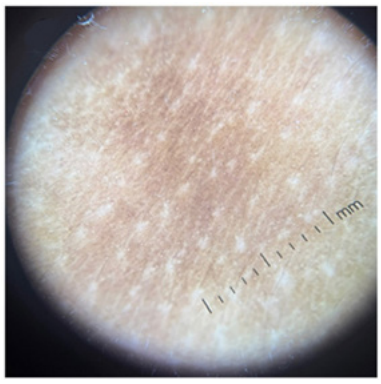

Fig. 3

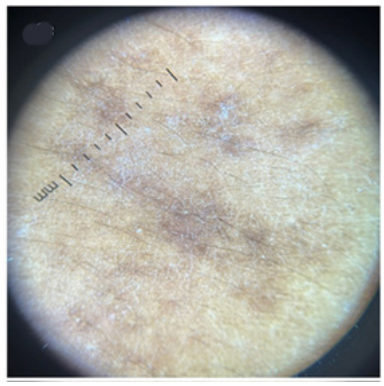

Fig. 4

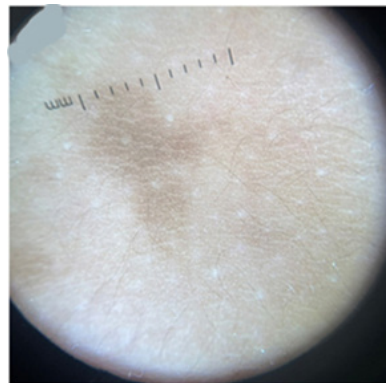

Fig. 5

Fig. 3, 4, 5: Dermoscopy of representative lesions from four patients showing diffuse light- to dark-brown pigmentation with a faint pigment network.

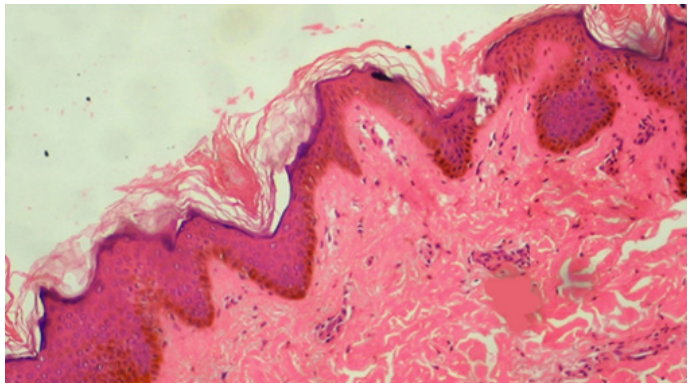

Fig. 6: In the epidermis orthokeratosis, papillomatosis and increased pigmentation of the basal layer: in the dermis scattered melanophages (H&E, x40).

ing post-inflammatory hyperpigmentation, lichen planus pigmentosus, ashy dermatosis, fixed drug eruption, and urticaria pigmentosa. In this context, thorough clinical evaluation supported by dermoscopy and histopathological examination plays a crucial role in establishing an accurate diagnosis and avoiding misdiagnosis.

Dermoscopy has emerged as a useful noninvasive tool in the evaluation of pigmentary disorders (5, 6) and provides supportive findings in IEMP. Dermoscopic examination typically shows brown structureless areas, well- to ill-defined, sometimes accompanied by a faint reticular pigment network. Reticular accentuation of the lesions on dermoscopy has also been reported in another study (3). In some cases, fine granules or dots corresponding to basal layer hyperpigmentation may be observed. Although these findings are not pathognomonic, dermoscopy aids in the differential diagnosis.

Histopathological examination in all cases revealed consistent findings, including orthokeratosis, increased basal layer pigmentation, and variable degrees of papillomatosis. Scattered melanophages in the superficial dermis, indicating pigment incontinence, were observed, accompanied in some cases by a mild perivascular lymphocytic infiltrate. Importantly, there was no basal cell vacuolar degeneration, lichenoid infiltrate, epidermal necrosis, or significant dermal inflammation, thereby excluding interface dermatoses and drug-induced pigmentation. The presence of papillomatosis, as observed in

our cases, has been reported in several recent studies and has led some authors to suggest that IEMP may represent a spectrum overlapping with acanthosis nigricans–like changes, although the exact significance of this finding remains unclear. Papillomatosis and dermal melanophages have also been reported as histopathological findings in other studies (4, 7).

Management of IEMP is mainly conservative. All parents were counseled and reassured about the benign and self-limiting nature of the disease. All patients in this series were treated with topical agents such as glycolic acid, vitamin C, emollients, and photoprotection for cosmetic purposes.

Conclusions. In conclusion, this case series emphasizes the importance of recognizing IEMP as a distinct benign pigmentary disorder of childhood and adolescence. Careful clinical evaluation, dermoscopy, and histopathological correlation are essential for accurate diagnosis and for excluding the main differential diagnoses. Increased awareness among dermatologists can prevent unnecessary investigations, anxiety, and aggressive treatment.

Conflicts of interest

The authors declare that they have no conflicts of interest.

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