Dermatology Practical & Conceptual

Dermoscopic Findings in Juvenile Colloid Milium

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Introduction

Juvenile colloid milium (JCM) is an extremely rare condition characterized by the development of translucent papules in sun-exposed areas during childhood [1]. While the exact etiology remains unknown, studies suggest a potential autosomal inheritance of sun-induced keratinocyte damage susceptibility [2]. Familial cases have been reported [3]. In this paper, we describe a new case of familial JCM with an emphasis on dermoscopic findings.

Case Presentation

A 15-year-old boy from a rural area presented with multiple mildly pruritic facial papules that appeared at the age of 10 and gradually became pronounced. His parents were consanguineous, and his sister and paternal aunt had similar symptoms. Physical examination revealed numerous small firm translucent papules on his face and amber-brown papules on the dorsum of his hands (Figure 1). Dermoscopy showed well-defined structureless isolated or clustered translucent-white clods with a distinct white collarette, along with a faint brownish pigment pseudo-network (Figure 2). A biopsy taken from the dorsum of his hand showed acanthosis of the epidermis, with islands of amorphous eosinophilic material in the papillary dermis (Figure 2). No grenz zone was observed. The amorphous colloid material was positive with periodic acid-Schiff (PAS), and Congo red staining was negative. In the adjacent dermal papillae, elastic fibers did not show actinic damage. The clinical and histopathological findings were consistent with the diagnosis of familial JCM. Photoprotection measures were advised.

Discussion

Colloid milium (CM) is a disorder characterized by the accumulation of amorphous material in the dermis. JCM is a rare form of CM that typically appears before puberty [1]. It was linked to the degeneration of ultraviolet (UV)-transformed keratinocytes, suggesting a possible genetic photosensitivity [4].

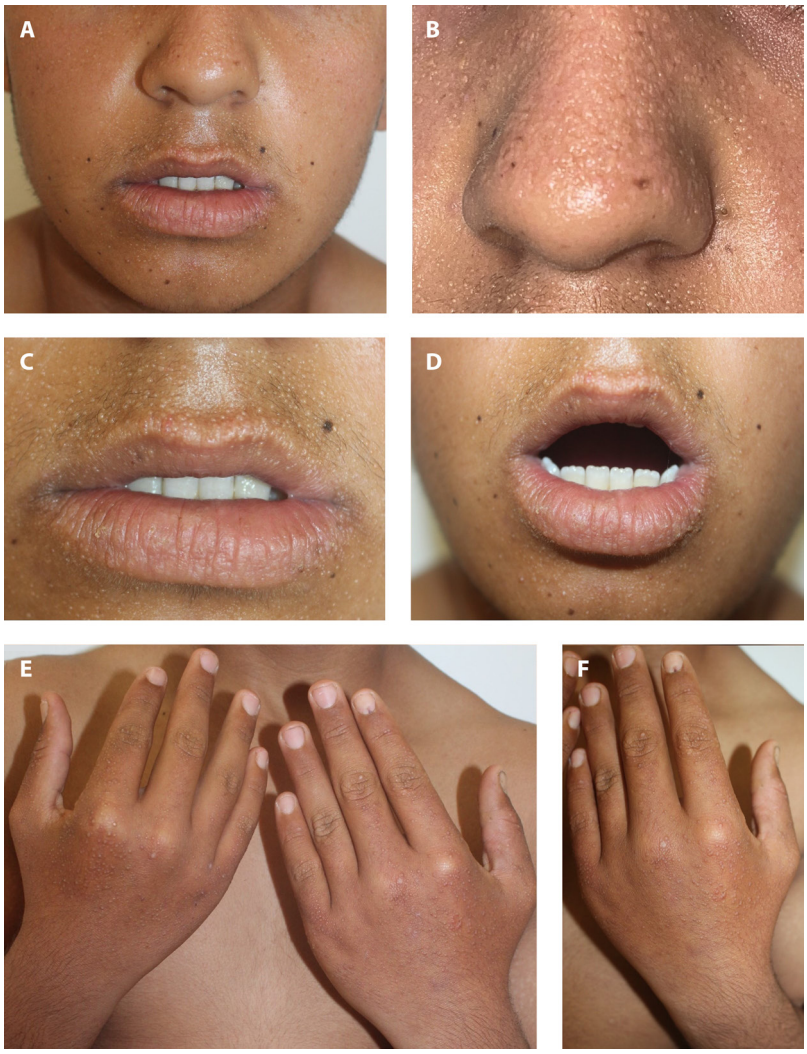

Figure 1. Clusters of translucent papules on the cheeks (**A**), nose (**B**), and lips (**C**, **D**). Brown amber papules on the dorsum of the hands (**E**, **F**).

Lesions often manifest as asymptomatic or mildly pruritic translucent, yellowish, or amber/brown papules, which may form clusters [1]. In our patient, dermoscopy showed distinct structureless isolated or clustered translucent-white clods featuring a white collarette and a subtle brownish pigment pseudo-network in the background. Structureless translucent clods correspond to the amorphous eosinophilic islands observed in the upper dermis in histopathology. These amorphous deposits lie directly below the epidermis, without a narrow papillary dermal band (grenz zone) [2]. Solar elastosis is usually absent but may develop with age [1,2,4]. The pigmentary changes may likely be due to solar damage, considering the patient's age (15 years) and regular sun exposure. JCM has been described in association with ligneous conjunctivitis and ligneous periodontitis [5]. This suggests a likely causal connection between these manifestations, potentially representing different clinical presentations of a shared pathogenic process that affects both cutaneous and mucosal areas [5]. The management of JCM is not well codified. Photoprotection should be recommended for all patients.

Conclusion

In conclusion, JCM is a rare and probably underdiagnosed subtype of CM. Although benign, JCM can alter the patient's quality of life by posing an aesthetic detriment. Raising awareness of this rare disease can lead to more cases being diagnosed and ultimately to the culprit gene(s) being identified.

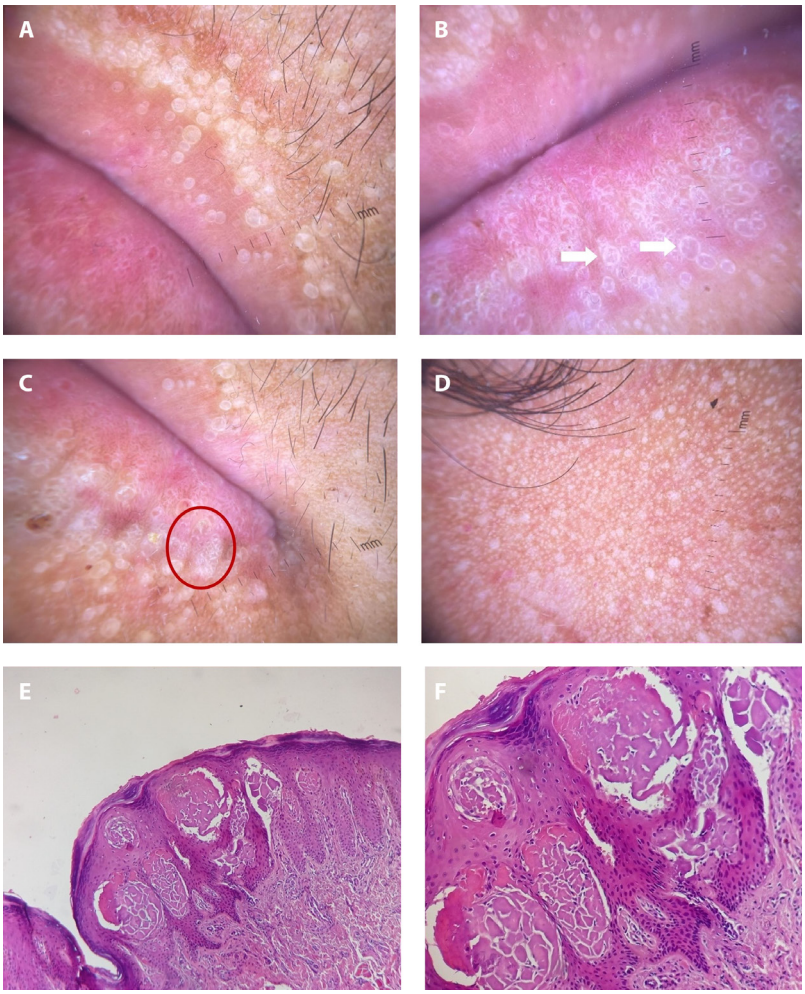

Figure 2. Dermoscopic examination reveals well-defined structureless translucent-white clods (**A**) with the presence of a white collarette (**B**, indicated by white arrows), often forming clusters (**C**, highlighted with a red circle). These clods are set against a faint brownish background (**D**). Histopathology showed eosinophilic material occupying the papillary dermis (**E**, Hematoxyline-eosin stain; original magnification x100). No grenz zone was noted (**F**, Hematoxyline-eosin stain; original magnification x200).

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