

Confluent and reticulated papillomatosis with eruptions on the trunk and extremities

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To the Editor:

Confluent and reticulated papillomatosis (CRP) is a rare skin disorder in young individuals. It is clinically characterized by slightly hyperkeratotic or verrucous grayish-brown papules coalescing to form a reticulated pattern peripherally with confluent plaques centrally.¹ Sites of predilection are the neck, interscapular, intermammary regions, and abdomen. CRP commonly arises dur-

ing puberty or in early adulthood. Herein, we describe an atypical case of CRP in which the skin lesions developed not only on the abdomen, as a site of predilection, but also on broad areas of the extremities.

The patient had noticed asymptomatic, brownish macular skin eruptions on the inner aspects of the thighs seven months earlier. These skin eruptions expanded to the lower legs within a few months. One month before first presentation, similar lesions had developed on the inner aspects of the upper extremities. Physical examination of these lesions revealed symmetric, hyperpigmented, slightly hyperkeratotic brownish macules having very fine reticular pattern (Figure 1 A-D). On the lower extremities, multiple petechiae were scattered in similar reticular macules (Figure 1 C,D). Additionally, skin lesions resembling those on the upper extremities were symmetrically distributed on the lower abdomen (Figure 1E). The patient had not noticed these abdominal lesions until discovered during the physical examination. Direct mycological examination of scales from the lesions on the extremities and the lower abdomen using potassium hydroxide yielded negative results. Two skin biopsies from lesions on the right thigh and left lower abdomen showed similar histopathological findings. Findings included orthokeratotic epidermis with hyperkeratosis, papillomatosis, focal acanthosis and hyperpigmentation in the basal layer, and perivascular discrete lymphocytic infiltrate in the superficial dermis (Figure 1F).

Based on the clinical and histopathological findings, CRP was diagnosed. After the biopsy, cefcapene pivoxil hydrochloride hydrate (100 mg thrice daily for 3 days) was prescribed routinely for infection prevention. At the second presentation, three weeks later, skin lesions on the extremities unexpectedly showed complete resolution, within a week after the first presentation. However, skin lesions were still present on the lower abdomen, with minor improvement. Hence, these lesions were treated with minocycline (100 mg twice daily for 28 days) but no improvement was noted. Treatment was then changed to cefcapene pivoxil hydrochloride hydrate (100 mg thrice daily for 14 days). After 14 days of cefcapene pivoxil hydrochloride hydrate treatment, all lower abdominal skin lesions resolved completely. No recurrence of CRP lesions was seen during six months of follow-up.

The striking feature in the present case was the unusual localization of skin lesions on the extremities. To the best of our knowledge, a total of four case studies of CRP with skin lesions restricted to small areas somewhere on extremities have been reported.²⁻⁵ Locations of CRP lesions in these cases included the antecubital fossae,^{2,5} popliteal fossae,^{2,3} elbows and knees,⁴ and upper arms.⁵ However, no case of CRP with skin lesions on broad areas on the extremities has previously been reported.

Although unclear, several underlying causes regarding the CRP pathogenesis include keratinization disorder, reaction to *Pityrosporum*, eruption related to endocrinopathy, reaction to bacterial infections such as *Dietzia papillomatosis* or to ultraviolet light, processes involving amyloidosis, or genetic factors.¹

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⁶The idea that CRP is related to bacterial infection is evident by the responsiveness of CRP to a variety of antibacterial agents, including minocycline,^{7,8} cefdinir,⁹ fusidic acid,¹⁰ clarithromycin,¹⁰ and erythromycin.¹⁰ In particular, the effectiveness of oral minocycline therapy against CRP has been well recognized. However, in the present case, cefcapene pivoxil hydrochloride hydrate (but not

minocycline) was effective against CRP lesions. Cefcapene pivoxil hydrochloride hydrate is a cephem antibiotic developed in Japan that inhibits the synthesis of bacterial cell walls and is used for treating bacterial infections.¹¹ A case of CRP that responded to amoxicillin, but not minocycline was reported.¹² Additionally, the present case suggests that a variety of bacteria cause CRP.

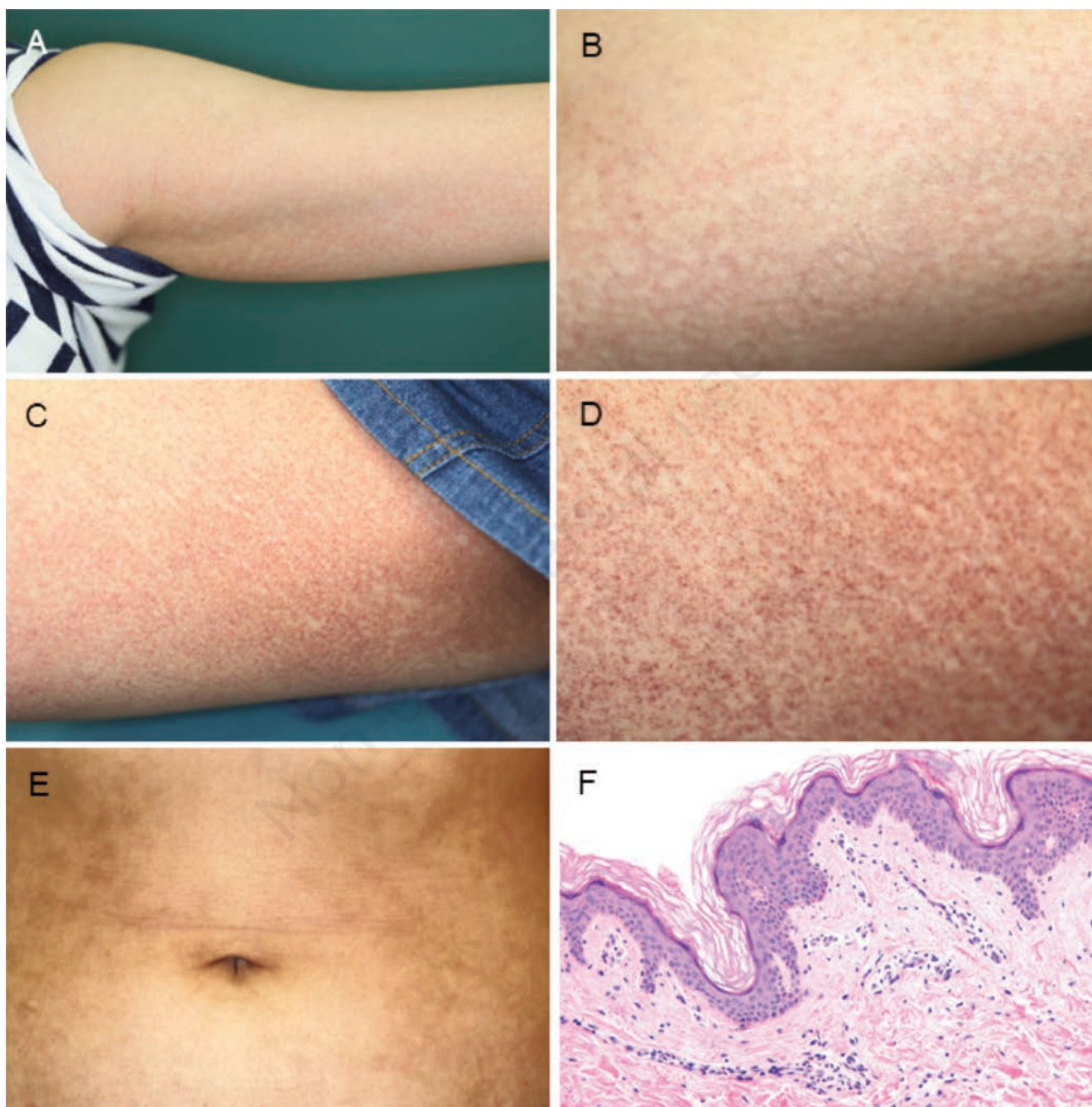


Figure 1. Clinical appearance of the skin lesions. Hyperpigmented, slightly hyperkeratotic macules with a very fine reticular pattern are evident on the inner aspect of the left upper arm (A). Magnified image of A (B). Hyperpigmented, slightly hyperkeratotic brownish macules with multiple scattered petechiae on the inner aspect of the right thigh (C). Magnified image of C (D). Hyperpigmented, slightly hyperkeratotic symmetric reticular macules on the lower abdomen (E). F) Histopathological findings for the lesion on the right thigh (F). The epidermis shows orthokeratotic hyperkeratosis, papillomatosis, focal acanthosis, and hyperpigmentation in the basal layer. Perivascular lymphocytic infiltration is present in the superficial dermis. (hematoxylin and eosin, original magnification $\times 200$).

References

1. Scheinfeld N. Confluent and reticulated papillomatosis: a review of the literature. *Am J Clin Dermatol* 2006;7:305-13.
2. Raja Babu KK, Snehal S, Sudha Vani D. Confluent and reticulate papillomatosis: successful treatment with azithromycin. *Br J Dermatol* 2000;142:1252-3.
3. Lee D, Cho KJ, Hong SK, et al. Two cases of confluent and reticulated papillomatosis with an unusual location. *Acta Derm Venereol* 2009;89:84-5.
4. Atasoy M, Aliğaoglu C, Erdem T. A case of early onset of confluent and reticulated papillomatosis with an unusual localization. *J Dermatol* 2006;33:273-7.
5. Kim MR, Kim SC. Confluent and reticulated papillomatosis on the arm successfully treated with minocycline. *J Dermatol* 2010;37:749-50.
6. Lim JH, Tey HL, Chong WS. Confluent and reticulated papillomatosis: diagnostic and treatment challenges. *Clin Cosmet Investig Dermatol* 2016;25:217-23.
7. Poskitt L, Wilkinson JD. Clearance of confluent and reticulate papillomatosis of Gougerot and Carteaud with minocycline. *Br J Dermatol* 1993;129:351-3.
8. Davis MD, Weenig RH, Camilleri MJ. Confluent and reticulate papillomatosis (Gougerot-Carteaud syndrome): a minocycline-responsive dermatosis without evidence for yeast in pathogenesis. A study of 39 patients and a proposal of diagnostic criteria. *Br J Dermatol* 2006;154:287-93.
9. Yamamoto A, Okubo Y, Oshima H, et al. Two cases of confluent and reticulate papillomatosis: successful treatments of one case with cefdinir and another with minocycline. *J Dermatol* 2000;27:598-603.
10. Jang HS, Oh CK, Cha JH, et al. Six cases of confluent and reticulated papillomatosis alleviated by various antibiotics. *J Am Acad Dermatol* 2001;44:652-5.

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