

Allergic contact dermatitis caused by chloramphenicol with prurigo nodularis-like spreading

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Topical drugs containing chloramphenicol and clostridiopeptidase A are frequently used for the treatment of cutaneous ulcers and other necrotic lesions. Chloramphenicol is a bacteriostatic broad-spectrum antibiotic that is widely used in eye and skin ointments to treat bacterial infections, and is a well-known cause of allergic contact dermatitis (ACD).¹ Clostridiopeptidase A, also called collagenase 1, is a proteolytic enzyme that facilitates tissue granulation, with consequent re-epithelialization; it has rarely been reported as cause of ACD.²

1 | CASE REPORT

A 65-year-old non-atopic man presented with a generalized papular and nodular eruption (Figure 1A). The eruption was diagnosed as

prurigo nodularis by another physician, and had been treated for 2 months with topical corticosteroids, without any improvement. The patient reported that the lesions appeared 1 month after he had started using topical therapy with an ointment containing chloramphenicol and clostridiopeptidase A for a leg ulcer, which was found surrounded by an eczematous reaction (Figure 1B). Topical drug withdrawal and clobetasole dipropionate ointment (twice daily) cleared the eczematous dermatitis surrounding the leg ulcer. Moreover, within 1 month, healing of nodular lesions was achieved, with residual hypopigmentation.

Histopathology of a nodular lesion showed hyperkeratosis, mild acanthosis, and focal spongiosis; the absence of cutaneous neural hyperplasia and an increase in the number of nerve fibres led us to exclude typical prurigo nodularis. Patch tests with the Italian Society



FIGURE 1 (A), Prurigo nodularis-like eruption. (B), leg ulcer surrounded by eczematous reaction. (C), positive patch test reaction to chloramphenicol on day 2

of Allergological Professional and Environmental Dermatology (SIDAPA) baseline series (Euromedical, Calolziocorte, Italy) and the topical ointment (Irujol, tested "as is") were performed. Patch tests were applied on the back and left under occlusion for 2 days with AI Test (Euromedical) on Scanpor tape (Norgesplaster, Vennesla, Norway). Readings were performed on day (D) 2, D4 and D7 according to ESCD guidelines, and showed a positive reaction to Irujol. Subsequently, patch tests with chloramphenicol 5% pet., Noruxol "as is" (containing only clostridiopeptidase A) and ingredients of both ointments (liquid paraffin and white pet.) were performed, and showed a positive reaction to chloramphenicol (Figure 1C). No recurrence at 1-year follow-up was observed.

2 | DISCUSSION

Chloramphenicol was first reported as a contact sensitizer in 1961.³ The prevalence of chloramphenicol contact sensitivity in a large group of patients with venous leg ulcers was reported to be 12.0%.¹ Here, we report contact sensitivity to chloramphenicol with extensive prurigo nodularis-like spreading appearing in areas where the chloramphenicol-containing ointment had not been applied. Spreading of eczema to adjacent and distant regions was described as "auto-allergy" by Parish in 1965.⁴ Recently, unusually extensive and non-eczematous spreading caused by a topical medication was described.⁵ Regarding the spreading induced by chloramphenicol, only two cases of maculopapular exanthema and one case of acute generalized exanthematous pustulosis have been reported.⁶ To the best of our knowledge, this is the first report of prurigo nodularis-like spreading associated with contact allergy to chloramphenicol. The occurrence of prurigo nodularis as result of ACD has been studied in the past⁷; prurigo nodularis-like lesions have rarely been described at the site of direct contact only, associated with contact allergy to nifuroxazide,⁸ parthenium,⁹ pyridine,¹⁰ and *p*-phenylenediamine.¹¹

CONFLICTS OF INTEREST

The authors have no conflicts of interest to report.

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