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DERMATOLOGY IMAGES

Skin ulcers due to *Serratia marcescens* mimicking a neutrophilic dermatosis of the hand

Úlceras cutâneas por Serratia marcescens mimetizando dermatose neutrofílica da mão

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A 74-year-old woman with prior history of hypertension medicated with enalapril presented to the Dermatology department due to recurrent ulcerated lesions on the right hand for the last 7 years. A previous skin biopsy was compatible with neutrophilic dermatosis of the hand, and the patient was treated with topical corticosteroids without significant change. An extensive analytical study, including autoimmunity, infectious serologies and protein electrophoresis, was unremarkable.

Physical examination revealed six ulcers on the lateral aspect of the second finger and dorsum of the right hand and wrist (Fig. 1).

A skin biopsy of the edge of an ulcer showed a dermal polymorphic infiltrate with suppuration (Fig. 2). No infectious agents were found using hematoxylin-eosin and special stains.

Serratia marcescens (*S. marcescens)* was isolated from cultures of the base of an ulcer. Fungi and acid-fast bacilli specific cultures were negative. The patient was treated with trimethoprim-sulfamethoxazole (800/160 mg twice daily) with clinical improvement after 2 weeks and complete remission in 6 weeks (Fig. 3). No relapse was observed during 15 months of follow-up.

Serratia marcescens (*S. marcescens)* is a gram-negative anaerobic bacillus from the Enterobacteriaceae family[1]. Skin infections caused by *S. marcescens* are rare and mainly occur in immunocompromised patients[2-4]. In the last years, more attention has been paid to this pathogen in Dermatology, given its increasing incidence and complex antibiotic resistance profile[1].

Figure 1. A, **B**, and **C:** skin ulcers of the dorsum of right hand and wrist; **B** and **C:** close images showing ulcers with a violaceous infiltrated border.

Here we describe a case of multiple hand ulcers resembling neutrophilic dermatosis. This similarity was previously described in a case mimicking pyoderma gangrenosum[5,3]. Diagnosis of pyoderma gangrenosum

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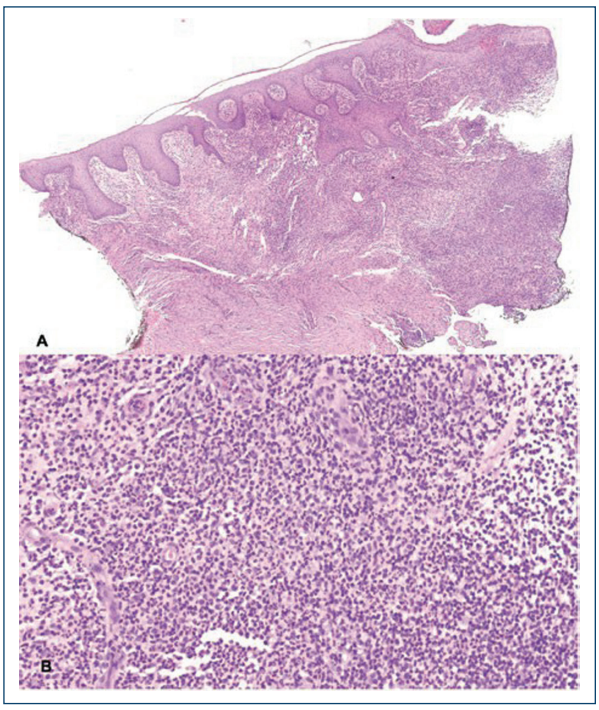

Figure 2. **A** and **B:** hematoxylin-eosin-stained sections at 50× and 200×, respectively. **A:** superficial ulcer and dense infiltrate on the dermis; **B:** close-up of the inflammatory infiltrate showing predominance of neutrophils.

Figure 3. Complete healing of the ulcers 6 weeks after treatment with trimethoprim-sulfamethoxazole.

implies the exclusion of other conditions, namely infections[5]. This case highlights the importance of performing cultures in ulcers, specifically when facing treatment failure.

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Conflicts of interest

None.

Ethical considerations

Protection of humans and animals. The authors declare that no experiments involving humans or animals were conducted for this research.

Confidentiality, informed consent, and ethical approval. The authors have followed their institution's confidentiality protocols, obtained informed consent from patients, and received approval from the Ethics Committee. The SAGER guidelines were followed according to the nature of the study.

Declaration on the use of artificial intelligence. The authors declare that no generative artificial intelligence was used in the writing of this manuscript.

References

1. Roh WS, Chung KB, Kim DY. Recent emergence of Serratia marcescens in dermatology: retrospective observations based on clinical outpatient data. Euro J Dermatol. 2022;32:94–8
2. Friedman ND, Peterson NB, Sumner WT, Alexander BD. Spontaneous dermal abscesses and ulcers as a result of serratia marcescens. J Am Acad Dermatol. 2003;49S:193–4
3. Veraldi S, Nazzaro G. Skin ulcers caused by serratia marcescens: Three cases and a review of the literature. Eur J Dermatol. 2016;26:373-6.
4. Seo J, Shin D, Oh SH, Lee JH, Chung KY, Lee MG, et al. Cutaneous Serratia marcescens infections in Korea: a retrospective analysis of 13 patients. J Dermatol. 2016;43:149–55.
5. Carlesimo M, Pennica A, Muscianese M, Bottoni U, Abruzzese C, Giubettini M, et al. Multiple skin ulcers due to Serratia marcescens in a immunocompetent patient. G Ital Dermatol Venereol. 2014;149:367-70.