

## Erosive pustular dermatosis of the scalp

Sergio Vano-Galvan,<sup>1</sup> Martorell-Calatayud Antonio,<sup>2</sup> Jaén Pedro<sup>3</sup>

Department of Dermatology, Ramon y Cajal Hospital, Madrid,<sup>1,3</sup> Department of Dermatology, Valencia,<sup>2</sup> Spain.

Corresponding Author: Sergio Vano-Galvan. Email: sergiovano@yahoo.es

### Abstract

Erosive pustular dermatosis of the scalp is a rare condition characterized by sterile pustules, erosions and crusted lesions on the scalp of elderly patients. It can be misdiagnosed with tinea capitis or even skin cancer, so it is important to be aware of this entity for a correct diagnosis.

An 80-year-old Caucasian man presented with a 3 month history of painful erythematous erosions and crusts on his scalp. The lesions appeared after treatment with cryotherapy of actinic keratoses. The patient underwent treatment with topical mupirocine and topical antifungals without success. Physical examination revealed the presence of extensive erosions and crusts along the scalp, with tiny pustules on the sides. The clinical and histopathological findings lead us to the diagnosis of erosive pustular dermatosis of the scalp. Treatment with potent topical corticosteroids twice daily was started with improvement after ten days. A maintenance therapy with topical tacrolimus was initiated without clinical relapse after 3 months.

**Keywords:** Erosive pustular dermatosis, Topical mupirocine.

### Introduction

Erosive pustular dermatosis of the scalp (EPDS) is a rare condition characterized by sterile pustules, erosions and crusted lesions on the scalp of elderly patients. It can be misdiagnosed with tinea capitis or even skin cancer, so it is important to be aware of this entity for a correct diagnosis.

### Case Report

An 80-year-old Caucasian man presented with a 3 month history of painful erythematous erosions and crusts on his scalp. The lesions appeared after treatment with cryotherapy of actinic keratoses. The patient underwent treatment with topical mupirocine and topical antifungals without success. Physical examination revealed the presence of extensive erosions and crusts along the scalp, with tiny pustules on the sides (Figure-1). A skin biopsy was performed.

Histopathological examination revealed an ulcerated epidermis with parakeratosis and serum-crust, and a mixed dense dermal infiltrate consisting of lymphocytes, neutrophils and plasma cells. Special staining and cultures for bacteria



Figure-1: Clinical image showing extensive erosions and crusts along the scalp, with tiny pustules on the sides.



Figure-2: Clinical image showing the important improvement of the lesions after a 10 days treatment of potent topical corticosteroids.

and fungi were negative. A direct immunofluorescence study was also negative.

The clinical and histopathological findings confirmed the diagnosis of erosive pustular dermatosis of the scalp. Treatment with potent topical corticosteroids twice daily was started with marked improvement after ten days (Figure-2). A maintenance therapy with topical tacrolimus was initiated without clinical relapse after 3 months.

## Discussion

Erosive pustular dermatosis of the scalp is a rare inflammatory disease of unknown etiology that usually occurs in the elderly. Cases of erosive pustulosis of the scalp have been reported following skin grafting, radiation, cryotherapy, or topical chemotherapy, among others.<sup>1</sup> A history of trauma to the affected area can usually be established. A similar condition may arise on the legs.

Tiny pustules form on the scalp, forehead or temples of the affected person. The pustules are usually sterile (uninfected) but they can become secondarily colonized by bacteria such as *Staphylococcus aureus* after the condition has developed. This particular disorder primarily occurs in older Caucasian women.

Erosive pustulosis of the scalp is a diagnosis of exclusion; therefore, other conditions, including malignancy, infection, neutrophilic dermatoses, and autoimmune blistering disorders, must first be excluded. In erosive pustulosis of the scalp, direct immunofluorescence studies on biopsy tissue should be considered. Results are typically negative in persons with erosive pustulosis of the scalp. Histopathologically, EPDS is nonspecific, showing atrophic epidermis and chronic inflammation.<sup>2</sup>

Awareness of the existence of this condition by the

dermatologist is important for management and prognosis of the patient. The choice of treatment depends on age, severity and extent of disease. As a rule, the treatment approach for erosive pustular dermatosis begins with local treatment for primary stages of disease. Systemic medication is administered in rapidly advancing, extensive disease, or when the condition is unresponsive to other forms of treatment. The most common treatment approach involves corticosteroids. The use of class I and class II steroids have shown rapid improvement of erosive pustular dermatosis. Sustained therapy is required for long-lasting effect of treatment.

Recently, a few cases of successful treatment of EPDS with topical tacrolimus ointment have been reported.<sup>3</sup> Another report describes a successful experience with photodynamic therapy.<sup>4</sup>

## Conclusion

Erosive pustular dermatosis of the scalp is a rare condition that usually affects elderly patients. Clinically, erosions, sterile pustules and crusted lesions appear on the scalp and it can mimic tinea capitis or even skin cancer. Physicians must be aware of this condition in order to avoid misdiagnoses.

## References

1. Patton D, Lynch PJ, Fung MA, Fazel N. Chronic atrophic erosive dermatosis of the scalp and extremities: A recharacterization of erosive pustular dermatosis. *J Am Acad Dermatol* 2007; 57: 421-7.
2. Van Exel CE, English JC 3rd. Erosive pustular dermatosis of the scalp and nonscalp. *J Am Acad Dermatol* 2007; 57: S11-4.
3. Laffitte E, Kaya G, Piguat V, Saurat JH. Erosive pustular dermatosis of the scalp: treatment with topical tacrolimus. *Arch Dermatol* 2003; 139: 712-4.
4. Meyer T, López-Navarro N, Herrera-Acosta E, Jose A, Herrera E. Erosive pustular dermatosis of the scalp: a successful treatment with photodynamic therapy. *Photodermatol Photoimmunol Photomed* 2010; 26: 44-5.