

## Chapter 30

# An 80-Year-Old Man with Erosions on the Scalp



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An 80-year-old man presented with a two-year history of progressing erosions on the scalp area. He did not complain of any symptoms associated with the skin lesions. The patient had hypertension, ischemic heart disease and type 2 diabetes mellitus.

A physical examination revealed erosions, yellowish crusts and areas of scarring hair loss on the frontal and parietal areas. Moreover, non-scarring hair loss of the frontal, parietal and vertex regions with multiple areas of actinic keratosis were presented (Fig. 30.1). On trichoscopy, red and milky-red areas with the absence of follicular openings, hemorrhagic and yellowish crusts were detected (Fig. 30.2).

**Fig. 30.1** An 80-year-old man with androgenetic alopecia. Erosions on the frontal and parietal areas with yellowish crusts surrounded by areas of scarring alopecia are presented



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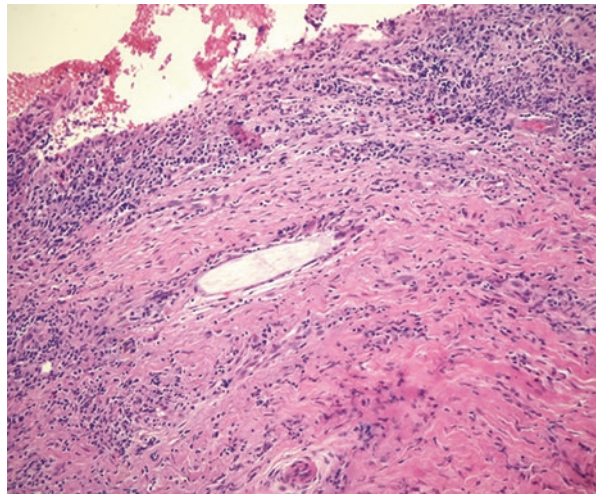
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A. Waśkiel-Burnat et al. (eds.), *Clinical Cases in Scalp Disorders*, Clinical Cases in Dermatology, [https://doi.org/10.1007/978-3-030-93426-2\\_30](https://doi.org/10.1007/978-3-030-93426-2_30)



**Fig. 30.2** Trichoscopy shows yellowish and hemorrhagic crusts with a surrounding erythema (×20)

**Fig. 30.3** Histology shows a zone of epidermal erosion covered with serum, blood and the cornified layer remnants. Moreover, a dense dermal polymorphous inflammation, loss of follicular structures, or in some areas the naked hair shaft surrounded by multinucleated giant cells are visible



In histopathological examination a zone of epidermal erosion covered with serum, blood and the cornified layer remnants was observed. Moreover, a dense dermal polymorphous inflammation with vascular proliferation suggestive of granulation tissue rich in plasma cells was detected. There was loss of follicular structures, or in some areas the naked hair shaft surrounded by multinucleated giant cells were visible (Fig. 30.3).

Based on the case description and the photographs, what is your diagnosis?

### Differential Diagnoses

1. Erosive pustular dermatosis of the scalp.
2. Brunsting-Perry cicatricial pemphigoid.
3. Basal cell carcinoma.
4. Pyoderma gangrenosum.

### Diagnosis

Erosive pustular dermatosis of the scalp.

### Discussion

Erosive pustular dermatosis of the scalp is a rare inflammatory condition of the scalp [1]. The etiopathology of the disease is not fully described. The possible trigger factors are a prior trauma, radiation, herpes zoster, treatment with topical fluorouracil or imiquimod, cryotherapy, and photodynamic therapy [2]. The lesions typically occurs six months after the triggering event [3]. Erosive pustular dermatosis of the scalp is more common in patients with androgenetic alopecia and actinic damage as well as in individuals with autoimmune disorders such as rheumatoid arthritis, autoimmune hepatitis, Hashimoto thyroiditis, and Takayasu aortitis [3]. It mainly affects elderly with aging of onset at 60–70 years [1, 3]. Clinically, the condition is characterized by recurrent pustules, inflamed erosions and grey, yellow or yellow-brown crusts that lead to the scarring alopecia. Affected areas undergo a continuous cycle of healing and recurrences with a fluctuating course [1]. Pain and pruritus are rarely observed. The vertex is the most common location for erosive pustular dermatosis of the scalp, followed by the frontal and parietal areas [1]. Diagnosis of the disease is based on a combination of history, physical examination, trichoscopy, and histopathology [3]. Trichoscopic features of erosive pustular dermatosis of the scalp include absence of follicular ostia, tufted and broken hair, crusts, serous exudate, dilated vessels, pustules and hyperkeratosis [1]. In histopathological examination, nonspecific changes such as an erosive or hyperplastic epidermis and subcorneal pustules are presented. In the dermis, there are lymphocytic and leukocyte-rich infiltrates, plasma cells and, in some cases, foreign body reactions [2]. The disease management involves a pragmatic multimodal approach. Potent or ultrapotent topical corticosteroids and topical calcineurin inhibitors are usually the first line treatment. Moreover, the improvement after topical calcipotriene (calcipotriol), systemic prednisone, doxycycline, isotretinoin or acitretin, dapsone and zinc has been described [2].

For the presented patient differential diagnoses included Brunsting-Perry cicatricial pemphigoid, basal cell carcinoma and pyoderma gangrenosum.

Brunsting-Perry cicatricial pemphigoid is a chronic inflammatory, autoimmune condition. It is characterized by subepithelial blisters and erosions with following scarring strictly limited to the head and neck. The mucous membranes are spared.

Pyoderma gangrenosum is a rare, noninfectious, neutrophilic dermatosis with an incidence between three and 10 patients per million [4]. It presents as pustules or papules that undergo a central necrosis and extend peripherally to form ulcers. Lower extremities are the most common location, however the scalp involvement has been described in the literature [4]. Classic pyoderma gangrenosum is most common in adults between 20 and 50 years of age. However, the scalp lesions frequently occur in the pediatric and geriatric patient populations [4]. Women are slightly more commonly affected compared to man. Pyoderma gangrenosum is commonly associated with an underlying comorbidity such as inflammatory bowel disease, hematologic disorders (myelodysplastic syndrome, multiple myeloma), or inflammatory arthritis [4].

Basal cell carcinoma is the most common skin malignancy. The incidence rate of the disease increases with age. There are five types of basal cell carcinoma: nodular, pigmented, morpheaform, superficial and premalignant (fibroepithelioma) that vary in clinical presentation. Basal cell carcinoma presents as solitary lesion, most commonly on the face, scalp or neck areas [5].

Based on the clinical manifestation, trichoscopy and histopathological examination, the diagnosis of erosive pustular dermatosis of the scalp was established. Therapy with propionate clobetasol 5% cream was initiated with clinical improvement.

### Key Points

- Erosive pustular dermatosis of the scalp is a form of scarring alopecia that is mainly observed in the elderly.
- It presents as recurrent pustules, inflamed erosions and grey, yellow or yellow-brown crusts that lead to scarring alopecia.

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