INTRODUCTION

Erosive pustular dermatitis of the scalp (EPDS) typically affects elderly people and is clinically characterized by pustules, erosions, and crusts, which heal with scarring alopecia.

Videodermoscopy (VD) of the scalp (trichoscopy) is a noninvasive tool used for the diagnosis and follow-up of different types of hair loss that, to the best of our knowledge, has never been assessed in the diagnosis of EPDS.

To evaluate the trichoscopy features of EPDS, we carried out a retrospective analysis of VD images obtained in the scalp of ten patients who affected by histopathologically confirmed EPDS, seen over a period of 7 years at the Outpatients Consultation of Hair Diseases of Dermatology of the University of Bologna. The trichoscopy results obtained from the patients with EPDS were compared with those obtained from a series of thirty patients who affected by other type of scarring alopecia involving the scalp and clinically presenting with erosions, crusts, pustules, and atrophy.

The most specific VD feature was thus represented by evident hair bulb in the scarring scalp, observed in all patients.

EPDS, a rare chronic disorder of unknown etiology, was first described in 1979 by Pye et al.[1] Trigger factors are local mechanical and chemical traumas or chronic sun exposure.[2,3] EPDS typically affects elderly people and is clinically characterized by pustules, erosions, and crusts, which heal with scarring alopecia. Usually, the diagnosis is pathologically confirmed. Scalp pathology excludes other scarring diseases and reveals nonspecific features: Massive fibrosis of the dermis with considerable reduction of the hair follicle density and absence of sebaceous glands with...
a neutrophilic infiltrate present around the hair follicles at the isthmus level.

Trichoscopy is a new diagnostic tool that permit diagnosing of different types of hair disorders and it has proved very useful in the management of EPDS, never seen before. We conducted a retrospective study of VD images obtained in the scalp of ten patient (mean age 50.3 years, range from 8 to 95) with a pathological diagnosis of EPDS made at the Outpatient Consultation of Hair Diseases of the University of Bologna seen over a period of 7 years.\[4,5\]

All medical records of patients with a diagnosis of EPDS made between January 2007 and January 2015 were reviewed. All patients were monitored by global photography and videodermatoscopy (Foto Finder dermatoscope\textsuperscript{®}, Touchscreen Software, Bad Bimbach, Germany).

The clinical examination revealed in all cases areas of scarring alopecia with skin atrophy. The hair was sparse or absent and sometimes irregularly twisted and broken a few millimeters above. The skin of the scalp was severely thin with eroded areas and in eight patients, it showed blood and seropurulent crusts [Figure 1a] while in two patients, it was diffusely covered by oily scales.

Trichoscopy was performed with high magnifications (\(\times20–70\)) and in incident light, without the use of immersion oil (dry VD). The following VD features were observed: (a) Atrophic and thin scalp in 8/10 patients; (b) lack of follicular ostia in 7/10 patients; (c) evident superficial blood vessels in 5/10 patients; (d) evident hair bulbs in all cases [Figure 1b]. The most specific VD feature was thus represented by evident hair bulb in the scarring scalp, observed in all patients (100%). The presence of atrophic and thin scalp was observed in 8/10 of cases; lack of follicular ostia was observed in 7/10 of patients while evident superficial blood vessels were observed in half of the patients.

The trichoscopy results obtained from the patients with EPDS were compared with those obtained from a series of thirty patients, taken from our databases, affected by other type of scarring alopecia involving the scalp and clinically presenting with erosions, crusts, pustules, and atrophy. In folliculitis decalvans (ten patients), VD showed the presence of tufted hair, perifollicular pustules, crusting, yellowish tubular scaling, and thin scalp without follicular ostia with twisted and elongated blood capillary loops [Figure 2a]. In lichen planopilaris (ten patients), VD showed the presence of peripilar casts, thin scalp without follicular ostia with enlarged and concentrically oriented blood vessels [Figure 2b]. In discoid lupus erythematosus (ten patients), VD showed keratotic plugs, red dots, and atrophic skin without follicular ostia with enlarged arborizing vessels [Figure 2c]. These data were consistent with the literature’s data.\[6,7\] None of these scarring alopecias showed evident hair follicle bulbs at VD.

VD is an important diagnostic tool for hair diseases and should be utilized in all patients as it provides important information and may allow diagnosis, avoiding a biopsy. In our series of patients with EPDS, the clinical features were not always diagnostic, and other scalp disorders producing atrophy and scarring had to be excluded. Trichoscopy might be useful in the diagnosis of EPDS as it shows atrophic and thin scalp, lack of follicular ostia, evident superficial blood vessels, and more specifically, visible hair follicle bulbs. The presence of evident hair bulb in EPDS has

\[\text{Figure 1: Clinical (a) and videodermoscopy (b) of erosive pustular dermatitis of the scalp with evident hair bulb (\(\times20\))}\]

\[\text{Figure 2: Videodermoscopy of scarring alopecia with erosions, crusts, pustules, and thin scalp. (a) Folliculitis decalvans. (b) Lichen planopilaris. (c) Discoid lupus erythematosus (\(\times20\))}\]
never been reported in the literature and seems unique and diagnostic of this disease.

In conclusion, the finding of scarring alopecia with skin thinning and evident hair follicle bulbs is highly suggestive for EPDS and may avoid a biopsy. This is particularly interesting in EPDS as it typically affects elderly patients, where performing a biopsy is difficult due to comorbidities and drug intake.

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Conflicts of interest

There are no conflicts of interest.

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