

Case Report

Demodex Folliculitis of the Scalp: Case Report

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Abstract

Demodex is a commensal mite found in the pilosebaceous units. Demodicosis in scalp is uncommon and only few cases were reported on the literature. We described a young caucasian male with burning, scaling and pustules on the scalp. The scalp biopsy showed granulomatous reaction and presence of *Demodex* mites in follicular canals. The diagnose of demodex folliculitis of the scalp was made and a good response was achieved after topical metronidazole treatment.

Keywords: *Demodex*; Demodicosis; Folliculitis; Metronidazole; Rosacea; Rosacea-like; Scalp; Therapy

Introduction

Demodex is a commensal mite found in the pilosebaceous units. The three mainly demodicosis clinical forms described in facial skin are: pityriasis folliculorum which presents facial erythema, burning, scales and follicular plugs; rosacea-like demodicosis characterized by scales, erythema and papulopustules very similar with rosacea and demodicosis gravis also called granulomatous rosacea-like [1].

Demodex can also occur associate with others skin conditions such as perioral dermatitis, rosacea and seborrheic dermatitis, called secondary demodicosis by some authors [2]. The clinical diagnose of demodicosis can be difficult due its clinical signs are common with other skin disorders.

Case Report

A 19-year-old caucasian male presented burning sensation, scaling on the center facial and scalp for the last four months. He had been treated before by another dermatologist with anti-seborrheic facial soap and corticosteroids shampoo without success. He had a medical

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record of atopic dermatitis, allergic rhinitis and penicillin allergy. On clinical examination, he had some pustules on the nose and erythematous plaques with fatty scaling on glabella, nasolabial sulcus and chin. The dermoscopy on the vertex scalp revealed scaling, follicular pustules, crusts, perifollicular and interfollicular erythema (Figure 1). There was no ocular symptoms. The diagnosis of facial and scalp seborrheic dermatitis was made. Doxycycline 100mg daily, ketoconazole 2% cream, ketoconazole 2% shampoo and clobetasol propionate 0.05% scalp solution was prescribed and there has been improvement on the facial and scalp lesions. After 2 weeks without treatment, the scalp lesions relapsed. Dermoscopy presented perifollicular erythema, pustules and crusts on vertex scalp. A bacterial folliculitis was suspected. It was prescribed oral sulfamethoxazole plus trimethoprim during four weeks without success.



Figure 1: The dermoscopy on the vertex scalp revealed follicular pustules, crusts, perifollicular and interfollicular erythema.

In order to elucidate the diagnosis, a scalp biopsy was performed. The histopathological examination revealed superficial folliculitis, interfollicular granulomatous reaction on dermis (Figure 2) and presence of *Demodex* in some hair follicles (Figure 3). No bacterial colonies or fungal were found. Firstly we consider a scalp rosacea diagnose, but the absence of clinical signs for facial rosacea led us to the diagnosis of scalp demodicosis folliculitis. Tetracycline 500mg and metronidazole solution on scalp was prescribed for four weeks. After one year of follow up, the patient remained asymptomatic.

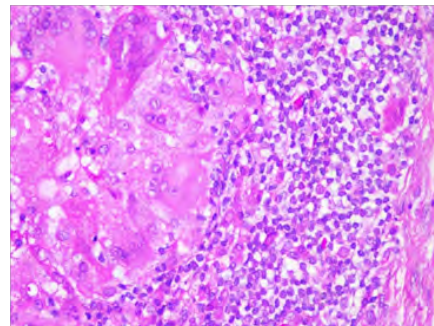


Figure 2: Histopathological scalp exam showed granulomatous reaction on dermis.

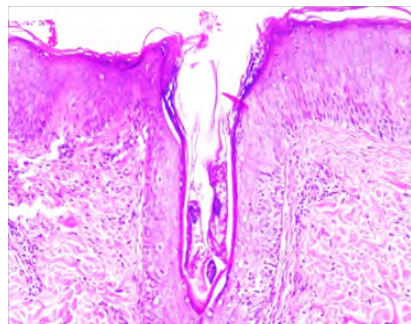


Figure 3: Presence of *Demodex* inside the follicular canal.

Discussion

A young man has been described, whose scalp signs and symptoms and histopathological findings were compatible with demodex folliculitis of the scalp. Previous case reports has involved bald scalp, within mid age men who presented facial more severe lesions [3]. Oberholzer et al., in 2009, described two patients complaining about red scalp with itching or burning sensation, erythema, papules and pustules on hairy scalp. There was no evidence of facial rosacea and the scalp biopsy showed absence of *Demodex* and presence of granuloma formation on dermis consistent with rosacea. However, the diagnose of rosacea-like dermatosis was given, whereas at that moment, no case of rosacea on hairy scalp has been published [4].

Demodex is commonly found on the face but unusual on the scalp [5]. Only few case reports of demodicosis of the scalp has been described [7-9]. Histopathological exam was performed on two cases demonstrated folliculitis, perifolliculitis and intrafollicular *Demodex* mites [7,8]. A retrospective study reviewed scalp biopsies of 333 patients with different diseases. *Demodex* mites were found in 17 cases. Four of them, showed similar clinical findings, among them, hair loss, erythema, scales and pustules. Histopathology showed 2 or more *Demodex* mites, mono-nuclear cell infiltrates and granulomas were present in 2 cases [10].

The diagnose of demodicosis suspected when suggestive clinical signs and symptoms are present, when the mites are found by Standardized Skin Surface Biopsy (SSSB) [11]. The presence of more than five mites per follicle or per cm² is consider positive for demodicosis [12].

In our case, the diagnose was defined due your histopathological findings, absence of facial rosacea and response after topical metronidazole treatment.

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