

Chapter 48

Erythematous and Desquamative Lesions Treated with Larval Secretions



Erdal Polat, Defne Özkoca, Burhan Engin, and Zekayi Kutlubay

A 45-year-old woman presented with a three-year history of scaling and itching of the scalp. The patient had been treated with topical corticosteroids and antifungal creams, lotions and shampoos without improvement. No other dermatological or non-dermatological diseases were reported.

A physical examination of the scalp revealed an erythema, diffuse, yellow, thick scales and longitudinal yellow hair casts (Fig. 48.1). No other skin lesions were presented.

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

Differential Diagnoses

1. Seborrheic dermatitis.
2. Scalp psoriasis.

E. Polat

Cerrahpaşa Medical Faculty, Department of Microbiology and Alternative Medicine, İstanbul University-Cerrahpaşa, İstanbul, Turkey

D. Özkoca · B. Engin

Cerrahpaşa Medical Faculty, Department of Dermatology and Venerology, İstanbul University-Cerrahpaşa, İstanbul, Turkey

Z. Kutlubay (✉)

Cerrahpaşa Medical Faculty, Department of Dermatology and Venerology, İstanbul University-Cerrahpaşa, İstanbul, Turkey

Cerrahpaşa Tıp Fakültesi, Deri ve Zührevi Hastalıkları Anabilim Dalı, İstanbul Üniversitesi-Cerrahpaşa, İstanbul, Turkey

Fig. 48.1 A 45-year-old woman with an erythema and diffuse yellow, thick scales. Moreover, longitudinal yellow hair casts are presented



Diagnosis

Seborrheic dermatitis treated with *Lucilia sericata* larval secretions.

Discussion

Seborrheic dermatitis is a common eczematous disorder that has a relapsing nature. It affects 1–3% of the immunocompetent individuals; and is more common in males compared to females. The disease is common in infants less than three months of age, adolescents, young adults and elderly. The frequency of the disease increases in the patients infected with Human Immunodeficiency Virus or who suffer from parkinsonism [1].

Malessezia furfur has a key role in the pathogenesis of seborrheic dermatitis; therefore the treatment concentrates on topical antifungal and anti-inflammatory agents [2]. The conventional treatment modalities are topical selenium sulphide/sulphur, zinc pyrithione, tar, bifonazole, lithium succinate, miconazole, benzoyl peroxide, ketoconazole, propylene glycol, fluconazole, corticosteroids, metronidazole, ciclopirox and terbinafine; and oral ketoconazole, itraconazole and terbinafine [3].

The secretions of *Lucilia sericata* larvae have been used in the treatment of ulcers and debriment of soft tissue wounds and necrotic debris for 20 years [4].

The presented patient was diagnosed with seborrheic dermatitis. She did not want to use topical formulations; therefore she was consulted in the Microbiology Department. *Lucilia sericata* larval secretions were used to treat the patient. The

Fig. 48.2 A complete resolution of the disease



oxygen injection headpiece of the Beauty Instrument-Hydra Facial was used to spray sterile larval secretions on to the scalp with an atmospheric pressure of 4–5 units. The treatment was applied once a day for 20 days. A complete resolution of the skin lesions was achieved (Fig. 48.2).

Key Points

- Seborrheic dermatitis is a common eczematous disorder that has a relapsing nature.
- The conventional treatment modalities for seborrheic dermatitis are topical selenium sulphide/sulphur, zinc pyrithione, tar, bifonazole, lithium succinate, miconazole, benzoyl peroxide, ketoconazole, propylene glycol, fluconazole, corticosteroids, metronidazole, ciclopirox and terbinafine; and oral ketoconazole, itraconazole and terbinafine.

References

1. Dessinioti C, Katsambas A. Seborrheic dermatitis: etiology, risk factors, and treatments: facts and controversies. *Clin Dermatol*. 2013;31(4):343–51. <https://doi.org/10.1016/j.clindermatol.2013.01.001>.
2. Borda LJ, Perper M, Keri JE. Treatment of seborrheic dermatitis: a comprehensive review. *J Dermatolog Treat*. 2019;30(2):158–69. <https://doi.org/10.1080/09546634.2018.1473554>.
3. Gupta AK, Bluhm R. Seborrheic dermatitis. *J Eur Acad Dermatol Venereol*. 2004;18(1):13–26.; quiz 19-20. <https://doi.org/10.1111/j.1468-3083.2004.00693.x>.
4. Polat E, Cakan H, Aslan M, Sirekbasan S, Kutlubay Z, Ipek T, Ozbilgin A. Detection of anti-leishmanial effect of the *Lucilia sericata* larval secretions in vitro and in vivo on *Leishmania tropica*: first work. *Exp Parasitol*. 2012;132(2):129–34. <https://doi.org/10.1016/j.exppara.2012.06.004>.