

# *Ulceration of the scalp: lipogranuloma induced by industrial oils in an interior decorator*

H. Husein-ElAhmed, M. I. Hernandez-Soriano, J. Aneiros-Cachaza, J. C. Ruiz-Carrascosa,  
R. Naranjo-Sintes

## **K E Y W O R D S**

**lipogranuloma,  
oil-based paint**

To the Editor,

A lipogranuloma or oleoma is a focus or nodule of a foreign-body granulomatous inflammation, in association with lipids, usually mineral oil, deposited in tissues. This material was widely used in cosmetics and plastic surgery in the early 1990s (1). We present a case of oleoma on the scalp in a woman with no previous evident cause.

A 46-year-old female interior decorator presented with an ulceration of the scalp lasting 11 months. She complained of swelling and tenderness of the scalp. The medical history showed that the lesion began as a 4 cm-diameter raised plaque that enlarged over a 6-week period until reaching its present size. Neither antifungal drugs nor antibiotic therapies brought about improvement. She indicated that she usually worked with industrial oil-based paints without any protection from direct contact. On examination, we found a 9 cm ulceration on the scalp with irregular and elevated borders (Fig. 1). No adenopathies were detected. The first diagnosis considered was an ulcerated basal cell carcinoma. Prior to surgery, a skin biopsy was performed that revealed a lesion consisting of fat vacuoles with foreign-body giant cells and scattered lymphocytes (Fig. 2). A diagnosis of oleoma was then made.

The injection of exogenous lipids was used as an early medical intervention for augmenting body contours in the late twentieth century. Injections of oil may cause foreign body reactions that lead to lesions named according to the injected material, such as paraffinoma or oleoma. Systemic distribution can occur, resulting in pulmonary complications. These lesions have been widely described in body-builders that practice intramuscular self-injection of walnut oil and sesame seed oil (1). Our patient denied these kinds of practices, but she worked with oil-based paints. It is unclear how the lipid material reached this patient's scalp. We reviewed her medical story and found that she had been diagnosed with borderline personality disorder, but she had not followed the therapy plan. When she was questioned again, she confessed to self-harming behavior.

The two main important features of lipogranuloma for dermatologists are: first, it may be helpful to detect underlying personality disorders and, second, it can be misdiagnosed as malignant lesion. It is essential to differentiate lipogranulomas from malignancy in order to avoid extensive surgery. This patient was misdiagnosed with basal-cell carcinoma, but a biopsy excluded that first diagnosis. Although the usual treatment is total or partial excision, steroids have also been

reported as a satisfactory therapy (2). We performed a narrow excision of the lesion and no flap reconstruction was needed.

Diagnosis of oleomas can be a challenge, particularly when the medical history is not suspicious. These conditions can easily be misdiagnosed as malignancies, leading to overly aggressive therapies. History is the physician's most important basis of diagnosis, in

order to detect behavior disorders. Skin biopsy should be performed in suspicious lesions. Our case is unusual due to its atypical location, but the histologic findings were decisive for making the correct diagnosis and treatment. Dermatologists should be aware that in cases of such lesions an underlying psychiatric disorder may be present.



Figure 1. Ulceration of the scalp with elevated edges induced by oil-based paints.

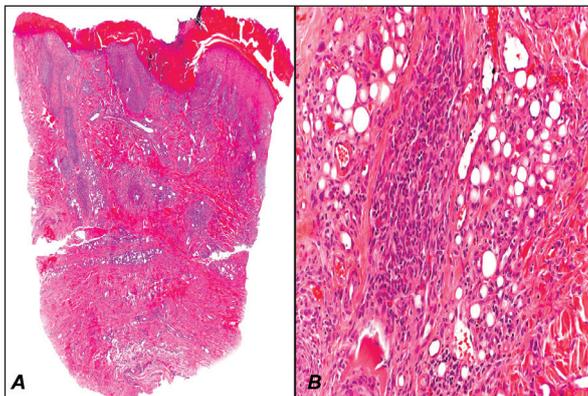


Figure 2. A. Panoramic view of the lesion: ulcerated epidermis with lymphohistiocytic infiltrate associated with perivascular eosinophils in dermis (hematoxylin & eosin).

B. Oil-induced vacuoles of various sizes showing a pseudolipomatosis-type pattern (hematoxylin & eosin  $\times 20$ ).

## REFERENCES

1. Georgieva J, Assaf C, Steinhoff M, et al. Bodybuilder oleoma. *Br J Dermatol*. 2003 Dec;149(6):1289–90.
2. Lawrentschuk N, Angus D, Bolton DM. Sclerosing lipogranuloma of the genitalia treated with corticosteroids. *Int Urol Nephrol*. 2006;38(1):97–9.

**A U T H O R S ' A D D R E S S E S** Husein Husein-ElAhmed, MD, Department of Dermatology. San Cecilio University Hospital, Avd. Madrid S/N. CP: 18012, Granada, Spain, corresponding author; E-mail: huseinelahmed@hotmail.com

María Isabel Hernandez-Soriano, MD, same address

Jose Aneiros-Cachaza, MD, Department of Pathology. San Cecilio University Hospital, Granada, Spain

Jose-Carlos Ruiz-Carrascosa, MD, Department of Dermatology. San Cecilio University Hospital, Granada, Spain

Ramón Naranjo-Sintes, MD, same address