

## LETTERS TO THE EDITOR

## Effective Laser Treatment in a Case of Lupus Pernio

Maria Ekbäck and Lars Molin

Department of Dermatology, Örebro University Hospital, S-701 85 Örebro, Sweden. E-mail: maria.ekback@orebroll.se  
Accepted November 12, 2004.

Sir,

Sarcoidosis is a chronic granulomatous disease of unknown aetiology, the treatment of which is so far not completely efficacious. Papules and nodules tend to resolve within months or years, but plaques are often more resistant. The course of lupus pernio is very chronic and resistant to treatment (1). A patient with facial lupus pernio is presented in whom treatment with vascular laser was highly effective.

## CASE REPORT

A 57-year-old woman presented for the first time 17 years ago with bluish-red slightly infiltrated plaques on her left cheek. The sarcoidosis diagnosis was verified by histopathology.

No pulmonary or other extracutaneous sarcoidosis involvement has been diagnosed so far. Treatment with potent corticosteroids topically and by intralesional injections as well as oral Plaquenil® had no or only limited effect. During a period of systemic treatment with corticosteroids and cytostatic drugs for a non-Hodgkin lymphoma the lesions temporarily healed, but relapsed thereafter with lesions more spread over the cheek and on the nose as well. Pulsed dye laser treatments (Candela SPTL 1, 585 nm, 450 µsec, 6.75–7 J/cm<sup>2</sup>) were performed 10 times during a period of 3 years after which the lesions were less reddish and somewhat thinner but overall the effect was limited (Fig. 1A).

Use of a frequenced-double YAG laser (Versapuls®; 532 nm, 50 msec, 12–16 J/cm<sup>2</sup>) twice, the second time after 7 months, caused complete healing of the lesions (Fig. 1B). The patient experienced only slight erythema and swelling of treated skin areas the day after treatment. There were no other complaints related to the treatment. Follow-up for 3 years showed no sign of relapse.

## DISCUSSION

Many treatments have been described for lupus pernio, but no large series indicate the superiority of any one treatment modality.

Steroids have been used to reduce the inflammatory component of the lesions, topical or intralesional preparations often being the first-line therapy (2). In this patient there was no effect. Parenteral steroids used in the treatment of systemic sarcoidosis have been reported to resolve lupus pernio lesions (3); this was also the case in our patient during treatment for a non-Hodgkin lymphoma. Other medications such as hydroxychloroquine (Plaquenil®) may be used in refractory cases (4).

Surgical treatment such as conventional excision (5) or laser excision and fulguration (6) with either skin grafting or healing by second intention has also been used. Pulsed dye laser treatment has been reported to be temporarily effective in one case of nasal lupus pernio lesions (7). The remission was largely attributed to the immunomodulatory effect of the dye laser, which corresponds to the theory postulated by Alster in 1997 (8). However, in our patient the effect of this laser treatment could not be verified.

To the best of our knowledge this is the first report of the use of Versapuls® in the treatment of lupus pernio. The effect was excellent with very good cosmetic result, there were only minor postoperative complaints, and during a 3-year follow-up there was no tendency to relapse. The mechanism of action of this laser treatment is unclear. One can only speculate about a combination of inhibition of vascular components and activation of immunological processes.

## REFERENCES

1. Veien NK. Cutaneous sarcoidosis: prognosis and treatment. *Dermatologica* 1977; 154: 185–189.
2. Khatri KA, Chotzen VA, Burrall BA. Lupus pernio: successful treatment with a potent topical corticosteroid. *Arch Dermatol* 1995; 131: 617–618.



Fig. 1. Long-standing lupus pernio lesions in the face after pulsed dye laser but before Versapuls® treatment (A). Complete healing of the lupus pernio lesions was seen after two Versapuls® treatments (B). The photo is taken 1 year after the second treatment. Unmasked photos are presented with the patient's permission.

3. Selroos O, Niemisto M. Sarcoidosis of the nose. *Scand J Respir Dis* 1977; 58: 57–62.
4. Zic JA, Horowitz DH, Arzabiaga C, King LE. Treatment of cutaneous sarcoidosis with chloroquine. *Arch Dermatol* 1991; 127: 1034–1040.
5. Goldin JH, Jawad SMA, Reid AP. Cutaneous nasal sarcoidosis – treatment by excision and STSG. *J Laryngol Otol* 1983; 97: 1053–1056.
6. Stack BC, Hall PJ, Goodman AL, Perez IP. CO<sub>2</sub> laser excision of lupus pernio of the face. *Am J Otolaryngol* 1996; 17: 260–263.
7. Goodman MM, Alpern K. Treatment of lupus pernio with the flashlamp pulsed dye laser. *Lasers Surg Med* 1992; 12: 549–551.
8. Alster TS. Laser treatment of hypertrophic scars, keloids, and striae. *Dermatol Clin* 1997; 3: 419–429.