

## Lentigo Maligna Treated with Ruby Laser

Sir,

Lentigo maligna (LM) may be defined as an intraepidermal melanocytic dysplasia, with the capacity of evolving into intraepidermal (in situ) and invasive melanoma (1). In this letter we report the case of a 50-year-old, healthy man with an LM lesion, which we treated with Ruby laser.

On the right cheek there was a sharply demarcated brown macule with some black spots in the central part. An identical lesion on this location had been removed by a plastic surgeon, 4 years earlier (Fig. 1A). Histological examination of skin biopsy specimens showed atypical melanocytes and enlarged amounts of melanin in the epidermis, together with signs of solar degeneration. There was no involvement beneath the basement membrane. The patient was treated three times with a Q-switched Ruby 694 nm laser (Lambda type, energy dosis 40 J/cm<sup>2</sup>). Afterwards, the lesion had completely disappeared, both clinically and histologically (Fig. 1B). During the first year after treatment, there were no signs of recurrence.

The early lesion begins as a small, well-circumscribed tan or light brown macule, which may remain stable or enlarge and may develop dark pigmentations and nodules, and is believed to cause malignant degeneration in approximately 1 out of 750 affected persons a year. LM is readily recognizable and usually treatable in an early phase of development, so it is an important disorder to be diagnosed.

In literature, several methods for treatment of LM are known. Surgical excision is the most reliable method of adequately removing LM. Vital structures, like eyelids, do not always permit such an extensive approach. Sometimes other therapeutic options are required, including cryotherapy (2), ionizing radiation, dermabrasion, curettage and Argon and CO<sub>2</sub> laser (3). These non-surgical modes of superficial destructive therapy may be associated with higher recurrence rates.

Since LM is a pigmented epidermal skin disorder, theoretically the Q-switched Ruby laser is selective in removing the LM lesion. The light will penetrate into the reticular layer of the dermis (4), so all melanocytes in the lesion might be destroyed by laser light.

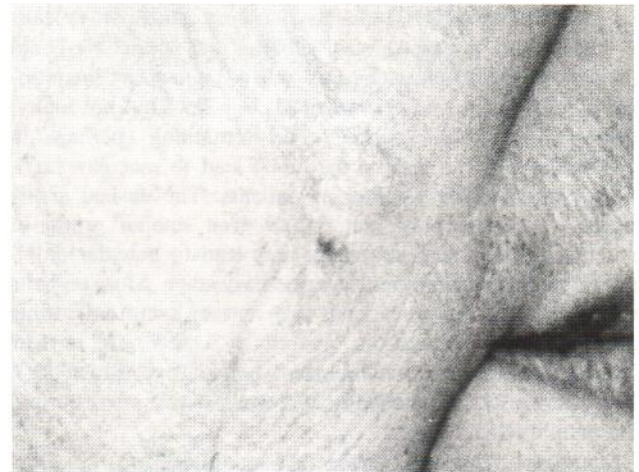
In summary, surgical excision will remain the therapy of first choice, because of its efficacy. Ruby laser treatment could be a good second choice if surgical excision is leading to complications. Compared to other non-surgical treatments, there will be less adverse events like scar formation or persistent hypo- or depigmentation. At this moment we cannot say much about the risk of recurrence, because the follow-up time was only 1 year. For this reason, further control visits are necessary.

### REFERENCES

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- Green T, et al. Malignant melanoma developing after cryotherapy for lentigo maligna - 6 cases. *Br J Dermatol* 1991; 125: 18.



(a)



(b)

Fig. 1. Pigmented macule on the right cheek before (a) and after (b) laser treatment. The black spot shows the place where the control biopsy was taken.

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Accepted October 2, 1996.

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