

## A Case of Bowen's Disease Successfully Treated by Photodynamic Therapy

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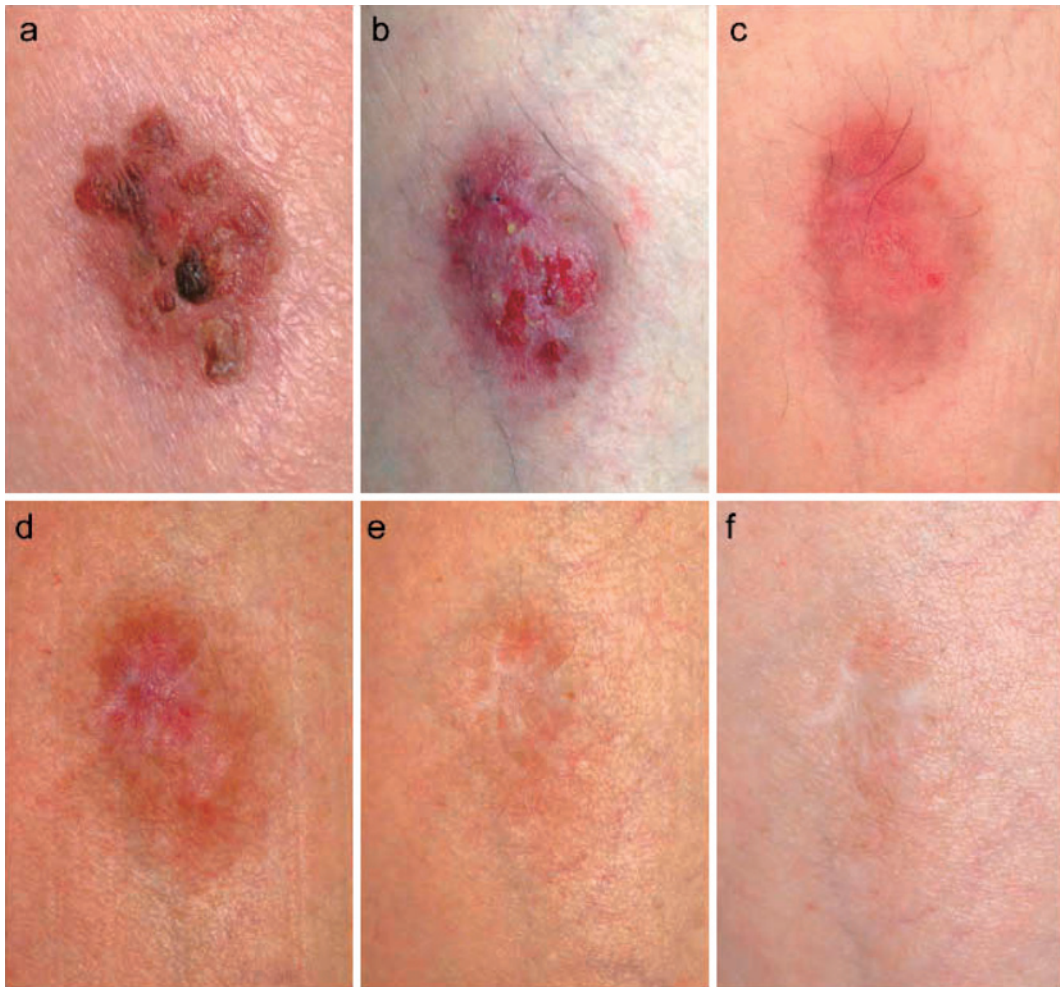


Fig. 1

### Abstract

Photodynamic therapy (PDT) using 5-aminolevulinic acid (ALA)-induced protoporphyrin IX (PpIX) (ALA-PDT) is useful for treating nonmelanoma skin cancers, actinic keratosis and psoriasis, in addition to several other cutaneous indications<sup>1,2</sup>. In Bowen's disease in light skin types, ALA-PDT resolves an average of 86% to 93% of lesions following 1 or 2 treatments<sup>3</sup>. ALA-PDT is a particularly good option for unusual sites or poor healing lesions because of its good cosmetic and functional outcomes.

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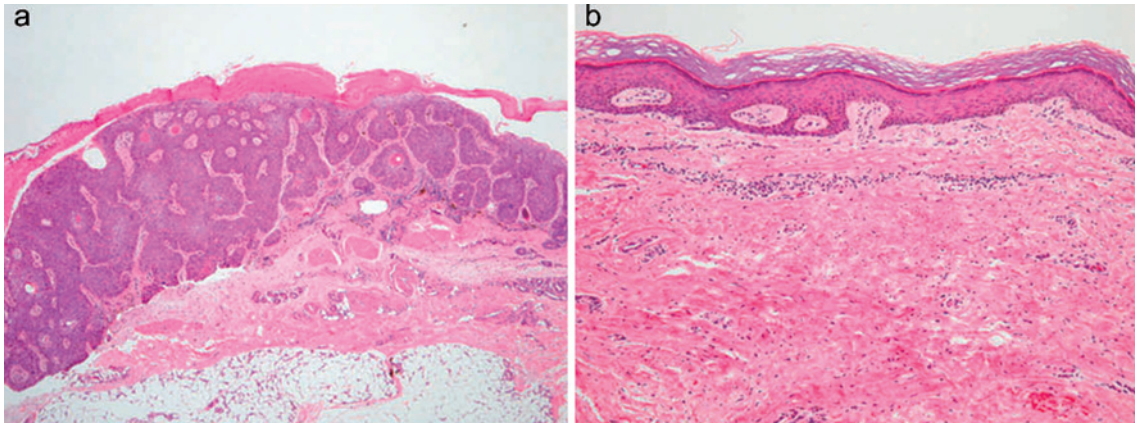


Fig. 2

The patient in this case was a 56-year-old Japanese female with a  $1.8 \times 2.5$  cm erythematous plaque with a thick crust on the right shin (**Fig. 1a**). A skin biopsy showed acanthosis and full-thickness atypia of the epidermis with hyperkeratosis and parakeratosis (**Fig. 2a**). The diagnosis was Bowen's disease, which is a form of carcinoma *in situ*. ALA-PDT was performed over a series of 5 treatments at 1-month intervals. After 4 hours contact with 20% ALA under occlusion, irradiation was applied with a broadband light source (600 to 1,100 nm,  $90 \text{ J/cm}^2$ ,  $66 \text{ mW/cm}^2$ ). Disappearance of malignant cells was confirmed 1 month after the last treatment (**Fig. 2b**) and there has been no recurrence and a good cosmetic outcome over a 3-year follow-up period (**Fig. 1a-f**).

**Fig. 1** Clinical appearance of the lesion (a) pre-treatment, (b) one month after PDT, (c) two months after PDT, (d) six months after PDT, (e) eighteen months after PDT, (f) three years after PDT.

**Fig. 2** Structural and cellular atypia were observed before PDT, and disappeared after PDT. (a) pre-treatment. (b) one month after the final treatment.

### References

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