

# How is Photodynamic Therapy (PDT) Being Used After a Few Years of Experience? A Presentation of the Results from a Questionnaire Answered by Dermatology Units Performing PDT in Sweden.

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## Background

Photodynamic therapy (PDT), using the topical application of a sensitizer in the treatment of various diseases of the skin, has been of increasing interest for several years.

Several centres in the Nordic countries have been involved in the development of this treatment. 5-aminolevulinic acid (ALA), a precursor in the biosynthetic pathway for heme, has been of special interest. ALA is converted, preferentially within hyperproliferative cells, to protoporphyrin IX. Sensitized cells can then be destroyed by irradiation with a red light, while surrounding normal tissue remains unharmed.

In Sweden, the derivative methyl aminolevulinic acid (Metvix®) was approved for the treatment of actinic keratoses and basal cell carcinomas in 2001 (in the other Nordic countries somewhat later).

## Objective

The purpose of this study was to find out how this new treatment is being used in practise after a few years of experience in the different units equipped with PDT in Sweden.

## Method

In February 2004, a questionnaire of 9 questions mostly of multiple choice type, was sent to all dermatology departments in Sweden equipped with PDT. This was the case in 45 out of 119 departments, which means that 38% were able to offer the patients this treatment at this time. Both major dermatology departments as well as smaller private clinics were asked to fill in the questionnaire and all the 45 different dermatology units with PDT received the questionnaire. Out of these, 44 units (98%) answered the questionnaire.

## Results

More than half of the clinics (57%) treated less than 10 patients per month, while 5 clinics (11%) treated more than 25 patients per month. About half of the clinics (54%) arranged special days for PDT and the rest of the clinics treated the

patients when needed. Almost all (90%) used the methyl aminolevulinic acid cream (Mevix®). Among the lamps used, the Aktelite lamp from PhotoCure was most common (92%) and there were only a couple of lamps from Waldmann (5%) or Medeikonos (3%). Most of the clinics (59%) had 2 lamps, usually one small and one larger version of Aktelite, 36% had just one lamp and a couple had 3 or more lamps. The most common diagnoses treated with PDT were superficial basal cell carcinomas and actinic keratoses. Mb Bowen was treated by 84% of the clinics, although this diagnosis is not yet approved for PDT in Sweden. Nodular basal cell carcinomas were treated by 45%. Only a few cases of other diagnoses (squamous cell carcinoma, Hailey-Hailey, mycosis fungoides, warts) were reported (Fig. 1). When superficial basal cell carcinomas were treated, most of the clinics performed two treatments with one week between treatments (Fig. 2), while actinic keratoses were mostly treated just once (Fig. 3). The doctor performed the curettage of the lesions in 82%, while the nurse was usually responsible for the application of cream. As for the illumination, this was mostly performed by the nurse alone (Fig. 4). All clinics planned a follow-up

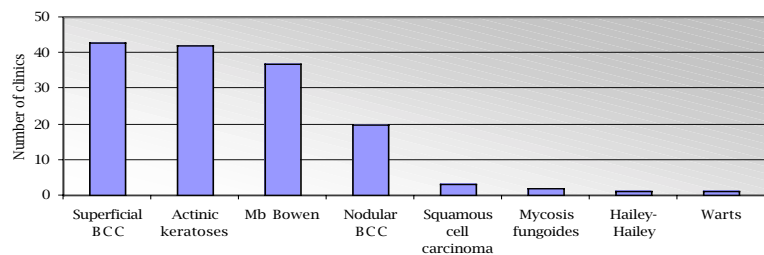


Fig. 1. Diagnoses treated with PDT. BCC:basal cell carcinoma

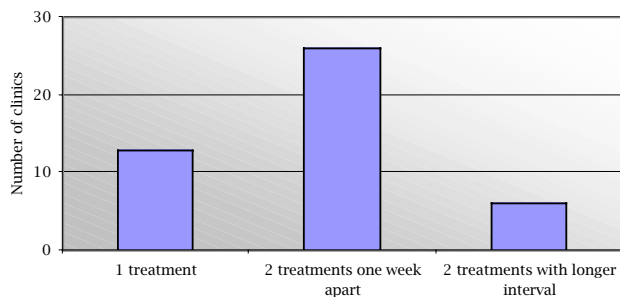


Fig. 2. Number of treatments - basal cell carcinoma

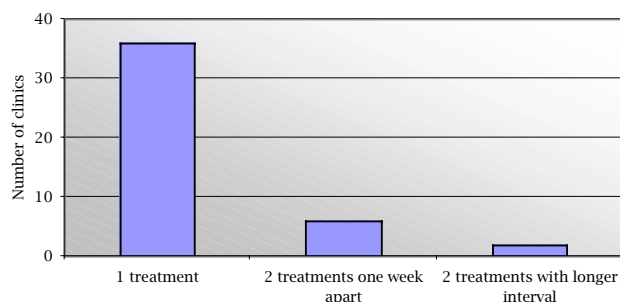


Fig. 3. Number of treatments - actinic keratoses

visit for patients with basal cell carcinomas treated with PDT and most, but not all, of the patients with actinic keratoses were followed-up in one visit. The follow-up schedule differed, but most of the clinics had their check-up after 3-4 months. Only 27% continued to follow the patients regularly after this treatment.

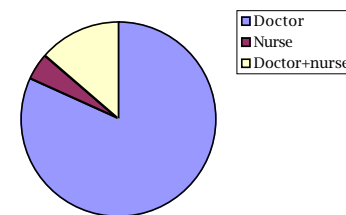
### Discussion

Almost all of the clinics that have been using PDT in Sweden since 2001 have been offered education, mostly by the company delivering the lamps. After a couple of years it seems reasonable to assume that the different units probably would adjust the treatment procedure to fit their own conditions. The results from the questionnaire which is being presented, however, shows that PDT is still used rather similarly

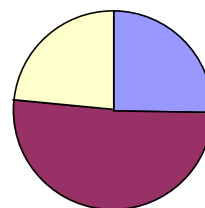
between the clinics. But some differences can be seen, especially in how the treatment is organized. It is also interesting to see that so many of the clinics already are treating Mb Bowen with PDT, although this carcinoma in situ of the skin has not yet been approved for this treatment. However, there are recent studies that support this treatment approach (1). Furthermore, most of the clinics treated actinic keratoses just once, even if twice is still the general recommendation. The explanation to this could be that approximately 20 clinics in Sweden have participated in a large multi-centre study on actinic keratoses and PDT, where it was shown that one treatment is sufficient for thin actinic keratoses (2).

Today, the doctor is in charge of the curettage at most of the clinics. It would be interesting to investigate

### Lesion preparation - curettage



### Cream application



### Illumination

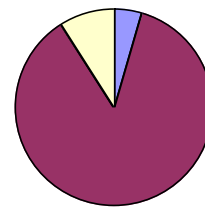


Fig. 4. Lesion preparation - curettage, cream application and illumination performed by doctor or nurse

if this is still the case a few years from now.

Finally, I would like to thank all of you who have kindly answered this questionnaire! The results have also been presented at the Nordic part of the 4th Annual Meeting of the European Society of Photodynamic Therapy in Stirling, Scotland, March 26-27, 2004.

### References

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- Tarstedt M, Rosdahl I, Berne B, Svanberg K, Wennberg A-M. A randomised multicenter study to compare two treatment regimens of topical methyl aminolevulinat (MAL, Metvix®)-PDT in actinic keratosis of the face and scalp. *Acta Derm Venereol* (in press).