PUVA Treatment in Sweden

Bernt Lindelöf and
Bárður Sigurgeirsson

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*Department of Dermatology, Karolinska Sjukhuset, Stockholm, and cooperating centers in Sweden**

To investigate the pattern of PUVA treatment in Sweden, eleven centers supplied protocols of 4945 PUVA-treated patients between 1974 and 1985. The information collected was evaluated by computer. The most common indications for PUVA treatment were: Psoriasis; 64%, Pustulosis Palmo Plantaris; 10,5%, and Eczema; 9,4%. Fifty-five different diagnoses were reported. The treated area was mainly the whole body; 70,6%. The type of psoralen regimen varied between different centers, but oral 8-MOP was the dominating psoralen; 77,1%. Forty-five patients had received more than 400 treatments, the highest number being 758, and 537 patients had received more than a total dose of 1000 J/cm², the highest being 6476 J/cm². The average PUVA dose per treatment was highest for Vitiligo patients but Alopecia Areata and Pustulosis Palmo Plantaris also received high doses per treatment. One hundred and thirtyeight patients were treated for Mycosis Fungoides and 11 for Sézary's Syndrome.

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B. Lindelöf, Department of Dermatology, Karolinska Sjukhuset, S-104 01 Stockholm, Sweden

* University Hospital, Lund (E. Tegner)., Sahlgrenska Hospital, Gothenburg (O. Larkö)., The Swedish Psoriasis Association, Stockholm (A. Johannesson)., University Hospital, Uppsala (B. Berne)., General Hospital, Malmoe (O.B. Christensen)., University Hospital, Linköping, (T. Andersson)., Danderyds Hospital, Stockholm, (M. Törngren)., Örebro Hospital, Örebro (L. Molin)., University Hospital, Umeå (E. Nylander-Lundqvist) and Huddinge Hospital, Stockholm (L. Emtestam).

Psoralen photochemotherapy (PUVA) (1,2) is one of the most effective forms of therapy for psoriasis. PUVA has also been used to treat a variety of other diseases such as Pustulosis Palmo Plantaris, Mycosis Fungoides, Vitiligo and Eczematous conditions, etc. PUVA treatment is sometimes used for prevention of disease, mainly in the management of photosensitivity diseases. To investigate the pattern of PUVA treatment in Sweden a study was initiated, comprising almost all PUVA-treated patients in Sweden from eleven dermatological centers. The information collected was evaluated by computer.

METHODS

Patients

During the years 1974–1985, 4945 patients who received therapeutic doses of PUVA at eleven dermatological centers in Sweden were evaluated. The patient population consisted of 2423 males and 2522 females (Fig 1).

Protocols

Each participating center supplied for each patient a protocol that allowed electronic data processing. The following information was obtained from the patients' records: name, date of birth, sex, date of first PUVA treatment, diagnosis, site of treatment, type of psoralen, dose of PUVA, number of treatments and skin type.

Onehundred and sixty one patients had received PUVA treatment at two or more centers. The total PUVA dose etc. was therefore calculated as the sum of the information given from the different centers.

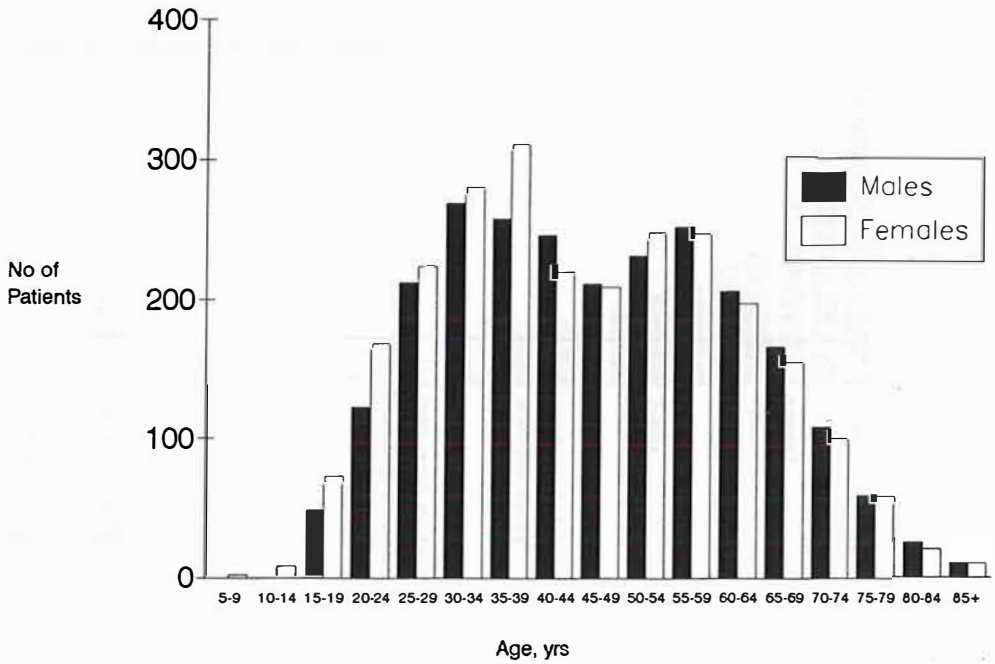


Fig. 1. Age distribution at first PUVA treatment.

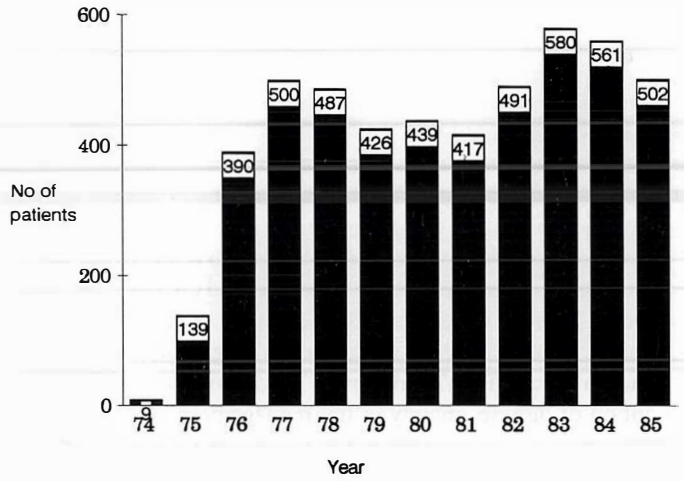


Fig. 2. Number of PUVA patients started per year.

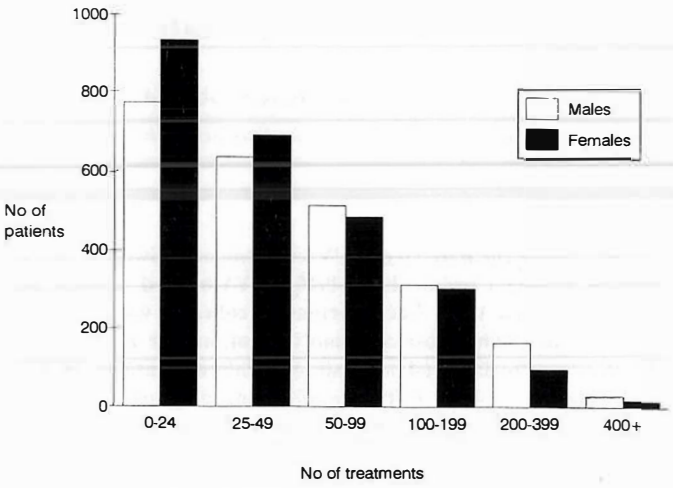


Fig. 4. Total number of PUVA treatments.

RESULTS

The results are summarized in Tables I-IV and in Figs 1–9.

DISCUSSION

161 of 4945 patients had received PUVA treatment at more than one center. This figure, 3,3%, is low but indicates that patients may receive very high doses of PUVA if the treating center is not aware of the previous PUVA treatments, at other centers. Thc patients should therefore be accurately questioned about previous PUVA treatments, and records from other centers should be examined before start of PUVA.

The median age of the patients at PUVA start was 35–40 years. The small number of patients under the age of 15 had been treated for Vitiligo. PUVA treatment started in Sweden in 1974 and since 1977 the number of patients started per year, between 400 and 500, has been fairly constant.

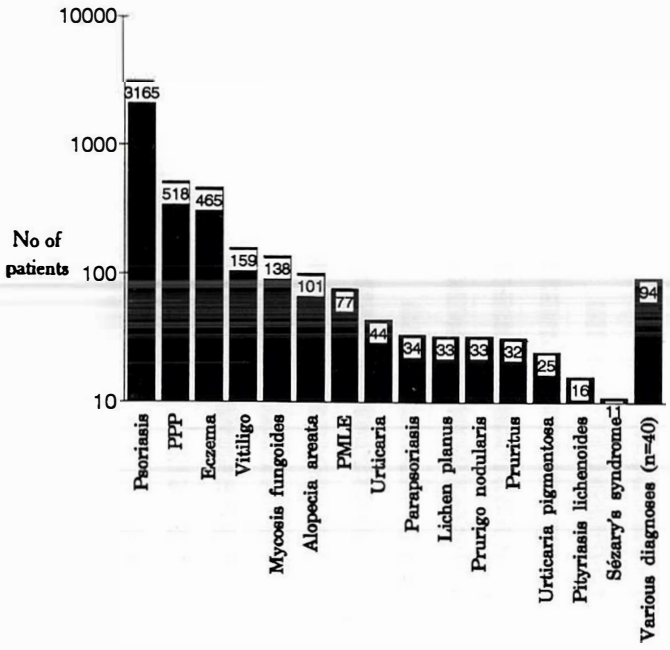


Fig. 3. Indications for PUVA treatment.

The most common diagnosis was Psoriasis (64%) and the second most common was Pustulosis Palmo Plantaris (10,5%). The total number of treated diagnoses was 55. Among common diagnoses were also malignant conditions such as Mycosis Fungoides (2,8%).

The treated area was mainly the whole body (70,6%) but hand and foot PUVA (14%) or combinations of the whole body/ hand/ foot were quite frequent. The type of psoralen used varied between different centers. Oral 8-MOP was the most common (77,1%) and TMP bath was used in 15% of the patients. The University Hospital in Uppsala was the only center which employed bath PUVA exclusively.

Skin type was reported only in 49,4% of the patients, and sometimes the reports disagreed when the patient had received treatment at different centers. However, skin type III (55%) dominated in the PUVA-treated population. 4% of the patients had skin type I. Skin types V and VI were not reported, though a few black patients were treated.

Forty-five patients had received more than 400 treatments, the highest number being 758. 537 patients had received more than a total dose of 1000 J/ cm^2, the highest dose being 6476 J/cm^2. There is no established maximum dose or maximum total number of treatments for PUVA treatment, but the ma-

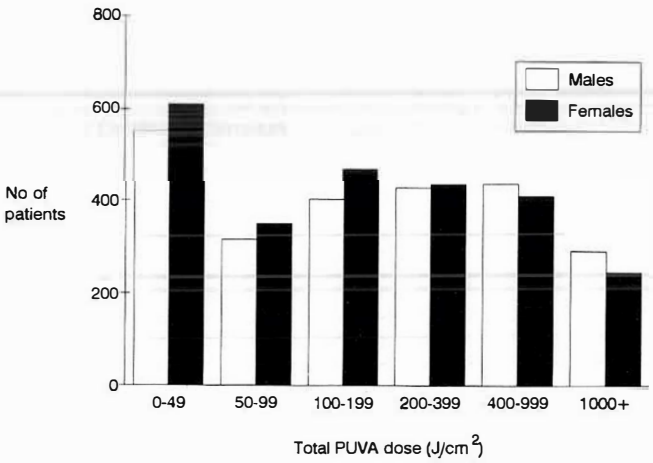


Fig. 5. Total PUVA dose.

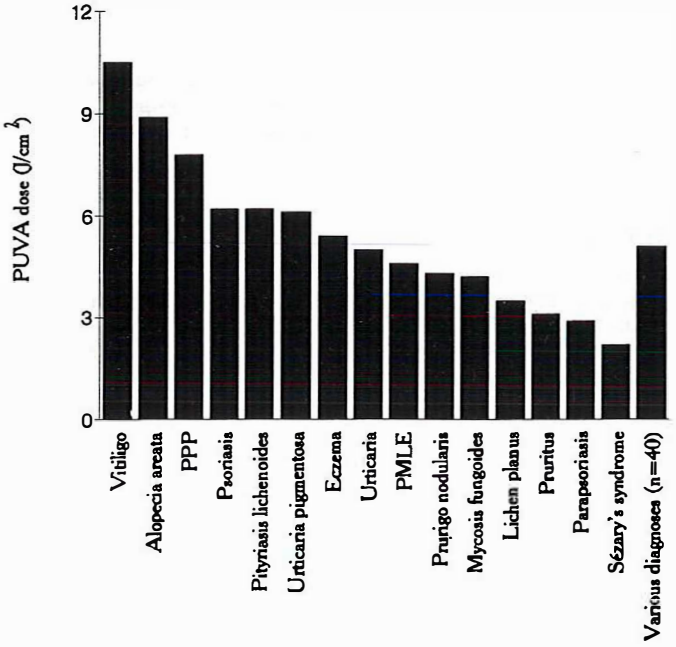


Fig. 6. PUVA dose per treatment.

terial presented in this study will be further analysed according to cancer development and we hope to be able to give some recommendations. The average PUVA dose per treatment was highest for Vitiligo patients, but Alopecia Areata and Pustulosis Palmo Plantaris also received high doses per treatment. In contrast to this, patients treated for Mycosis Fungoides, Parapsoriasis and Sézary's Syndrome received small average doses per treatment (Fig 7).

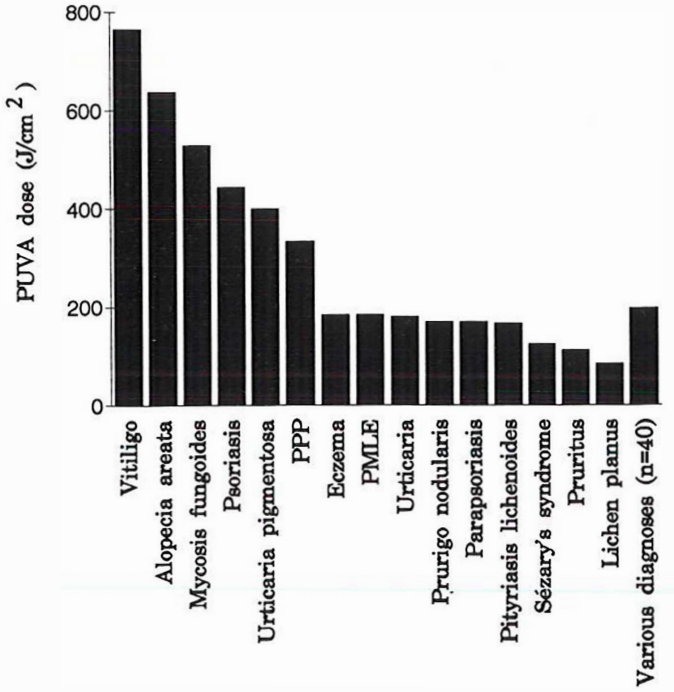


Fig. 7. Average PUVA dose.

Tabel I. *Number of patients in the Swedish PUVA study (1974–1985).*

Medical Center	No of Patients (%)
University Hospital, Lund	918 (18.6%)
Sahlgrenska Hospital, Gothenburg	895 (18.1%)
Karolinska Hospital, Stockholm	786 (15.9%)
Swedish Psoriasis Association	
Outpatient Clinics; Stockholm	
Enskede	284 (5.7%)
Kungsholmen	187 (3.8%)
Södertälje	145 (2.9%)
Kista	74 (1.5%)
Norrtälje	16 (0.3%)
University Hospital, Uppsala	597 (12.1%)
Malmoe Hospital	401 (8.1%)
University Hospital, Linköping	301 (6.1%)
Danderyds Hospital	132 (2.7%)
Örebro Hospital	124 (2.5%)
University Hospital, Umeå	75 (1.5%)
Huddinge Hospital	10 (0.2%)
Total	4945 (100%)

Table II. *PUVA-treated patients. Distribution with respect to treated area.*

Treated area	No of patients (%)
Total body	3479 (70.6%)
Hand and foot	694 (14.0%)
Hand	420 (8.5%)
Total body, hand and foot	140 (2.8%)
Foot	94 (1.9%)
Total body and foot	55 (1.1%)
Total body and hand	55 (1.1%)
Scalp	6 (0.1%)
Face	2 (0.0%)
Total	4945 (100%)

Table III. *PUVA-treated patients. Distribution with respect to type of psoralen regimen used.*

Psoralen regimen	No of patients (%)
8-MOP, oral	3813 (77.1%)
TMP, bath	746 (15.1%)
TMP, oral	173 (3.5%)
8-MOP, bath	128 (2.6%)
8-MOP, oral/TMP, bath	72 (1.5%)
TMP, ointment	9 (0.1%)
8-MOP, ointment	3 (0.1%:
TMP, bath/TMP, ointment	1 (0.0%)
Total	4945 (100%)

Table IV. *PUVA-treated patients. Distribution with respect to skin type.*

Skin type	No of patients (%)
I	98 (4%)
II	683 (28%)
III	1343 (55%)
IV	318 (13%)
Information missing	2503
Total	4945

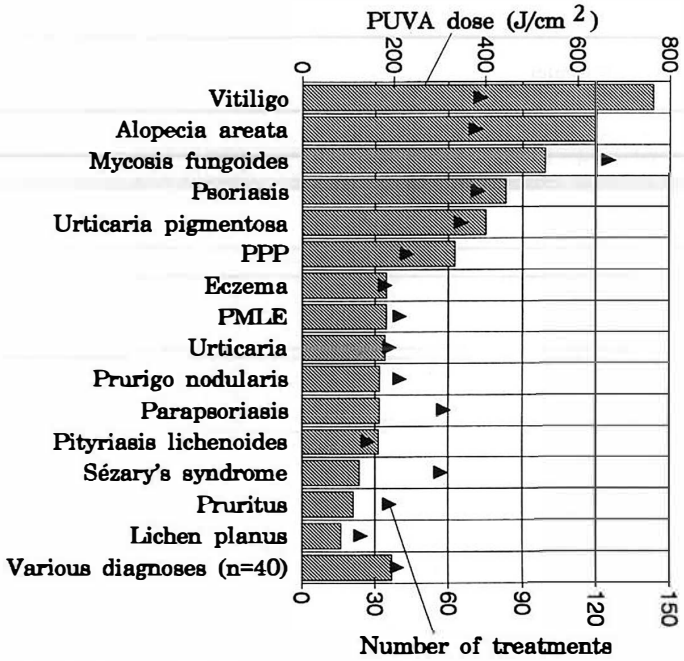


Fig. 8. Average PUVA dose in comparison to average number of treatments.

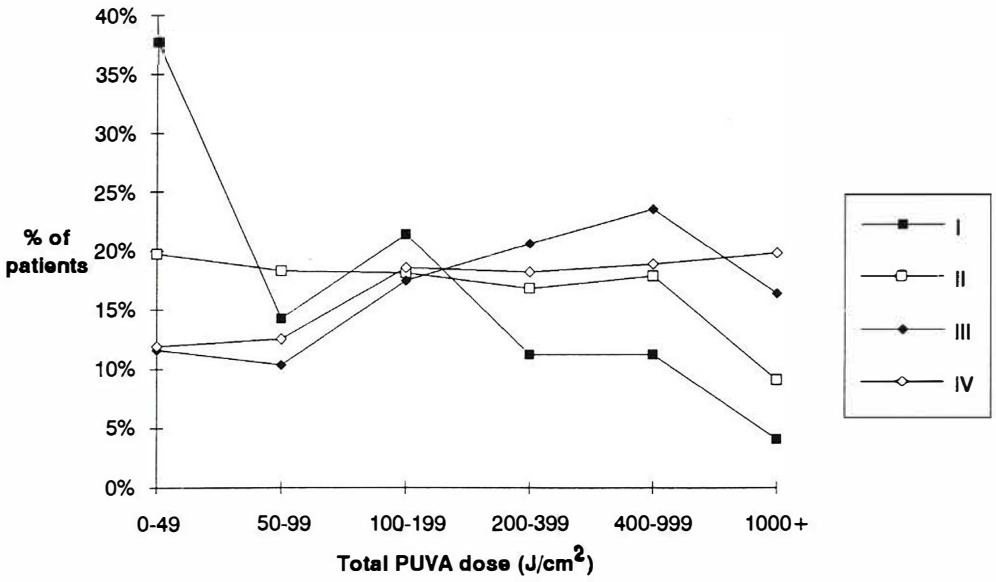


Fig. 9. PUVA dose according to skin type.

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