Demographics, Adherence, and Satisfaction of Home UV Phototherapy in Psoriasis

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INTRODUCTION

Narrowband UVB phototherapy offers an efficacious and safe treatment option in patients with diffuse psoriasis. However, phototherapy is usually office-based, resulting in frequent travel, costly copayment, and poor treatment adherence. [1] A domestic UVB phototherapy device offers similar efficacy and safety profile to office-based phototherapy. [2,3] We present a novel handheld narrowband UVB phototherapy device to address localized plaque-type psoriasis with a primary intention of gathering insights in demographics, adherence, and patient satisfaction.

MATERIALS AND METHODS

In this retrospective, open-label clinical study, treatment data was collected from 36 patients (14 males and 16 females) with plaque-type psoriasis using a novel home phototherapy system. The battery-operated phototherapy device uses UVB LEDs and an optical filter to deliver NB-UVB predominately in the 300 to 320 nm range. Patients administered treatment at home using the scheduling, dosing and guidance built into the system. The phototherapy system was also used to remotely monitor patient treatments, collecting treatment records and adherence data. Dosing was based on American Academy of Dermatology NB-UVB dosing guidelines for psoriasis. Treatments were scheduled three times per week until clearance was achieved, at which time treatment frequency and dosing were reduced in accordance with the protocol. Adherence was calculated by the number of treatments/opportunities over the first 20 treatments or first 40 opportunities. Patient satisfaction was measured using a five-point Likert scale.

RESULTS

Patient ages ranged from 10-65, with a mean age of 41. There were no differences in adherence or satisfaction between genders or age groups. Females had more treatment spots than men (13.1 vs 20.8, respectively (p=0.03)). Patients aged 30-39 had more treatment spots (26.6) compared to patients <29 (10.5) and patients 40-49 (13.4) (p=0.005 and p=0.002, respectively).

Table 1. Patient Adherence.

Group		Mean rate of adherence (%)	Median rate of adherence (%)
Sex			
Men	n=14	53.8%	52.0%
Women	n=16	60.0%	59.5%
Age			
Under 30	n=4	64.7%	69.4%
30-39	n=8	51.4%	44.5%
40-49	n=11	67.5%	74.1%
50+	n=7	43.1%	25.0%
Overall	**n=30**	**57.1%**	**54.9%**

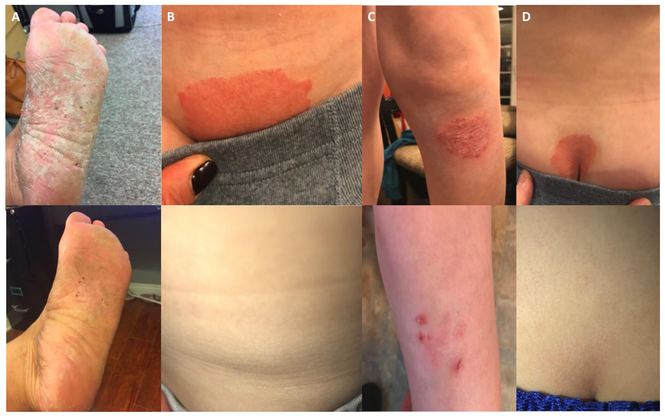

Figure 1. Improvement in psoriasis with home phototherapy. Top pictures were taken before initiation of phototherapy and bottom pictures were after phototherapy. (A) Phototherapy alone before and after 3 weeks, adherence 100%. (B,C,D) Phototherapy and biologic treatment before and after 16 weeks, adherence 96%.

Table 2. Treatment Spots and Patient Satisfaction

Group	Mean Number of Treatment Spots	Median Number of Treatment Spots	Mean Satisfaction	Median Satisfaction
Sex				
Men	20.8	14.5	3.6	3.0
Women	13.1	11.5	3.9	4.0
Age				
Under 30	10.5	11.5	4.0	4.0
30-39	26.6	27.5	3.8	4.0
40-49	13.4	11.0	3.6	3.0
50 +	14.0	9.0	3.8	4.0
Overall	**16.7**	**12.5**	**3.75**	**4.0**

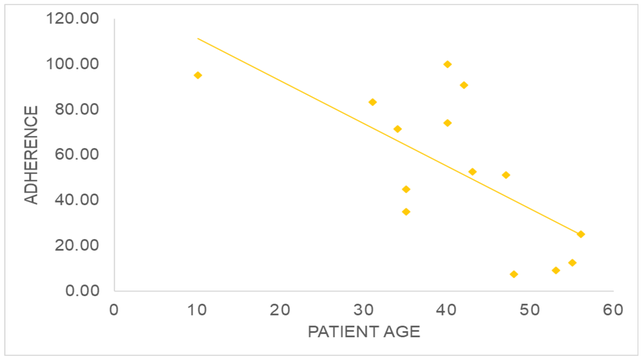

Figure 2. In male patients, patient age negatively correlated with adherence (R=-0.683, p=0.007).

CONCLUSION

The smartphone connected home UVB phototherapy system offers a convenient and satisfactory treatment option for psoriasis patients.

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Disclosures

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