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INTRODUCTION

While effective and relatively safe compared to other treatments for severe psoriasis, office UVB phototherapy is quite inconvenient, requiring visits 3-5 times per week. Home-based phototherapy devices offer greater convenience and are more of cost-effective.

No clinical trial data exist on the actual efficacy, safety, or adherence of subject-administered home phototherapy.

PURPOSE

To explore efficacy, safety, and adherence to a self-administered home phototherapy regimen in a clinical trial setting.

METHODS

We conducted a clinical trial of self-administered narrow-band UVB (NBUVB) in combination with low-dose (10-25mg/day) acitretin in the treatment of moderate to severe psoriasis. Subjects were provided with a 6-foot, 6-bulb, single panel NBUVB unit and instructed on its use.

Dosage recommendations were based on skin types, manufacturer recommendations, and published protocols. Subjects were to self-treat 3 times weekly and adjust dosage upward as tolerated over the 12 week study period.

OUTCOMES MEASURES

- Efficacy – as measured by change in PASI and IGA
- Safety – assessment of laboratory values and adverse events
- Adherence – assessed by electronic medication caps for acitretin and light event monitors for NBUVB
- Other – SGA, DLQI, SF-36

Each NBUVB unit was fitted with a light-sensitive data logger that recorded the subject's usage of phototherapy.

RESULTS

Preliminary efficacy data for combined home NBUVB and acitretin are presented in Table 1.

TABLE 1. SEVERITY OUTCOME MEANS FROM BASELINE TO WEEK 12

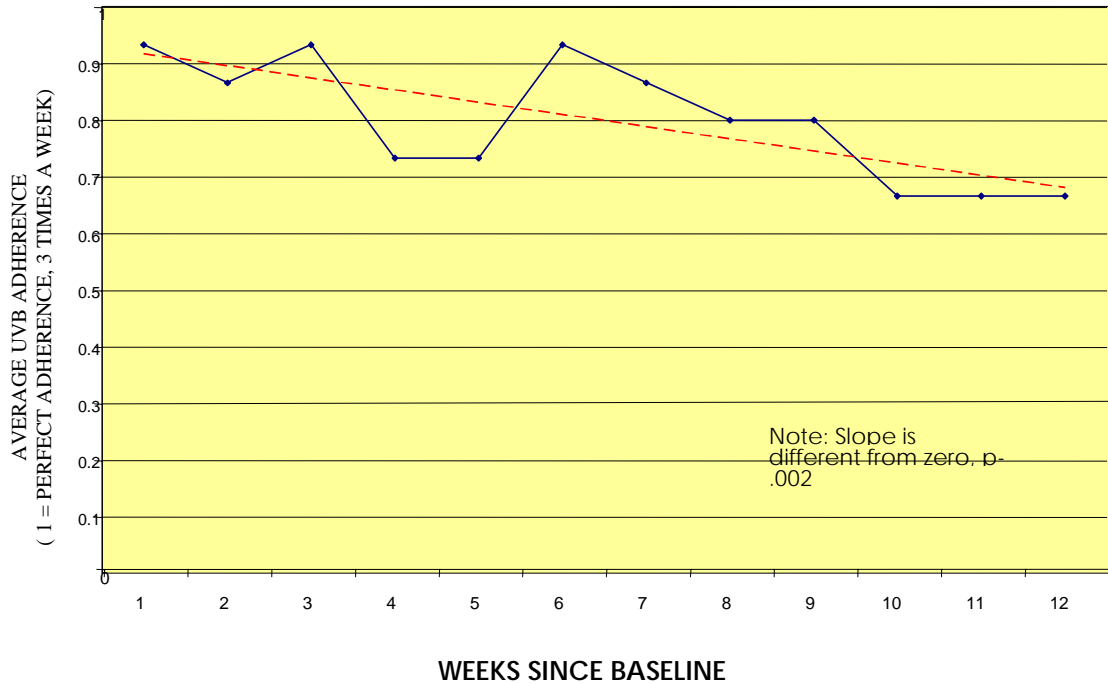
	Baseline	Week 2	Week 4	Week 8	Week 12
PASI	18.56	18.40	17.70	15.36**	13.98
PGA	3.48	3.40	3.08**	2.78***	2.61***
SGA	4.26	4.04	3.63**	3.50***	2.68***

Note: T-tests for significant mean change from baseline results: ** p value <.05.*** p-value < .001

Data loggers detailing home NBUVB adherence have been collected for 5 subjects. UVB adherence over time and adherence in relation to acitretin are presented in Figures 1 and 2.

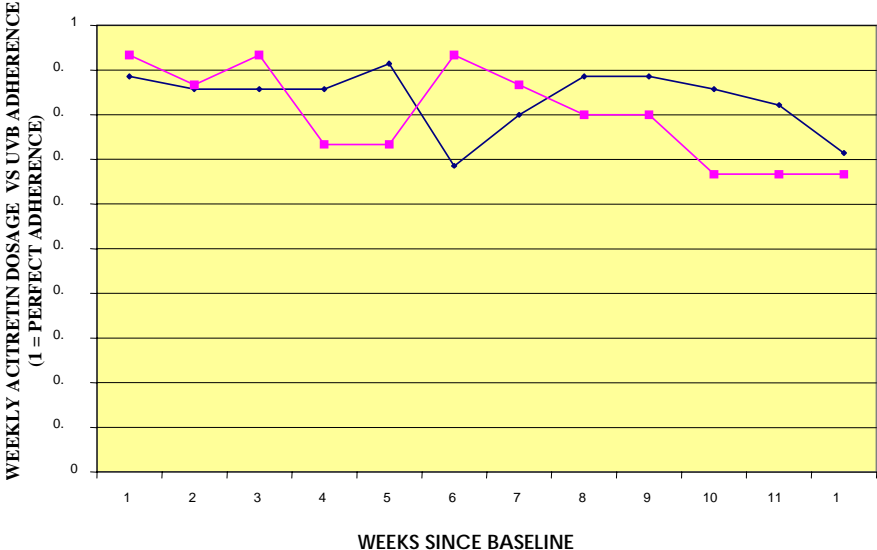
Average UVB adherence (N = 5): mean= 0.76, std = 24, min = 0.41, max = 0.97

**FIGURE 1.
UVB
ADHERENCE
(N = 5)**



Some subjects noted mild erythema and tingling with increasing NB-UVB doses. One subject had a squamous cell carcinoma found on the lower leg at the 4 week visit and withdrew from the study. One subject terminated due to worsening of psoriasis. Three subjects were lost to follow-up. Two serious adverse events occurred (one CVA and one BKA) were not deemed related to treatment. Several subjects had elevated triglyceride levels, necessitating a reduction in acitretin dosage during the study period. One subject experienced alopecia.

**FIGURE 2.
ACITRETIN
WEEKLY
DOSAGE VS
UVB (N = 5)**



DISCUSSION

UVB phototherapy for psoriasis is a safe and effective treatment option. Although home phototherapy can be used in cases where patients have limited access to office-based phototherapy, its usage is poorly studied. This study provides preliminary clinical trial data for home phototherapy in conjunction with low-dose acitretin. The combined treatment showed significant reductions in PASI score, PGA, and SGA at weeks 8 and 12. UVB treatment was well tolerated.

Additionally, this study provided the first known adherence data for home phototherapy. Adherence declined during the study period at a rate similar to adherence to the acitretin and average adherence over the course of the study was consistent with, and perhaps even better than, prior published adherence studies. The exact relationship between adherence and clinical improvement/worsening has yet to be explored.