

## Evidence for efficacy of home-based narrowband ultraviolet B therapy

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Phototherapy with or without photosensitizers has been used for thousands of years for the treatment of various skin disorders. In addition to controlling the inflammatory component, it also stimulates the proliferation and migration of melanocytes.<sup>1</sup> Currently, in vitiligo, narrowband 311-nm ultraviolet B (NB-UVB) therapy is the first choice for treating widespread and active disease.<sup>2,3</sup> The introduction of this treatment for vitiligo by Westerhof *et al.* in 1997 was a milestone in the field.<sup>4</sup> However, unlike eczema and psoriasis where excellent outcomes (90% reductions in Psoriasis Area and Severity Index and Eczema Area and Severity Index, respectively) can be achieved within 8 to 12 weeks, outcomes in vitiligo are far less favourable, and a 90% improvement in Vitiligo Area Scoring Index is still far away from clinical practice. Therefore, NB-UVB is often combined with topical corticosteroids to enhance efficacy. Nevertheless, the duration of treatment is typically 9–12 months to reach approximately 40–50% repigmentation.

With such prolonged treatments, home-based NB-UVB would be an efficient and patient-friendly option. However, good evidence has been lacking for both the combination of NB-UVB plus topical corticosteroids, and for home-based NB-UVB.<sup>5</sup>

In this issue of the *BJD*, Thomas *et al.* describe the results of a large multicentre double-blind trial, the Home Interventions and Light therapy for the treatment of Vitiligo Trial (Hi-Light Vitiligo Trial).<sup>6</sup> This study from the UK enrolled 517 patients with active vitiligo who were randomized into three arms: (i) potent topical corticosteroid ointment; (ii) handheld NB-UVB device; and (iii) a combination of the two. Treatment success as defined by the participant-reported Vitiligo Noticeability Scale at 9 months was 17%, 22% and 27%, respectively.


Unlike many other phototherapy studies, every attempt was made to keep the risk of bias low and assess meaningful outcomes. They adopted placebo cream and dummy devices to retain blinding and, remarkably, the follow-up was 12 months in order to assess maintenance of repigmentation, which is an outcome that is regarded as essential but has hardly been studied in the past.<sup>7</sup> Therefore, this large multicentre study by Thomas *et al.* is another milestone in clinical vitiligo research.

What we learn from this study is that home-based handheld NB-UVB combined with a potent topical corticosteroid is safe and moderately effective. But we also learn that we are still far

from where we want to be, with only 27% of participants in the combination group reaching treatment success after 9 months of treatment. In addition, we learn that maintenance of repigmentation requires our attention, as at 12 months of follow-up, 40% reported loss of treatment response in all groups. Consequently, the research community should focus on treatment regimens aiming at maintenance of gained repigmentation.

Summarizing, the Hi-Light Vitiligo study is a milestone in vitiligo research, demonstrating moderate efficacy of home-based handheld NB-UVB therapy combined with a topical corticosteroid.

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