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EDITORIAL

Does hospitalization, independent of other treatment, improve severe chronic skin conditions?

Hospitalization, independent of other treatment, is thought to improve skin disease and quality of life (1). In several studies, patients with psoriasis and atopic dermatitis who failed outpatient treatment were hospitalized and improved despite not intensifying the outpatient treatment regimen (2). Possible mechanisms to explain this improvement include removing patients from environmental allergens at home and taking patients away from the stress of the home environment (3). However, adherence to outpatient treatment is often abysmal. Better medication adherence in the hospital setting may be a simpler and more logical explanation for inpatient skin disease improvement. We assessed whether reports of skin disease improvement with hospitalization could be explained by better medication adherence. Our hypothesis was that studies reporting benefits of hospitalization would include treatment with outpatient regimens that had 'failed' and that better adherence to those treatments might explain the perceived benefits of hospitalization.

The Medline (PubMed) database was reviewed for relevant articles using a combination of keywords or phrases, including: 'adherence', 'atopic dermatitis', 'hospitalization', 'inpatient', 'medication', and 'psoriasis'. References of articles from the literature search were also considered. We examined the studies to determine if hospitalized patients were treated with hospitalization alone or if they were continued on outpatient treatments that had not worked.

In three studies, hospitalized patients with atopic dermatitis or psoriasis improved; in each case, patients were treated with topical treatments that may have been effective in the hospital due to better medication adherence (Table 1). In one study, patients had failed outpatient treatment with topical steroids and improved with inpatient topical steroids (4). Other studies examined admitted patients with difficult-to-control skin conditions in the outpatient setting or who had failed outpatient treatments; patients in both studies improved on inpatient topical therapy. The specific outpatient and inpatient treatments used were not reported (5,6). None of the studies had assessed the adherence to the outpatient treatments that had previously failed, and no study reported the isolated effect of hospitalization in the absence of other treatment (4–6).

When patients are admitted to the hospital, treated with regimens that did not work in the outpatient setting, and improve in the inpatient setting, it may appear that hospitalization—not the treatment—must be responsible for improvement. However, adherence to outpatient treatment can be poor, and adherence to chronic outpatient topical treatment is often abysmal, leading to outpatient treatment failure and presumed refractory disease (2). While clinical disease severity may improve in the hospital setting, better medication adherence to treatments that patients were previously failing, rather than 'less stress in the hospital than at home' or 'removing patients from dust mites at home,' may explain the findings (4–6). It is possible that hospitalization, independent of any other treatment, improves skin disease; however, this seems unlikely, and we did not find evidence to support this dogma. The recognition that hospitalization frequently results in rapid improvement in skin disease suggests there may be opportunities to see similar improvements in the outpatient setting if we can improve adherence to outpatient treatment regimens.

Disclosure statement

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Table 1. Summary of published effect of inpatient hospitalization on patients with AD and/or PSO.

Study	Sample Size	Outcome Measures	Results	Treatments
Prospective Cohorts				
Schmitt et al.[6]	14 AD 22 PSO	EASI/PASI (SEM) VAS score (SEM) DLQI (SEM)	At 3-month follow up: Mean change in EASI/PASI and VAS scores was 12.5 (2.2) and 2.7 (0.5) respectively, ($p < 0.001$). Mean DLQI decreased at by 9.1 (1.5) ($p < 0.001$).	Anti-inflammatory treatment including UV therapy, unspecified topical agents
Retrospective Cohorts				
Masson et al.[4]	56 AD	SCORAD	SCORAD reduced by 50% or more in 65% of patients. SCORAD reduced by 75% in 27% of patients. Mean reduction of SCORAD index was 57.9%.	Daily bath with emollients and chlorhexidine, topical corticosteroids (betamethasone dipropionate or fluticasone propionate cream), antibiotics
Observational Study				
Van der Schaft et al.[5]	79 AD	SASSAD	At 3-month follow up: SASSAD50 achieved in 79.7% of patients and SASSAD75 achieved in 55.7 % of patients. Mean SASSAD score decrease was 69.0%.	Emollients, topical corticosteroids, oral immunosuppressives, antihistamines and antibiotics

AD: atopic dermatitis; PSO: psoriasis; EASI: eczema area and severity index; PASI: psoriasis area and severity index; SEM: standard error of the mean; VAS: visual analog scale (disease severity); DLQI: dermatology life quality index; SCORAD: SCORing Atopic dermatitis; SASSAD50; Six Area, Six Sign Atopic Dermatitis score reduction of 50%; SASSAD75: Six Area, Six Sign Atopic Dermatitis score reduction of 75%.

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Data availability statement

The data that support the findings of this study are available in the PubMed database at https://pubmed.ncbi.nlm.nih.gov/. These data were derived from the following resources available in the public domain: https://pubmed.ncbi.nlm.nih.gov/.

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