BRIEF REPORT

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Outpatient Home-based Wet Wrap Dressings with Topical Steroids with Children with Severe Recalcitrant Atopic Dermatitis: A Feasibility Pilot Study

Abstract: **Wet wrapping (WW) appears to be effective in severe atopic dermatitis (AD) in children resistant to topical treatment. Seventeen children were included and were directed to use WW every night (≥6 hr) until lesions disappeared, followed by maintenance treatment of two to three treatments per week. The mean Scoring Atopic Dermatitis (SCORAD) score at baseline was 48.9. After 1 month of treatment the mean SCORAD score was 18.9, and efficacy was maintained after 3 months of treatment. The majority of patients were satisfied (91.7%) with the WW treatment; 92% considered it to be much more effective than the previous treatments received. WW was easy to perform for 75% of patients, 83% of patients stated that it was better tolerated, and 17% considered it to be tolerated equally to dermatologic corticosteroids without WW. The home WW program was continued on a maintenance basis for 75% of patients. This open-label study showed that this program was a feasible and well-tolerated alternative for the treatment of severe, refractory AD in children and adolescents.**

The use of systemic immunosuppressants and phototherapy raises safety concerns in children with severe recalcitrant atopic dermatitis (AD), and wet wrap (WW) dressings with topical steroids appears to be an appealing alternative (1–3), but few data are available on the feasibility of WW in outpatients. WW is a complex treatment, and although practical guidelines have been recently published (4), poor adherence is likely to be a problem. We sought to assess the long-term feasibility and safety of a nurse-led web-based assistance program for outpatient children with severe recalcitrant AD.

Our pilot study included children and adolescents (<18 yrs) with severe recalcitrant AD who participated in the program at one tertiary care hospital from January 2012 to December 2013. The program consisted of three parts. First, in a 30-minute nurse-led consultation with a practical demonstration, patients and parents were taught to use WW with 25% to 50% diluted fluticasone propionate 0.05% cream in emollient on the affected area. A WW (wet Tubifast, Mölnlycke, Gothenburg, Sweden) was then applied, followed by a dry layer of Tubifast (3). Patients and parents were asked to use this treatment once a day for 6 hours until clearance of erythema and pruritus and then two to three times a week for 3 months (maintenance phase). The second part was a 5-minute Web-based video demonstration that patients and parents could watch at home. The third part was contact information (telephone number and e-mail address) for the nurse. One investigator assessed patients at 1 and 3 months. Seventeen children ages 2 to 17 years were included in the study. The mean Scoring Atopic Dermatitis (SCORAD) score at baseline was 48.9 ± 11.9. After 1 month of treatment the mean SCORAD score was 18.9 ± 9.9, a mean change of 61.4%. This efficacy was maintained after 3 months of treatment (−54.8% compared with baseline; mean SCORAD 22.1 ± 11.1). Twelve patients and parents (71%) responded to a feasibility questionnaire at the end of the study. Eleven patients (91.7%) were satisfied with the treatment and felt it was much more effective than previous treatments received. The treatment was easy to follow for 75% of patients and rather difficult for 25% of patients (including time spent of more than 20 min daily). Regarding safety and tolerance, only one patient reported one adverse event (folliculitis) during the study. The treatment was continued during the maintenance phase in 75% of patients to keep control of disease activity, 78% used it on demand during flares, and 22% used it proactively to prevent flares.

In conclusion, although no evidence of efficacy can be drawn from this study because of its design, our program could increase long-term adherence to WW in outpatient children with severe AD. A prospective controlled study is now warranted to support these results. It would be worth calculating the savings realized by using this technique in an outpatient context versus the cost of hospitalization.

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