Frequent Versus Infrequent Bathing in Pediatric Atopic Dermatitis: A Randomized Clinical Trial

PURPOSE OF THE STUDY: To examine the relationship between bathing frequency and disease severity in pediatric atopic dermatitis (AD).

STUDY POPULATION: The study included 42 children aged 6 months to 11 years with moderate-to-severe AD.

METHODS: The authors conducted a 1:1 randomized, single-blind, crossover trial over a two-week period comparing twice-daily soak-and-seal bathing 15 to 20 minutes (“wet method”) with twice-weekly soak-and-seal bathing less than 10 minutes (“dry method”). Patients received the same treatment of a moisturizer, cleanser, and low-potency topical corticosteroid. The primary end point was change in physician-scored disease using the SCORing Atopic Dermatitis (SCORAD) index, and secondary end points included caregiver assessment of disease severity, quality of life indices, bacterial colonization, and skin hydration status. Analysis of efficacy was per intent to treat with all patients who were randomized.

RESULTS: Of the population screened, two-thirds met the inclusion criteria, and only 5% were lost to follow-up. Twice-daily soak and seal decreased severity index by 21.2 (95% CI, 14.9–27.6, P < .0001) compared with twice-weekly bathing (greater than the minimal clinically important difference of 8.7). Fifty-eight percent of children receiving the wet method had a greater than 30% physician-assessed SCORAD improvement; however, a subset of patients (15%) did achieve a greater response with the “dry method.” Parent-assessed severity also improved significantly for the wet method compared with the dry method (P = .0052). No significant differences in quality of life indices, skin hydration status, S aureus relative colonization density, or desonide usage were observed.

CONCLUSIONS: Twice-daily soak-and-seal bathing is an effective strategy for moderate-to-severe pediatric AD.

REVIEWER COMMENTS: AD impacts up to a third of all children, and this study adds clarity to the discussion of how frequently these children should bathe to improve disease course. The authors’ takeaway is clear: bathing more frequently provides objective improvement in moderate-severe pediatric AD, and these effects are also recognized by caregivers. While therapy needs to be tailored to individual context, hydration is key and more frequent “soak-and-seal” is a cost-effective strategy.

URL: www.pediatrics.org/cgi/doi/10.1542/peds.2020–023861FF

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Pilot Study of a Customized Nanotextile Wet Garment Treatment on Moderate and Severe Atopic Dermatitis: A Randomized Clinical Trial

PURPOSE OF THE STUDY: To compare the use of nanotextile (100% nanopolyester) and viscose rayon (Tubifast) garments for wet wrap therapy (WWT) thereby demonstrating nanotextile as a comparable alternative to the conventional material, viscose.

STUDY POPULATION: The study included infants and children younger than 18 years of age with moderate to severe atopic dermatitis (AD) from the KK Women’s and Children’s Hospital inpatient ward and dermatology outpatient clinics in Singapore City, Singapore. Exclusion criteria included those with active skin infection, on immunotherapy, and phototherapy.

METHODS: Patients were recruited between March 4, 2017 to August 8, 2017. Enrolled patients were randomized to undergo viscose or nanotextile WWT in addition to regular eczema treatment. Application of WWT was instructed to occur daily overnight for 2 weeks. On day 0, 7, and 14, self-reported Scoring Atopic Dermatitis (SCORAD) index and the Investigator’s Global Assessment (IGA) Scale were used to measure disease severity. Quality of life (QoL) as it relates to health was measured utilizing the Infant’s Dermatitis Quality of Life Index (IDQOL) in those 4 years of age and younger. In children ages 5–18 years old, the Children’s Dermatitis Life Quality Index (CDLQI) was used to gauge QoL. Patients were also asked to provide feedback on the use of the WWT. On day 0, 7, and 14 of treatment, patients’ disease severity score (IGA and SCORAD) as well as QoL score (IDQOL or CDLQI) were assessed.

RESULTS: The study randomized a total of 53 children from the ages of 7 months to 17 years. Twenty-seven were in the viscose arm and 26 in the nanotextile arm. Disease severity as measured by SCORAD had a mean baseline of 52.3 (SD, 12.8) in the viscose arm and 57.0 (SD, 14.4) (P = .25) in the nanotextile arm. The post-treatment mean SCORAD improvement score was 16.1 in the viscose arm and 19.3 in the nanotextile arm on day 14 (P = .65). Baseline IGA scores in the viscose arm was 3.17 (SD, 0.62) and 3.29 (SD, 0.70) in the nanotextile arm. Similar to the findings with the SCORAD score, mean IGA score improvement in the viscose and nanotextile groups was 1.36 and 1.3, respectively (P = .71). The mean improvement found in QoL on day 14 in the viscose arm was 5.48 and in the nanotextile arm was 6.05 (P = .57). The collected patient feedback scores showed significant preference to nanotextile on the topics of comfort, temperature, and ease of wear.

CONCLUSIONS: Nanotextile has a comparable effectiveness to viscose for the use of WWT in moderate to severe AD.
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Pediatrics 2020;146;S340
DOI: 10.1542/peds.2020-023861FF

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