Randomised controlled trial of silk therapeutic clothing for the long-term management of atopic eczema in children

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BACKGROUND
Silk garments are available on prescription in the UK for the treatment of eczema (syn. atopic dermatitis, atopic eczema) despite a lack of evidence of their effectiveness.

Objective
To assess whether silk therapeutic clothing, when used in addition to standard eczema care, reduces eczema severity in children over a period of six months.

METHODS
Parallel group randomised (1:1 ratio) controlled, observer-blind trial of 6 months duration. Included 300 children aged 1 to 15 years with moderate-to-severe eczema.

Intervention: Standard care plus 100% sericin-free knitted silk garments
Control: Standard care

Primary outcome:
Eczema severity: Eczema Area and Severity Index (EASI) at baseline 2, 4 and 6 months (assessed by nurses blinded to treatment allocation).

Secondary outcomes:
Investigator and Patient Global Assessment, Three Item Severity scale (TIS), use of topical treatments, POEM – patient-reported symptoms, Quality of Life, safety (skin infections and hospitalisation for eczema) and cost-effectiveness.

RESULTS

Primary Outcome – Eczema severity (EASI)
EASI score was log transformed and analysed using a multilevel model to account for the repeated measures adjusting for baseline EASI score and the stratification variables age and site as covariates.

Secondary Outcome – Topical steroid use
Mean difference
-3.7 days of topical steroid (95% CI -9.6, 2.3) p = 0.23

Safety
No difference in skin infections or hospitalisations

Cost-effectiveness
• No reduction in other health resource use
• Incremental cost effectiveness ratio: £74,720/QALY
• Cost of garments £547 per participant

CONCLUSIONS
This adequately powered trial, with good follow-up and adherence rates demonstrates that silk clothing is unlikely to provide additional benefit over standard care in children with moderate to severe eczema.

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