Introduction

• In the United States, one of the first eczema schools was founded in 2014 with great success at incorporating patient education to reduce disease severity and symptoms [1].

• In addition to increases in patient education, prior studies of educational interventions have demonstrated a direct impact in reducing disease severity for pediatric patients living with AD. [2]

• However, prior meta-analytical work has focused mostly on comparing in-person interventions.

Methods

A comprehensive search was conducted in accordance with the Cochrane Handbook for Systematic Reviews of Interventions 2019 and registered under PROSPERO (ID: CRD42023424932). [3]

The following databases were searched for articles up to April 04, 2023, with no restriction imposed on publication date: PubMed, MEDLINE, Embase, Scopus, LILACS, Cochrane, CINAHL, and GREAT. We also searched the trial register ClinicalTrials.gov.

Inclusion criteria: any educational intervention in the realm of atopic dermatitis/eczema; any virtual intervention with an in-person comparator; primary outcomes include patient and clinical reported scoring (e.g. SCORAD, EASI, POEM)

Exclusion criteria: no report of any primary outcome with raw data; secondary review (research meta-analysis); gray literature (dissertation, conference abstract, letter, review, commentary, editorial, note); language other than English. No primary virtual interventions with no in-person comparator. No language or date restrictions were applied.

Objective

• Evaluate the effectiveness of virtual eczema educational programming compared to traditional in-person interventions.

Results

• The present systematic review and meta-analysis synthesizes findings from a total of four studies, representing a comprehensive pool of 667 total study participants, with 334 in the virtual education arm, and 333 in the control arm.

• Our pooled analysis demonstrated a significant improvement in the Patient-Oriented Eczema Measure (POEM) scores with online educational interventions. The standard mean difference (SMD) in POEM scores between online and traditional in-person interventions was 0.34 (95% CI: [0.09-0.58], I² = 53%, p = 0.007).

• POEM is a regularly used self-assessment measure for patients living with atopic dermatitis to measure quality of life and disease severity.

Findings

• With eczema educational centers needing trained dermatology specialists, the geographical population density of physicians in the U.S. can lead to a large barrier for patients and families who want to enroll in such programs.

• One major limitation of traditional eczema schools in both number and location is that the few active programs in the U.S. are currently limited to major academic centers in urban locales, leaving out many patients suffering from atopic dermatitis due to the long and unrealistic distances required to reach such institutions.

• This meta-analysis provided evidence that virtual interventions can remove barriers to access regularly posed by in-person programming while at the least being equivalently effective, if not more effective at improving disease severity.

• Future studies reporting standardized eczema severity metrics should continue to provide higher-powered comparative analysis.

Disclosures

All authors have no disclosures to report.

References

