Libyan International Medical University
Faculty of Basic Medical Science

Treatment of Eczema in children

Submitted by: Hadeel Ahmad Almagrbi

Supervisor: Doctor Ganem Altwati

Date of submission: 15 April 2018

This report is submitted to fulfill the requirements for 3rd y.

`

Abstract:
This report discuss 3 different studies about the treatment of eczema in children using the immunotherapy, infliximab therapy and the effect of water softeners.

Introduction:
Atopic dermatitis (AD) is a common, chronic, inflammatory skin disorder characterized by the presence of pruritic, eczematous dermatitis. In most patients, the disorder is managed with careful skin care practices, topical therapies for inflammation, and the elimination of exacerbating factors.[1]

Method :
This trial involving 336 children (aged 6 months to 16 years) with moderate/severe atopic eczema. All lived in hard water areas (≥200 mg/l calcium carbonate). Participants were randomised to either installation of an ion-exchange water softener plus usual eczema care, or usual eczema care alone. The primary outcome was change in eczema severity at 12 weeks. Eczema severity improved for both groups during the trial. The mean change at 12 weeks was (20% improvement) for the water softener group and (22% improvement) for the usual care group.
Results: Water softeners provided no additional benefit to usual care in this study population. Small but statistically significant differences were found in some secondary outcomes as reported by parents, but it is likely that such improvements were the result of response bias.[2]

Method :
This study was conducted to evaluate the long-term efficacy and safety of infliximab in patients with AD. Nine patients with moderate or severe AD were enrolled. AD in these patients was resistant to conventional therapy. Infliximab 5 mg/kg was administered by intravenous infusion at weeks 0, 2, 6, 14, 22, 30, and 38, and patients were followed for 46 weeks.
Results: Induction therapy with infliximab significantly improved all clinical parameters, but this improvement was not sustained through maintenance therapy. Only two patients with severe AD achieved an excellent clinical response by 46 weeks.[3]

Method:
The effect of specific immunotherapy (SIT) on eczema in atopic dermatitis is not known. Therefore, a multi-centre, randomized dose–response trial, double-blind with respect to the efficacy of a biologically standardized depot house dust mite preparation was performed. Eighty-nine children with a chronic course of atopic dermatitis, SCORAD ≥40 and allergic sensitization to house dust mites [CAP-FEIA ≥3] were included, of whom 51 completed the study. Subcutaneous SIT with a house dust mite preparation (*Dermatophagoides pteronyssinus*/*D. farinae*) applying maintenance doses of 20,(2000 and 20,000 SQ-U) in weekly intervals for 1 year. The main outcome measures addressed the change of the SCORAD as average of the values after 9 and 12 months of SIT in comparison with the value at baseline.
Results: The SCORAD declined in the three dose groups in a dose-dependent manner and was significantly lower in the two high-dose groups (2000, 20000 SQ-U) compared with the low-dose group of 20 SQ-U, after 1 year of SIT. The use of topical corticosteroids was significantly reduced with higher doses.[4]

Conclusions:
1. Water softeners provided no additional benefit.
2. Infliximab monotherapy may be an additional therapeutic option for the management of refractory severe AD.
3. Allergen-SIT for 1 year with a house dust mite preparation is able to improve the eczema in patients with atopic dermatitis who are sensitized to house dust mite allergens and reduces the need for topical corticosteroids. SIT may be valuable in the treatment of this chronic skin disease.

`

References:

(1). http://www.skinsight.com/skin-conditions/child/atopic-dermatitis-eczema?Imiw9cApl
(2). KS Thomas, T Dean, C O'Leary, TH Sach, K Koller - PLoS, 2012 - journals.plos.org
(3). http://www.jaad.org/article/S0190-2014(04)03668-0/fulltext
(4). https://onlinelibrary.wiley.com/doi/full/10.1111/j.1398-9995.2013.00974.x

`