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Hand eczema is common, affecting about 10% of the general population over a one year period, with a poor long term prognosis, regardless of the etiology.[1] In severe cases it has a significant impact on quality of life, with major effects on social interactions, occupational success, and activities of daily living.[2]

There are multiple etiologies and clinical patterns, but there is no consistent correlation between the etiology and the clinical pattern. Various classification schemes have existed over the years, but none have been generally accepted. In many patients it is not possible to identify the etiology, even after extensive investigations and long term follow-up. While many mild cases respond well to lifestyle changes, moisturizers, and intermittent topical steroids, there is no consistently effective topical or systemic therapy for severe disease.

The charts of all patients treated with dupilumab at a single center were reviewed to identify those with dermatitis involving primarily the hands. Three patients treated with dupilumab for severe, chronic, recalcitrant hand eczema were identified. Information on personal and family history of atopy, clinical aspects of the hand eczema, presence of dermatitis in other locations, history of response to prior therapies, and response to dupilumab treatment were collected. All three patients had substantial responses to dupilumab, ranging from 80% improvement to complete clearance.

Patient characteristics, efficacy to prior topical and systemic steroids, and response to dupilumab are presented in Table 1. All patients were treated with the standard FDA approved dosing of 600 mg subcutaneously on day 1 followed by 300 mg subcutaneously every 14 days. It should be noted that prior to dupilumab therapy, all three patients underwent comprehensive patch testing and no relevant allergens were detected.

Dupilumab is the first FDA approved therapy for moderate-to-severe atopic dermatitis. Its efficacy, both as monotherapy and in conjunction with corticosteroids, has been demonstrated in multiple double blind, randomized, clinical trials.[3] In all the reported trials inclusion criteria included

that atopic dermatitis must affect greater than 10% of the body surface area.[3] Since the palm including the fingers is 1% BSA, the studies thus specifically excluded patients with atopic dermatitis limited to the hands.

While the reported patients do not fit the stereotypical pattern of extrinsic atopic dermatitis, characterized by combination of typical cutaneous features, childhood onset, and mucosal allergies (rhinitis or asthma), they do fit the well described intrinsic atopic dermatitis phenotype characterized by typical skin lesions, adult onset, and lack of mucosal allergies.[4] In addition, they meet the Hanafin and Rajka criteria for diagnosis of atopic dermatitis.[5]

Based on searches of Pubmed, Embase and Cochrane for all articles with the term "dupilumab" anywhere in the title or abstract, this is the first report of dupilumab therapy for patients with dermatitis limited primarily to the palms. The positive results in these three patients suggest that dupilumab can be considered as a therapeutic option in patients with palmar hand eczema who meet diagnostic criteria for atopic dermatitis.

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2. Agner, T., et al., *Hand eczema severity and quality of life: a cross-sectional, multicentre study of hand eczema patients*. Contact Dermatitis, 2008. **59**(1): p. 43-7.
3. Han, Y., et al., *Efficacy and safety of dupilumab for the treatment of adult atopic dermatitis: A meta-analysis of randomized clinical trials*. J Allergy Clin Immunol, 2017. **140**(3): p. 888-891 e6.
4. Wuthrich, B. and P. Schmid-Grendelmeier, *The atopic eczema/dermatitis syndrome. Epidemiology, natural course, and immunology of the IgE-associated ("extrinsic") and the nonallergic ("intrinsic") AEDS*. J Invest Allergol Clin Immunol, 2003. **13**(1): p. 1-5.
5. Hanifin, J.R.G., *Diagnostic features of atopic eczema*. Acta Dermato-Venereol, 1980. **92**: p. 44-47.

Table 1: Clinical characteristics, response to prior therapies, and response to dupilumab in 3 patients with hand dermatitis.

Demographics	Personal history of atopy	Family history of atopy	Duration of hand eczema	Other body areas affected with dermatitis	Distribution of hand eczema	Total Body Surface Area	Prior treatments	Response to dupilumab
72 y/o female	-Positive prick test to several pollens -No childhood rashes -No history of rhinitis, conjunctivitis, or asthma	None reported	>35 years	None	Palmar aspects only	2%	-Clobetasol under occlusion – no response -Tacrolimus under occlusion – no response -Systemic corticosteroids – numerous tapers starting at 40 mg/day with improvement followed by relapse as tapered -Thalidomide – dose not recalled – no response -Methotrexate 15 mg/wk – no response -Mycophenolate 3 g/day – no response -Modified Cyclosporine – 4 mg/kg/day - 40% better, but creatinine doubled	Complete clearance in 6 weeks; response maintained through 3 months at the time of writing
65 y/o female	-Hay fever as a child -No childhood rashes -No rhinitis, conjunctivitis, or asthma as adult	None reported	>10 years	None	Palmar aspects only	2%	-Clobetasol under occlusion – no response -Tacrolimus under occlusion – no response -Systemic corticosteroids – numerous tapers starting at 40 mg/day with improvement followed by relapse as tapered -Modified cyclosporine – 4 mg/kg/day – 50% improvement but 50% increase in creatinine -Mycophenolate 3 g/day – no response -Tacrolimus 7 mg/day + prednisone 10 mg/day – 70% better	90% improvement in 6 weeks; response maintained through 8 months at the time of writing
48 y/o male	-Hay fever as a child -No childhood rashes -No rhinitis, conjunctivitis, or asthma as adult	Sister with hay fever	9 years	Arms	Palmar aspects only	6%	-Clobetasol under occlusion – no response -Tacrolimus under occlusion – no response -Apremilast – no response -Ustekinumab – no response -Mycophenolate 4 g/day – no response	Arms clear, hands 80% improved at 3 months; response maintained through 8 months at time of

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