Dupilumab is effective in patients with atopic dermatitis and inadequate response, intolerance, or contraindication to cyclosporine: a systematic review and meta-analysis

CO82

Felix PAO [1], Duarte GV [2], Migliavaca CB [3], Gräf DD [3], Schneider NB [3], Falavigna M [3], Guyot P [4], Barbosa A [5], Bosnich FZ [5], Federico P [5], Magro FJB [5], Taminato A [5]

1. Hospital Federal dos Servidores do Estado, Rio de Janeiro, Brazil; 2. Instituto Bahiano de Imunoterapias, Salvador, BA, Brazil; 3. HTAnalyze Consulting, Porto Alegre, Rio Grande do Sul, Brazil; 4. Sanofi, Chilly-Mazarin, France; 5. Sanofi, Sao Paulo, Brazil

Contact details: Alexandre Taminato | Email: alexandre.taminato@sanofi.com

Scan here to download e-poster PDF

BACKGROUND

Atopic dermatitis (AD) is a chronic inflammatory disease characterized by intense pruritus, eczema and dry skin.[1]

Patients with persistent disease despite topical therapy may require systemic therapy. Cyclosporine is approved for AD in some countries, but it is associated with adverse events such as nephrotoxicity, hypertension, and increased susceptibility to serious infections, requiring frequent monitoring and being associated with high discontinuation rates. Treatment with cyclosporine is recommended for up to 2 years[2].

OBJECTIVES

To assess the efficacy and safety of dupilumab in adults with moderate-to-severe AD and inadequate response, intolerance, or contraindication to cyclosporine.

METHODS

Search: PubMed, Embase, and Cochrane CENTRAL up November 2021.

Eligibility criteria: randomized clinical trials assessing dupilumab 300mg Q2W in comparison to placebo (with or without topical corticosteroids) in adult patients with moderate-to-severe or severe AD and inadequate response, intolerance, or contraindication to cyclosporine.

Study selection and data extraction were conducted by two independent reviewers; discrepancies were solved through consensus or by a third reviewer.

Results were summarized with random-effects meta-analyses.

Risk of bias was assessed with RoB 2.0 and quality of evidence with GRADE.

RESULTS

We included 4 studies: SOLO 1, SOLO 2, LIBERTY AD CHRONOS and LIBERTY AD CAFÉ (Figure 1).[3-6]

Only the LIBERTY AD CAFÉ evaluated exclusively the population of interest. Other studies included broader population, but subgroup analysis for the population of interest was identified.

Dupilumab was associated with improvement in all efficacy outcomes in patients with moderate-to-severe/severe AD that had inadequate response, intolerance, or contraindications to cyclosporine (Figure 2).

Figure 1. Flowchart of study selection

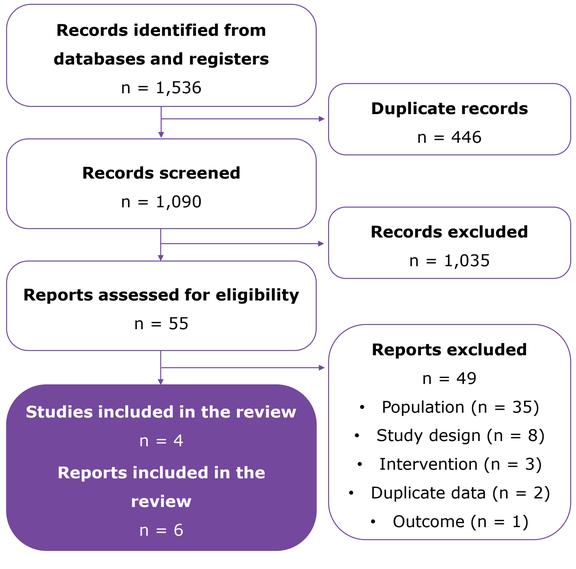
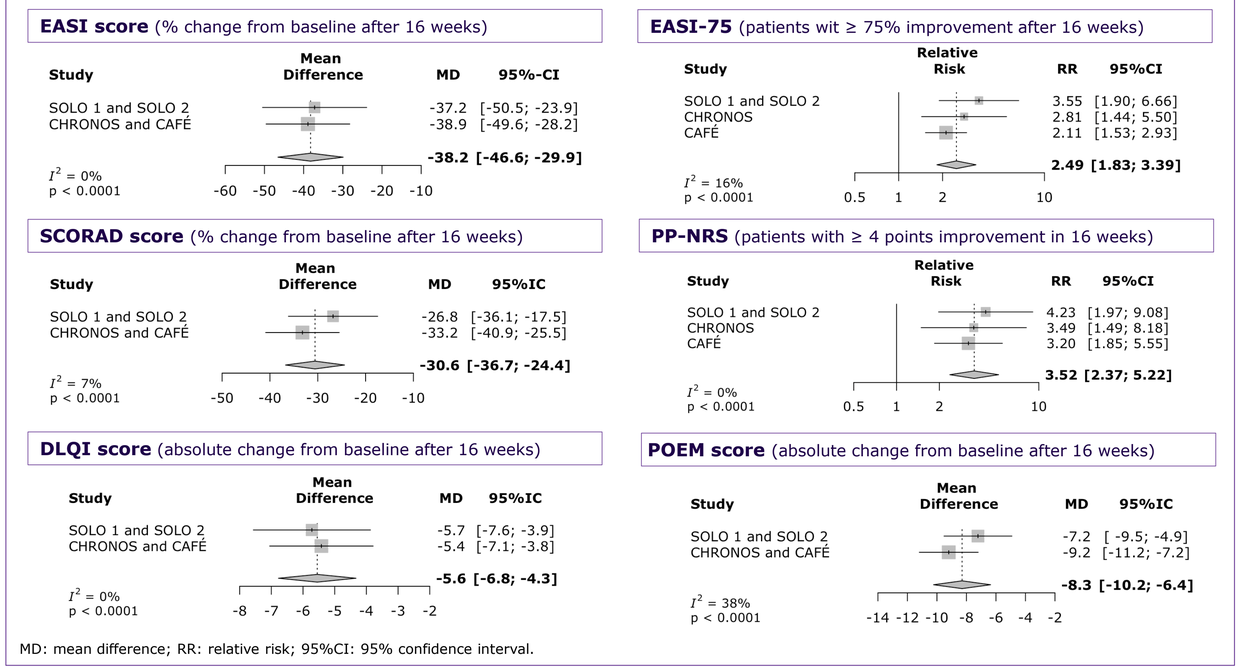


Figure 2. Efficacy of dupilumab in patients with atopic dermatitis



MD: mean difference; RR: relative risk; 95%CI: 95% confidence interval.

Treatment groups had similar overall rates of adverse events (dupilumab: 72.0%; placebo: 69.4%) and serious adverse events (1.9% for each group). In the placebo group, one patient (0.9%) discontinued due to adverse events; no discontinuation due to adverse event was reported among dupilumab-treated patients.

Risk of bias was classified as low for all outcomes in all studies. Quality of evidence was classified as high for all efficacy outcomes and as moderate for safety outcomes due to indirect evidence, considering that AD exacerbation was classified as an adverse event.

CONCLUSION

Dupilumab improved AD signs and symptoms, patient's quality-of-life and presented an acceptable safety profile, supporting the use of dupilumab in patients with inadequate response, intolerance, or contraindication to cyclosporine.

REFERENCES 1. Weidinger S, Novak N. The Lancet. 2016;387(10023):1109–22; 2. Aoki V et al., An Bras Dermatol. 2019;94:67–75; 3. De Bruin-Weller MS, 2017. Allergy. 2017;72(S103):46-7; 4. De Bruin-Weller MS, 2017. Allergy. 2017;72(S103):47–8; 5. De Bruin-Weller MS, 2018. Br J Dermatol. 2018;178(5):1083-1101; 6. Griffiths 2021. Dermatol Ther (Heidelb). 2021;11(4):1357-72.

DISCLOSURES Felix PAO and Duarte GV report receiving consulting fees from Sanofi. Migliavaca CB, Gräf DD, Schneider NB and Falavigna M received honoraria from Sanofi for study. Guyot P, Barbosa A, Bosnich FZ, Federico P, Magro FJB and Taminato A are Sanofi employees.

Study funded by Sanofi. Presented at: ISPOR 2023, 7-10 May 2023