Background: Psoriatic disease (PsD) refers to a systemic condition, probably driven by chronic and complex inflammatory mechanisms. PsD patients experience a fickle mixture of cutaneous (nail dystrophy, psoriatic lesions spectrum) and musculoskeletal (MSK: arthritis, enthesitis, dactylitis, spondylitis) inflammatory features, variously associated with other co-morbidities (ocular or bowel inflammatory disease, increased cardiovascular risk and metabolic syndrome).

Current evidence is limited in respect of the management of early, treatment-naive PsD.

Objectives: To assess the literature with a focus on pharmacological interventions in early, treatment-naive PsD.

Methods: Seven research questions were formulated according to the PICO approach: are interventions effective in obtaining control of overall PsD activity? Are interventions effective on peripheral arthritis? On dactylitis? On spondylitis? On enthesitis? On skin and nails?

The search was designed as a systematic review of the literature. Early PsD was defined as disease duration ≤2 years, except for studies investigating outcomes restricted to the skin.

Criteria for including records were: adult human participants; participants with cutaneous features of PsD; participants with MSK features of PsD; double blind, single blind and non-blinded RCT; well-designed prospective studies/series.

The search protocol was registered on PROSPERO [1], the search was performed between June 2018 and January 2019.

Results: Resources available were widely explored (4 databases, 5 trial registers, 5 conference archives; see figure). The search retrieved 156,348 references (publication range 1946–2019) of which 308 (0.2%) qualified for full-text assessment (FTA, figure): 7 (0.004%) fulfilled the selection criteria and only 4 underwent data extraction.

Meta-analysis was impossible due to data heterogeneity (disease classification criteria, outcome measures and intervention durations). Although no clinical study adopted comprehensive composite indexes as primary outcome measures, 40% of FTA references described more than one component of PsD (i.e.: cutaneous and MSK) at least within the baseline characteristics. A substantial proportion of FTA references did describe, among participants recruited, many who were early untreated PsD at baseline. Unfortunately, separate analyses were not possible due to unavailability of the original datasets. A subset (10%) of the FTA references did not report on the participants’ exposure to previous treatment.

Conclusion: Few studies addressed early, treatment naïve PsD. The underrepresentation of such data may be related to trial-enrolment criteria. Further studies in this timeframe are urgently needed.

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Results: Response rates at Wk 24 (Table) were significantly (p<0.05) greater in pts receiving IXE versus PBO across all endpoints assessed in subgroups defined by sex, disease duration, and in pts with overweight and obese BMI at baseline. Response rates were significantly greater with IXE compared to PBO for ACR20 and ACR50 in the normal BMI subgroup and for ACR50 in the extreme obese BMI subgroup. Assessment of superiority of IXE versus PBO in overweight and extreme obese subgroups was limited by small sample sizes; only three patients (all receiving IXE Q4W) had overweight BMI at baseline. For all endpoints assessed, numerical response rates were observed with IXE Q4W in male versus female pts.

Conclusion: IXE was superior to PBO in the treatment of pts with active PsA at Wk 24 regardless of sex or disease duration, as well as in normal, overweight, and obese BMI subgroups.

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FR0431 EFFECT OF PHOSPHODIESTERASE 4 INHIBITION WITH APREMILAST ON BODY WEIGHT AND VASCULAR FUNCTION IN PSORIATIC ARTHRITIS – INITIAL RESULTS FROM THE IMMUNE METABOLIC ASSOCIATIONS IN PSORIATIC ARTHRITIS (IMAPA) STUDY

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Background: Psoriatic arthritis (PsA) is associated with obesity and increased cardiometabolic risk. Weight loss is associated with improved disease activity and has been noted with the phosphodiesterase 4 (PDE4) inhibitor apremilast.

Objectives: To investigate the effects of PDE4 inhibition with apremilast on body weight, vascular function and disease activity in psoriatic disease.

Methods: The Immune Metabolic Associations in Psoriatic Arthritis (IMAPA) study is a prospective, open label study of adults receiving apremilast 30mg BD as part of routine care for psoriasis and/or PsA. Cardiometabolic, anthropometric, and disease activity assessments were performed at baseline, months 1, 3, and 6. A subgroup underwent endothelial function assessment by Endo-PAT at baseline and month 3. Repeated measures mixed models were used to compare changes in body weight, waist circumference, systolic & diastolic BP, reactive hyperaemia index (RHI), and disease activity markers with apremilast.

Results: 53 participants were recruited; mean age (SD) 52 (13) years, 64% female, mean disease duration (SD) 9.3 (8.1) years. To date, data available for n=47 at month 1, n=42 month 3, and n=29 at month 6. Mean weight loss after 6 months apremilast was -1.9kg (95% CI -2.8, -1.0); 13% (7/53) lost ≥2% body weight. Statistically significant improvements in RHI, SBP, or DBP (table 1). Weight change showed no statistically significant correlation with change in joint or skin disease activity markers.

Conclusion: Apremilast was associated with modest weight loss and reduced disease activity over 6 months. There did not appear to be any significant alteration in endothelial function, however this was assessed in relatively small numbers and many patients had baseline results within normal range. Improvements in disease activity with apremilast appear largely independent of weight change in this cohort.

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