

Video abstract transcript**Sex-Specific Differences in Patients With Psoriatic Arthritis: A Systematic Review**

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Hello and welcome to this video abstract concerning the paper “Sex specific differences in patients with psoriatic arthritis: a systematic review. My name is Laura Coates from the University of Oxford and it’s my pleasure to present this on behalf of my co-authors listed here.

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These are our disclosures and acknowledgements as listed in the paper. So we know from data in psoriatic arthritis and other forms of arthritis that sex specific differences are starting to be recognised in spondyloarthritis, rheumatoid arthritis and more recently in psoriatic arthritis. I think we’ve always known that there were some differences; that rheumatoid was more prevalent in women, that ankylosing spondylitis was more prevalent in men but we wanted to really try to understand the differences in terms of sex-specific differences in real-world cohorts of patients with psoriatic arthritis.

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So, the objective of this analysis was to perform a systematic review of published literature and to collate the evidence on sex-specific differences and that was linked to clinical characteristics of psoriatic arthritis, disease activity and impact, measured by patient reported outcomes in patients with PsA.

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So, we performed a large systematic review using Medline, Embase and the Cochrane database of systemic reviews to pull out literature from 2015 to 2020 and looked specifically for observational studies rather than interventional trials to try and get an idea about the real-world population. We didn't include any small studies with less than 100 patients included. We also looked for any relevant abstracts from EULAR, ACR and AAD annual meetings and looked at bibliographies of any systematic reviews that were identified to pick up any additional papers that may have been missed. Data extraction was then performed in a standard fashion.

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So, in total we identified 4245 records from those original electronic database searches. After de-duplication and a title and abstract review, there were just over 1000 records that went forward to full text review. Of these, 29 fulfilled the eligibility criteria. Then with those additional searches, looking for abstracts at conferences, clinicaltrials.gov and looking through the systematic review bibliographies, we found 2 additional records. So in total there were 31 publications which covered 27 unique studies included in the review. These identified studies generally showed a low to moderate risk of bias with the conclusions sufficiently supported by the results. But there was limited information about the methods for controlling bias in some of the papers. Where reported, there were usually slightly more women than men but this was generally in keeping with the PsA population with a roughly equal sex split. The average ages of men and women included in these studies were similar.

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Here you can see a summary of those 27 different studies and the data around them. You can see that all of these studies have more than 100 patients but they vary from just over 100 patients into thousands of patients. You can see, generally, a roughly equal sex split maybe with a little more women than men, and you can see that these different studies do vary, so in terms of disease duration, BMI and smoking status data, sometimes that data is missing. But where it is available, it is in keeping with a chronic PsA population.

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So, if we look at the results, we've summarised them here in this table. Where you can see a pink dot, that's where results were worse for women, a blue dot is results being worse for men, and a grey dot is no significant difference between them. So you can see here, across these different studies, that relatively consistently, we have higher numbers of tender joint counts seen for women in nearly all of the studies but for swollen joint counts the results are much more similar for men and women. Overall, there is not a huge difference in axial disease but where the papers found a difference, it tended to be that men had more axial disease, whereas women had more enthesitis. A small number of studies, but no obvious difference in terms of dactylitis. Not much data on nail disease. Generally in skin disease, you can see that the men typically had more active disease for their skin.

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When we look at comorbidities, there were only 4 studies that reported this data by sex and generally speaking, there were greater numbers of comorbid or concomitant disease in women compared to men. Typically, with things like diabetes, liver disease and fibromyalgia.

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If we look at patient reported outcomes, this looks across the different aspects of the impact of disease and you can see here that generally there are few studies showing similar results for men and women but the majority of studies are showing higher levels of patient impact or patient reported disease in female patients compared to male patients. You can see here consistently higher levels of disease reported for fatigue, for pain, for functional impairment and for quality of life.

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So in conclusion, we've managed to bring together several studies in this review that have identified sex specific differences in clinical characteristics in psoriatic arthritis with a greater prevalence of peripheral arthritis and tender joint counts in women and also higher levels of impact. This suggests that there are some clinical characteristics which differ between the sexes, particularly the peripheral arthritis and tender joint count which was greater in women and the skin disease burden which has been shown to be greater in men. Overall, women report worse scores across a range of patient reported outcomes, whereas there is evidence that men seem to respond better to treatment.

This difference in patient reported outcomes was particularly clear in pain, fatigue and HAQ scores and although there were higher skin scores observed for men, this didn't translate into higher DLQI scores for men as well. Generally speaking, there were quite few studies that reported a treatment response, but the general trend was that men tended to have better outcomes compared to women. So, these differences in response rates is very interesting to consider when we are looking at the sex specific differences in the way the disease present and the impact that this has on the individual. I think this review has found interesting patterns in terms of sex specific difference in PsA. This is clearly of interest to the community; we have seen more research in this area recently looking at response to treatment in particular, and I think future studies looking at this issue specifically will help us to shed more light on the biological, psychological and social differences that we see between the sexes in psoriatic arthritis. Thank you very much for listening.