

# International Journal of Advanced Research

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## REVIEWER'S REPORT

Manuscript No.: IJAR-57031

Title: Sex-related differences in gout: a comparative study in a Moroccan cohort,

### Recommendation:

**Accept after minor revision**

Rating	Excel.	Good	Fair	Poor
Originality		✓,		
Techn. Quality		✓,		
Clarity	✓,			
Significance	✓,			

Reviewer Name: Bilqees Hamza

### Detailed Reviewer's Report

The article titled "Sex-Related Differences in Gout: A Comparative Study in a Moroccan Cohort" provides a critical and clinically relevant analysis of how gender influences the manifestation and management of gout. By utilizing a cross-sectional study of 147 patients, the author successfully identifies two distinct clinical phenotypes: a metabolic and renal-centric profile in women, and an inflammatory and structural-centric profile in men. This research is highly significant for rheumatologists and primary care physicians, as it challenges the "one-size-fits-all" approach to gout management and advocates for sex-specific therapeutic strategies tailored to the unique comorbidity profiles of each group.

The manuscript's primary strength is its clear documentation of the "metabolic burden" experienced by female patients. The finding that women in the cohort were significantly older and presented with higher rates of hypertension and diabetes is a crucial observation that aligns with the post-menopausal shift in urate handling. The author effectively argues that the loss of the uricosuric effect of estrogen in older women likely contributes to both the onset of the disease and the increased severity of renal involvement. By highlighting that renal impairment was significantly more frequent and severe in women ( $p=0.003$ ), the paper provides a strong evidence base for prioritizing renal monitoring and cardiovascular risk assessment in female gout patients.

In contrast, the analysis of the male phenotype reveals a more "aggressive" inflammatory profile. The author correctly identifies that men exhibit higher pain scores, elevated C-reactive protein (CRP) levels, and a significantly higher frequency of tophi and structural joint damage. This suggests that while women may struggle more with the systemic metabolic consequences of hyperuricemia, men are more susceptible to the localized, destructive inflammatory response within the joints. The observation that

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colchicine use was more frequent in men likely reflects this increased inflammatory activity. This dichotomy between "systemic-metabolic" and "localized-inflammatory" profiles is a sophisticated framework that adds substantial value to the existing literature on sexual dimorphism in rheumatic diseases.

The methodological approach, though monocentric and retrospective, is sound for the purposes of this comparative study. The use of a standardized 0–10 Visual Analog Scale (VAS) for pain and established biological markers like CRP and serum uric acid ensures the reliability of the comparisons. The author's decision to include radiological data on structural damage provides a necessary long-term perspective on the disease's impact. The result—that men suffer more structural damage despite similar overall treatment patterns—is a provocative finding that suggests male patients may require earlier or more intensive urate-lowering therapy (ULT) to prevent irreversible joint destruction.

To further elevate the manuscript for publication in a high-impact rheumatology or internal medicine journal, the following detailed recommendations are provided. First, the author should expand the "Discussion" to include a more nuanced exploration of the "Hormonal Variable." While the paper correctly points to the role of estrogen, a brief discussion on the timing of gout onset relative to menopause in the female cohort would add significant depth. Second, the manuscript would benefit from a "Comorbidity Management Table" that suggests specific monitoring priorities for each sex (e.g., focus on GFR and metabolic syndrome for women; focus on joint imaging and inflammatory markers for men). Third, the author should address the "Dietary and Lifestyle" limitations mentioned in the text. Even if not systematically assessed, providing a brief qualitative overview of typical Moroccan dietary habits and how they might differ by sex could offer localized context for the hyperuricemia observed. Fourth, the author should strengthen the "Therapeutic Recommendations" section by discussing the choice of ULT. For instance, does the higher prevalence of renal disease in women suggest a preference for non-renal cleared medications or more cautious dosing of allopurinol? Fifth, the author is encouraged to include a brief "Literature Comparison" section, contrasting the findings in this Moroccan cohort with studies from other regions (e.g., Europe or North America) to highlight potential ethnic or environmental influences on gout phenotypes.

Sixth, from a structural perspective, the paper is well-organized, but the transition between the "Results" and "Conclusion" could be strengthened with a more robust "Summary of Findings" paragraph. Seventh, the author should ensure that all  $p$ -values and statistical notations are presented consistently throughout the tables and the narrative. Eighth, the bibliography is current and relevant, but the author should verify

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that the formatting of the references strictly adheres to the target journal's specific style requirements (e.g., Vancouver or AMA). Ninth, the author should consider adding a brief "Future Directions" section, advocating for prospective, multicenter studies to validate these sex-specific phenotypes on a larger scale. Finally, a concluding conceptual map illustrating the different pathways to gout for men and women would serve as an excellent visual summary of the paper's core thesis.

From a formal standpoint, the article is written in a professional, academic tone that reflects the author's expertise in the field. The English is clear and precise, and the use of technical terminology is appropriate for the intended audience. The manuscript successfully bridges the gap between epidemiological data and clinical practice, offering actionable insights for the personalized management of gout. By addressing these minor points of technical and structural refinement, the author will ensure that the paper stands as a definitive study of sex-related differences in the Moroccan context.

**Recommendation:** Recommend for publication with minor revision.