

# Review of: "Breaking Stereotypes: Sectoral Varicocele Diagnosis Revolutionized by Doppler Ultrasound Advancements"

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Potential competing interests: No potential competing interests to declare.

I was kindly invited to review this article. I hope that my humble suggestions can be useful to the authors in further improving the paper.

I found the article well-written and clear in its objectives. The results confirm the well-known diagnostic superiority of scrotal Doppler ultrasound compared to physical examination. Although not innovative, the work is appreciable and provides updated data on the most frequently used varicocele diagnostic techniques.

However, I find it right to highlight some critical issues which, if corrected, could make the article a greater contribution to the scientific community.

- Title: As already mentioned, numerous studies have already confirmed the diagnostic superiority of scrotal Doppler ultrasound compared to physical examination in the evaluation of patients with varicocele. I would change the article title.
- Introduction: In my opinion, the introduction to the pathology deserves a greater degree of in-depth analysis, with literature data relating to the prevalence, pathophysiology, and effects on fertility of varicocele. This would give greater prominence to the results, underlining the clinical and social impact of the pathology. Furthermore, for a more correct and complete understanding of the two different diagnostic procedures analyzed in the article, the limitations of scrotal Doppler ultrasound (a technique dependent on the subjectivity and level of experience of the operator) should also be highlighted.

Bibliographic suggestion: Cocuzza MS, Tiseo BC, Srougi V, Wood GJA, Cardoso JPGF, Esteves SC, Srougi M.

Diagnostic accuracy of physical examination compared with color Doppler ultrasound in the determination of varicocele diagnosis and grading: Impact of urologists' experience. *Andrology*. 2020 Sep;8(5):1160-1166

- Materials and methods: Specify the name of the hospital where the study was carried out. The Materials and Methods section should be expanded by specifying the diagnostic criteria used for both the physical examination and the scrotal Doppler ultrasound. It is not entirely clear how the physical examination was carried out and whether this was performed by a doctor other than the two urologists who defined the reference standard. Anyway, I still have some doubts about the definition of the reference standard. In light of the poor diagnostic power of the physical examination

that emerges from the literature data, why didn't you choose an ultrasound or phlebographic consensus instead of a physical one as the standard reference?

- Results: The results section should be completed with the addition of tables and graphs for better reading of the data. Were patients with varicocele stratified based on the degree of varicocele observed, or was a distinction made only between presence/absence of pathology? It would be interesting to compare the two techniques by stratifying the patients by degree of varicocele to understand whether the diagnostic superiority of scrotal Doppler ultrasound is maintained both for subclinical varicocele and for higher grade varicocele.
- Discussion: The results of the study should be compared with the data already present in the literature relating to the sensitivity and specificity of the two techniques. The bibliography is insufficient and dated, as the articles cited all precede the new millennium. I suggest a bibliographic search that takes into account the latest developments in scientific literature relating to varicocele and its diagnosis.

Bibliographic suggestion: Belay RE, Huang GO, Shen JK, Ko EY. Diagnosis of clinical and subclinical varicocele: how has it evolved? *Asian J Androl*. 2016 Mar-Apr;18(2):182-5