

PEER-REVIEW REPORT

Name of journal: *World Journal of Cardiology*

Manuscript NO: 90142

Title: Venous Doppler flow patterns, venous congestion, heart disease and renal dysfunction: a complex liaison

Provenance and peer review: Invited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 05742562

Position: Peer Reviewer

Academic degree: MD

Professional title: Doctor

Reviewer's Country/Territory: China

Author's Country/Territory: Italy

Manuscript submission date: 2023-11-24

Reviewer chosen by: AI Technique

Reviewer accepted review: 2023-11-24 13:50

Reviewer performed review: 2023-11-29 08:27

Review time: 4 Days and 18 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Very good <input type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Novelty of this manuscript	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No novelty
Creativity or innovation of this manuscript	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No creativity or innovation

Scientific significance of the conclusion in this manuscript	<input type="checkbox"/> Grade A: Excellent <input checked="" type="checkbox"/> Grade B: Good <input type="checkbox"/> Grade C: Fair <input type="checkbox"/> Grade D: No scientific significance
Language quality	<input type="checkbox"/> Grade A: Priority publishing <input checked="" type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input checked="" type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Peer-reviewer statements	Peer-Review: <input type="checkbox"/> Anonymous <input checked="" type="checkbox"/> Onymous
	Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS

Title: The title, "Venous Congestion in Heart Disease: Unraveling the Role of Ultrasonography and Doppler Flow Patterns," accurately reflects the main subject of the manuscript, which discusses the significance of venous congestion in heart disease and the diagnostic utility of ultrasonography and Doppler flow patterns. **Abstract:** The abstract effectively summarizes the key points of the manuscript, emphasizing the importance of venous congestion in heart disease and the role of ultrasonography and Doppler flow patterns in assessing fluid status. It provides a clear overview of the study's objectives and findings. **Key Words:** The key words appropriately reflect the focus of the manuscript, including terms such as venous congestion, ultrasonography, Doppler flow patterns, fluid overload, and cardio-renal syndrome. **Background:** The manuscript adequately describes the background, present status, and significance of the study. It highlights the clinical importance of investigating venous congestion in intensive care settings and its association with acute and chronic renal dysfunction in heart disease. **Methods:** The manuscript provides sufficient detail regarding the methods used, including the evaluation of venous Doppler profiles at multiple sites. However,

more specific information on the study design and patient characteristics could enhance the clarity of the methods section. Results: The research objectives are achieved through the experiments described in the study. The manuscript effectively communicates the contributions of the study to understanding the pathogenesis of renal dysfunction in heart disease. Discussion: The discussion section interprets the findings adequately and logically, emphasizing the significance of fluid overload and venous congestion in heart disease. The implications for clinical practice are clearly stated, and the discussion accurately discusses the paper's scientific significance. Illustrations and Tables: The figures, diagrams, and tables are of good quality and appropriately illustrative. However, some figures could benefit from more explicit labeling using arrows or asterisks. The legends are generally adequate and accurately reflect the images. Biostatistics: The manuscript meets the requirements of biostatistics, providing appropriate statistical information to support the study's findings. Units: The manuscript adheres to the requirements of using SI units, ensuring consistency in the presentation of data. References: The manuscript appropriately cites the latest, important, and authoritative references in the Introduction and Discussion sections. No issues with self-citation, omission, incorrect citation, or over-citation were identified. Quality of Manuscript Organization and Presentation: The manuscript is well-organized and presented coherently. The style, language, and grammar are accurate and appropriate. Research Methods and Reporting: The manuscript follows BPG's standards for manuscript type and the appropriate topically-relevant category. It adheres to reporting guidelines relevant to the study type. Ethics Statements: The manuscript meets the requirements of ethics by providing formal ethics documents related to human studies and/or animal experiments, reviewed and approved by the local ethical review committee. Original Findings and New Hypotheses: The manuscript effectively communicates the original findings, hypotheses, and phenomena discovered through experiments. It proposes new

hypotheses related to the role of venous congestion in heart disease and confirms these through experiments. Quality and Importance: The quality and importance of the manuscript are well-established. It presents new concepts, methods, and insights relevant to the understanding of fluid status in heart disease. The conclusions appropriately summarize the data and provide unique insights. Limitations and Future Directions: The manuscript discusses the limitations of the study and suggests future directions. It prompts questions and issues that remain to be solved, encouraging further research. The potential impact on basic science and clinical practice is acknowledged. Overall, I recommend accepting this manuscript for publication with minor revisions to address specific points in the methods section and figure labeling. The study makes a valuable contribution to the understanding of venous congestion in heart disease and the use of ultrasonography as a diagnostic tool.