Thank you for asking me to review this manuscript.
Here are my review report:

Abstract:

Clarity of research question: The abstract does state the research question, but it could be more concise. Instead of "whether standardized preconditioning protocols are also needed for the sonographic examinations of plantar fascia," it could simply state "to investigate the effect of loading history on plantar fascia measurements."

Highlight key findings: The abstract adequately highlights the key findings, but it could be more impactful. Instead of just stating the findings, it could emphasize the clinical implications, such as "These findings suggest that preconditioning protocols are crucial for accurate SW elastography assessments in plantar fasciopathy."

Clinical implications: The abstract briefly mentions clinical implications, but it could be expanded. It could state "These findings have implications for the diagnosis and management of plantar fasciopathy, highlighting the need for standardized preconditioning protocols in clinical practice."

Introduction:

Strengthen the rationale: The introduction provides a good overview of plantar fasciopathy and the use of ultrasound, but it could strengthen the rationale for the study. It could further emphasize the limitations of existing research regarding loading history and its impact on plantar fascia measurements, creating a stronger argument for the need for this study.

Expand on SW elastography: The introduction adequately discusses SW elastography, but it could expand on its advantages compared to other imaging modalities, highlighting its sensitivity to tissue stiffness changes, which is crucial for diagnosing plantar fasciopathy.

Refine the literature review: The literature review is adequate, but it could be refined to explicitly discuss the limitations of existing research regarding the effect of loading history on plantar fascia measurements, further justifying the need for the current study.

Clearly state objectives: The objectives are stated, but they could be more explicit. Instead of "to investigate whether standardized preconditioning protocols are needed," it could state "to assess the effect of loading history on plantar fascia thickness and SW speed measurements."

Restructure for clarity: The introduction's structure is generally good, but it could benefit from a clearer flow. It could start with the significance of PHP, then discuss the role of ultrasound, followed by the structure and function of the plantar fascia, and finally the potential of SW elastography and the rationale for the current study.

Methods:

Detailed study design:The methods section adequately describes the study design, but it could be more detailed. It could provide specific details about the loading scenarios, such as the duration and intensity of each condition, and the methods used for measuring plantar fascia thickness and SW speed.

Participant characteristics: The methods section mentions participant characteristics, but it could be more comprehensive. It could include details such as age, sex, and any relevant medical history, which might influence plantar fascia properties.

Standardized protocols: The methods section mentions standardized protocols, but it could be clearer. It could provide a detailed description of how the loading protocols were standardized, including the specific procedures and equipment used.

Image analysis: The methods section mentions image analysis, but it could be more specific. It could explain the software used for analysis and the criteria used for measuring plantar fascia thickness and SW speed.

Results:

Consistent data presentation: The results section presents data inconsistently, using median (maximum, minimum) for thickness and mean (± standard deviation) for SW speed. It should use a consistent approach for all variables, either median or mean, to ensure clarity and comparability.

Visual aids: The results section uses tables, but it could benefit from more visual aids, such as figures, to effectively present the results and highlight key findings.

Focus on clinical relevance:The results section presents the findings, but it could better focus on clinical relevance. It could discuss the clinical significance of the findings, relating the observed changes in plantar fascia measurements to the diagnosis and management of plantar fasciopathy.

Discussion:

In-depth analysis: The discussion acknowledges the difference in sensitivity to loading history between different parts of the plantar fascia, but it doesn't delve deeply into the potential reasons behind this observation. It could explore the biomechanical and material properties of the plantar fascia, providing a more in-depth analysis.

Clinical implications: The discussion primarily focuses on the methodological implications of the findings, particularly regarding the need for preconditioning protocols. It could benefit from a more detailed discussion of the potential clinical implications of the findings, particularly for the diagnosis and management of plantar fasciopathy.

Preconditioning protocols: The discussion suggests a five-minute rest protocol, but it doesn't fully address the complexities of preconditioning. It could discuss the potential for individual

variability in tissue recovery time and the need for standardized protocols across different loading scenarios.

Confounding factors: The discussion mentions the confounding effect of guided wave propagation but doesn't delve deeper into other potential confounding factors. It could discuss other factors that might influence SW speed measurements, such as temperature, hydration levels, and individual variations in tissue properties.

Future research directions:The discussion suggests future research on preconditioning protocols, but it could outline a broader range of potential areas for future research, such as investigating the influence of different loading scenarios, exploring the role of individual factors in tissue response to loading, and examining the long-term effects of loading history on plantar fascia biomechanics.

Conclusion:

Nuanced interpretation: The conclusion effectively summarizes the findings, but it could provide a more nuanced interpretation, considering the limitations of the study and the potential for individual variability in tissue responses to loading.

Specific clinical implications: The conclusion mentions the potential clinical relevance of SW elastography, but it could discuss the specific clinical applications and implications of the findings, relating them to the diagnosis and management of plantar fasciopathy.

Broader research directions: The conclusion briefly mentions the need for further research on preconditioning protocols, but it could outline a broader range of potential areas for future research, addressing the need for further investigation into preconditioning protocols, individual factors, and long-term effects of loading history.

Overall:

The manuscript provides a solid foundation for understanding the effect of loading history on plantar fascia measurements. However, it could be strengthened by addressing the areas for improvement mentioned above. By providing a more in-depth analysis of the findings, exploring the potential clinical implications, and addressing the complexities of preconditioning protocols and confounding factors, the manuscript can be made more impactful and relevant to the field.