## Peer Review File

## Article information: https://dx.doi.org/10.21037/tau-23-550

### **Review Comments**

## **Reviewer A:**

**Comment 1:** This is a nice and comprehensive review. I believe many of the text can be either organized in a table or preferably in a figure highlighting the mechanism of biofilm formation.

**Reply 1:** Thank you for your review and comments. We have created a figure to help illustrate the mechanism of biofilm formation.

**Changes in text:** Figure 2 has been included with the manuscript and referenced in line 58.

**Comment 2:** It is critical to highlight how biofilm can result in infection. A figure will be very useful to show the breach of the biofilm layers and the capsule especially in revision surgery.

**Reply 2:** Thank you for your suggestion. We have created Figure 3 to demonstrate how revision surgeries can disrupt the biofilm and cause infection.

Changes in text: Figure 3 has been included and referenced in line 127.

**Comment 3:** How can patient prep affect biofilm formation? This can affect the source of bacteria for biofilm formation.

**Reply 3:** Thank you for your suggestion. We agree that patient prep can affect biofilm formation and also serve as another avenue for interventions to prevent biofilm formation.

Changes in text: We have added commentary regarding this in lines 207-232.

**Comment 4:** It is important to add a section for the clinical utility - how this can change the practice, and what can we do now based on the manuscript.

**Reply 4:** Thank you for your comment. We agree that a section on clinical utility will provide useful context for readers.

Changes in text: We have added a section on clinical utility in lines 379-390.

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## **Reviewer B:**

# Comment 1: Abstract:

Clarity and Conciseness: The abstract effectively summarizes the key points of the article. To enhance it further, consider condensing the information a bit more while ensuring all essential elements are covered within 150-250 words.

**Reply 1:** Thank you for your review and comments. We have made edits to the abstract.

Changes in text: The abstract has been edited (Lines 1-17)

# Comment 2: Introduction:

Enhance Statistics Presentation: The statistics provided on the prevalence of erectile dysfunction and the number of penile prosthesis implantations could be presented in a more engaging manner, possibly in the form of a concise infographic or chart for better visual impact.

**Reply 2:** Thank you for your suggestion. We have created an infographic figure to help illustrate this data.

**Changes in text:** Figure 1 has been included with the manuscript and referenced in line 29.

**Comment 3:** Strengthen Transition: The introduction sets the stage but could better transition into the core discussion of biofilms. Adding a brief statement that explicitly emphasizes the significance of addressing biofilms in penile prosthesis surgeries might improve the flow.

**Reply 3:** Thank you for your suggestion. We have added a brief transition statement to improve the flow.

Changes in text: We have added a sentence in lines 48-50.

#### Comment 4: Biofilm Formation Section:

Simplify Complex Concepts: While the section provides a detailed insight into biofilm formation, consider simplifying certain scientific terms or concepts for readers who might not have a technical background.

**Reply 4:** Thank you for your suggestion. We have simplified this section to make it easier to understand and follow.

Changes in text: We have edited the Biofilm Formation Section in lines 60-68.

**Comment 5:** Visual Aid: Incorporating diagrams or visual representations of the biofilm formation stages could aid in understanding complex processes more easily.

**Reply 5:** Thank you for your suggestion. We have created a diagram (Figure 2) to help illustrate the biofilm formation process.

Changes in text: We have included the figure and referenced the figure in line 58.

**Comment 6:** Bacterial Profile and Clinical Presentation Section:

Clarity in Findings: Reiterate the key findings of studies related to bacterial profiles in a concise manner, making it easier for readers to grasp the essential points.

**Reply 6:** We have added additional sentences to summarize the key findings and pertinence of these studies as well as created a table (Table 1) to summarize the key findings.

**Changes in text:** Table 1 has been referenced in line 100 and additional sentences have been added to lines 109-111.

**Comment 7:** Highlight Key Insights: Emphasize the implications of the findings on clinical outcomes and infection rates after revision surgeries. This will help in reinforcing the importance of understanding biofilms for clinicians and researchers.

**Reply 7:** We agree that this will help reinforce the importance of understanding biofilms and have added additional sentences to reflect this.

Changes in text: This has been reflected in lines 130-132.

**Comment 8:** Challenges and Strategies Sections:

Subheadings for Clarity: Introduce subheadings within these sections to enhance readability and allow readers to navigate through different strategies and challenges more easily.

**Reply 8:** Thank you for your suggestion. We have added subheadings for improved readability and overall flow.

Changes in text: This has been reflected in lines 135, 148, and 166.

**Comment 9:** Conciseness: While detailed explanations are essential, ensure brevity to maintain reader engagement.

**Reply 9:** Thank you for your suggestion. We have made edits to improve the conciseness and brevity of this section. We have also created a table (Table 2) to help concisely convey this information.

**Changes in text:** This has been reflected in lines 134-205 and Table 2 has been referenced in line 138.

Comment 10: Novel Methods and Future Directions:

Expanded Discussion: Elaborate more on the potential future applications of these emerging strategies in clinical settings, indicating how these methods might revolutionize the management of biofilm-related infections.

**Reply 10:** Thank you for your suggestion. We have added a section to discuss the clinical utility of these new treatments and potential future applications in the clinical setting.

Changes in text: This has been reflected in lines 379-390.

Comment 11: General Recommendations:

Peer Review and Revision: Seek input from experts in the field to ensure accuracy, especially in technical details and terminology.

**Reply 11:** Thank you for your comment. We have utilized expert opinions and critically examined the literature when constructing this review paper.

#### Changes in text:

**Comment 12:** Citations and References: Ensure citations are consistent and properly linked to the main text to validate the information presented.

**Reply 12:** We have checked our manuscript for consistency of the references. **Changes in text:** 

### Comment 13: Conclusion:

Summary of Key Strategies: Recap the most promising strategies discussed in the article and their potential impact on reducing biofilm-related infections in penile prosthesis surgeries.

**Reply 13:** Thank you for your suggestion. We have added in sentences to the conclusion to summarize the novel strategies under development/investigation. **Changes in text:** This has been reflected in lines 392-407.

## Comment 14: Ethical Statement and Conflict of Interest:

Clarity in Declarations: Ensure absolute clarity in the declaration of conflicts of interest and ethical statements to maintain transparency.

**Reply 14:** We have checked the declaration of conflicts of interest and ethical statements to ensure clarity and transparency.

Changes in text: This has been reflected in lines 413-414.

## Comment 15: Overall:

Engagement: Consider using more real-world examples or case studies to illustrate the impact of biofilms in penile prosthesis surgeries.

**Reply 15:** Thank you for your suggestion. We have added an additional reference to a case series to demonstrate the importance of antibiotic treatments to reduce infections during revision surgeries.

Changes in text: This has been reflected in lines 200-203.

**Comment 16:** Language and Readability: Simplify complex terms and ensure a consistent tone throughout the article for better readability.

Remember, balancing depth of information with accessibility for a diverse readership is key. Incorporating these suggestions could help refine the article and enhance its impact on readers interested in this specialized area of study.

**Reply 16:** Thank you for your comment. We have read through the entire manuscript and edited it to simplify terms and improve readability for a diverse audience. **Changes in text:**