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Peer Review

Review of: "Pioneering Spinal Anesthesia: A Historical Examination of Benedetto Schiassi’s Landmark Work"

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This manuscript presents an insightful historical analysis of Benedetto Schiassi’s pioneering contribution to spinal anesthesia in Italy in 1899. The study is well-structured, rigorously researched, and supported by **archival records and period medical publications.** The authors effectively contextualize Schiassi’s work within the broader evolution of loco-regional anesthesia, drawing valuable connections between historical advancements and contemporary anesthetic practice.

The topic is highly relevant to medical historians and anesthesiologists, offering a detailed examination of Schiassi’s modifications to Bier’s original spinal anesthesia technique. The discussion of cocaine dosing, patient positioning, and intraoperative observations provides a compelling narrative that highlights early efforts to improve the safety and efficacy of spinal anesthesia.

However, certain aspects of the manuscript require further clarification and refinement to enhance its scientific rigor, coherence, and impact. I have included specific comments and recommendations for improvement below.

Major Comments

Historical Context and Literature Review

- The manuscript would benefit from a more comprehensive comparative analysis of the development of spinal anesthesia across different countries. While the authors effectively discuss Bier’s contribution (1898) and Schiassi’s adaptation (1899), additional discussion on parallel developments in other regions (e.g., the United States, France, and the United Kingdom) would enhance the global perspective.

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- It would be valuable to review more thoroughly contemporary reactions to Schiassi's work in Italy and internationally. Were his techniques widely adopted then, or were they met with skepticism?
- The discussion of Schiassi's innovations (lower cocaine dose, prone positioning) is compelling. However, the authors should further elaborate on how these modifications influenced later refinements of spinal anesthesia.

Scientific and Clinical Relevance

- The manuscript successfully demonstrates the historical significance of Schiassi's work, but it would benefit from a more substantial discussion of its impact on modern anesthetic techniques.
- The comparison table (Table 1) contrasting 1899 vs. 2025 spinal anesthesia techniques is excellent. However, it could be expanded to include additional aspects, such as:
  - The evolution of spinal needle design and materials beyond the Quinke and Whitacre models.
  - The role of baricity and modern anesthetic solutions in spinal anesthesia safety.
- I think a brief discussion on how historical spinal anesthesia complications were managed would be informative.

Methodology and Source Validation

- The manuscript relies heavily on historical documents and primary sources from Schiassi and his contemporaries. While this approach is appropriate, the authors should explicitly discuss the reliability of these historical sources.
- How were these archival materials authenticated? Were they compared to other independent historical records?
- The article references Schiassi's four leading publications. A summary of their key findings (perhaps in a supplementary table) would **strengthen the argument**.

Translation and Interpretation of Historical Texts

- The manuscript includes several direct quotes from Schiassi's original Italian publications. While these are valuable primary source**s**, the translations should be critically assessed for accuracy and contextual meaning.
- Did the authors consult historical linguistics or medical historians to ensure the most precise rendering of Schiassi's terminology into modern English?

Minor Comments & Editorial Suggestions

Language and Readability

- The manuscript is well-written and engaging, but specific passages contain long and complex sentence structures that could be simplified for clarity.
- Minor grammatical inconsistencies (e.g., "peculiar type of anesthesia" → consider "novel approach to anesthesia").
- The abbreviations section includes some self-explanatory terms (e.g., **cmc. and cg.**), which might not be necessary in the main text.

Figures and Tables

- **Figure legends should provide more context**. For example:
  - Figure 1: A brief caption explaining how the Il Policlinico journal disseminated Schiassi's findings would enhance its significance.
  - Figure 2: The anatomical rationale behind Schiassi's lumbar injection site (L2-L3) compared to Bier's approac**h** could be elaborated on.
- **Table 1 (Comparison of 1899 vs. 2025 Spinal Anesthesia Techniques)**
  - This is an excellent addition, but consider:
    - Clarifying the introduction of hyperbaric vs. isobaric local anesthetics.
    - Discussing how patient positioning evolved (prone vs. lateral vs. sitting) and its effects on drug spread.

References and Citation Style

- The reference list is extensive and appropriate, but some citations need consistency in formatting (e.g., missing DOI links, inconsistent journal name abbreviations).
- The authors could expand their discussion of Bier's 1898 work by incorporating more recent secondary sources that discuss its impact.

Overall Recommendation

This manuscript presents an essential and novel historical examination of Benedetto Schiassi's contribution to spinal anesthesia, highlighting his pioneering modifications and their lasting impact.

The research is well-supported by historical documentation, and the comparative analysis of anesthesia techniques is highly valuable.

However, before publication, the authors should address the following key areas:

- Expand the discussion on global developments in spinal anesthesia.
- Clarify Schiassi's influence on subsequent anesthetic practices.
- Strengthen the methodology regarding source validation.
- Refine translations of historical texts for accuracy.
- Enhance the figures and tables with more explanatory context.

With these improvements, this paper would substantially contribute to the history of anesthesiology and serve as a valuable resource for medical historians and anesthesiologists.

Final Decision:

Major revisions are required before acceptance.

Declarations

Potential competing interests: No potential competing interests to declare.