

# Review of: "Comprehensive Anaesthesia Management Strategies for Orthognathic Surgical Procedures"

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The paper provides a thorough analysis of anaesthesia management in orthognathic surgery, emphasizing the need for a comprehensive approach due to the complexity of these procedures. The introduction clearly sets the stage by explaining the purpose of orthognathic surgery and the importance of precise anaesthesia management to optimize outcomes. However, the abstract could benefit from a more structured summary, highlighting key findings and recommendations explicitly. The detailed description of the surgical procedures, including maxillary, mandibular, and bimaxillary surgeries, is well-articulated. It sets a solid foundation for understanding the subsequent discussions on anaesthesia management. However, the paper would be more effective if it integrated the anaesthetic considerations directly within the description of each surgical step rather than presenting them separately.

The discussion on airway management and intubation is comprehensive, highlighting the challenges and solutions, such as the use of videolaryngoscopy. The authors effectively argue the benefits of the McGrath videolaryngoscope, supported by relevant studies. Including more comparative data on different videolaryngoscopes and their success rates could further enhance this section.

The importance of eye protection and pressure injury prevention is well-covered. The paper appropriately emphasizes the need for preventive measures given the lengthy nature of orthognathic surgeries. It would be beneficial to include more recent data or studies on the effectiveness of various preventive strategies for perioperative pressure injuries.

The inclusion of throat packs is explained with practical recommendations and protocols, ensuring all team members are aware of their use and removal. The emphasis on communication within the surgical team is a critical point well-made by the authors. However, a flowchart or visual aid summarizing the protocol could make this section more user-friendly.

The discussion on fluid management is particularly insightful, emphasizing the balance between adequate hydration and avoiding fluid overload. The paper's exploration of the physiological mechanisms behind fluid-induced oedema is commendable. Including more specific guidelines or a fluid management protocol for orthognathic surgery could provide clearer guidance for practitioners.

The section on bleeding control, including the use of hypotensive anaesthesia and tranexamic acid, is comprehensive and well-supported by literature. The explanation of different pharmacological agents used to achieve hypotensive anaesthesia is detailed. However, it would benefit from more specific case studies or examples demonstrating the practical application of these strategies.

The coverage of PONV prophylaxis is extensive, detailing various pharmacological and non-pharmacological strategies. The authors provide a robust review of current medications and their efficacy, supported by meta-analyses and clinical studies. A table summarizing the different antiemetic drugs, their dosages, and timing could enhance readability and practical application.

The multimodal analgesia approach is well-argued, emphasizing the combination of local infiltration with systemic analgesics. The discussion on the role of dexmedetomidine is particularly noteworthy, given its dual benefits in analgesia and bleeding management. The paper could benefit from more detailed protocols or case examples illustrating successful analgesia strategies in orthognathic surgery.

The sections on antibiotic prophylaxis and DVT prophylaxis are succinct but thorough. The authors provide evidence-based recommendations, though these sections would benefit from a deeper exploration of controversial or emerging issues in these areas. Including a decision tree or algorithm for antibiotic and DVT prophylaxis could be useful for clinical practice.

The final section on emergence and extubation is concise, reiterating the importance of careful airway management post-surgery. It aligns well with the earlier discussions on airway management and highlights key points to ensure a smooth recovery phase.

Overall, the paper offers a comprehensive and well-researched guide to anaesthesia management in orthognathic surgery. It effectively covers the critical aspects and provides practical recommendations backed by literature. To enhance its utility, the paper could benefit from more visual aids, such as flowcharts, tables, and protocols, and a deeper integration of case studies or practical examples. Additionally, while the paper is thorough, some sections could be condensed to improve readability without losing essential information.

The collaborative approach between anesthesiologists and surgeons emphasized throughout the paper is a crucial takeaway, highlighting the need for multidisciplinary teamwork in optimizing patient outcomes in orthognathic surgery.