

REVIEWER'S REPORT

Manuscript No.: IJAR-52118

Date: 04-06-2025

Title: COMPARISON OF DEXMEDETOMIDINE AND FENTANYL-MIDAZOLAM FOR TYMPANOPLASTY UNDER MONITORED ANAESTHESIA CARE

Recommendation:

Accept as it is.....**YES**.....
 Accept after minor revision.....
 Accept after major revision
 Do not accept (*Reasons below*)

Rating	Excel.	Good	Fair	Poor
Originality			√	
Techn. Quality		√		
Clarity		√		
Significance			√	

Reviewer's Name: Dr Aamina

Reviewer's Decision about Paper: **Recommended for Publication.**

Comments (*Use additional pages, if required*)

Reviewer's Comment / Report

Abstract and Introduction:

The abstract concisely presents the clinical rationale for comparing dexmedetomidine and fentanyl-midazolam combinations in tympanoplasty under monitored anaesthesia care (MAC). It highlights the methodology, key findings, and conclusion, while the introduction clearly establishes the relevance of optimizing sedation strategies for tympanoplasty. The contrast between dexmedetomidine's pharmacological profile and the limitations of midazolam-opioid combinations is well-articulated. The background emphasizes clinical concerns such as respiratory depression and inadequate analgesia, validating the study's objective.

Materials and Methods:

The study design is appropriate for comparative clinical evaluation. The inclusion of 60 patients (ASA I & II, aged 18–60) and the random assignment to two groups strengthen the study's internal validity. Exclusion criteria are well-defined, helping control for potential confounders. The sedation scale

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(Ramsay) and pain scale (VAS) used are standard, ensuring consistency in measurement. Monitoring parameters such as heart rate, MAP, rescue doses, and satisfaction scores add to the depth of analysis.

Results:

The results section reports key outcome measures effectively:

- **Sedation and satisfaction:** Dexmedetomidine provided better patient and surgeon satisfaction scores than midazolam-fentanyl.
- **Haemodynamics:** Lower intraoperative heart rate and mean arterial pressure were observed in the dexmedetomidine group.
- **Analgesic requirement:** Fewer rescue doses were required in the dexmedetomidine group.
- **Adverse events:** Minor side effects such as dry mouth were noted in both groups. One case of bradycardia with hypotension in the dexmedetomidine group was promptly managed.

These findings underscore dexmedetomidine's advantage in providing stable sedation and analgesia with minimal interventions.

Clinical Relevance:

This study addresses an important aspect of perioperative management in ENT surgeries, particularly tympanoplasty. The comparison of commonly used sedative regimens under MAC provides valuable insights for anaesthesiologists aiming to balance sedation, patient comfort, and safety. Dexmedetomidine emerges as a suitable agent, given its minimal respiratory depression, stable haemodynamics, and higher satisfaction scores.

Strengths:

- Direct clinical applicability
 - Use of validated sedation and pain scales
 - Well-matched study groups
 - Consideration of both subjective (satisfaction) and objective (haemodynamic, rescue doses) metrics
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Conclusion:

The study presents clinically significant evidence supporting the use of dexmedetomidine for tympanoplasty under monitored anaesthesia care. It reinforces the importance of individualized anaesthetic planning based on patient stability, safety, and procedural comfort. The data contributes meaningfully to the growing preference for α_2 -agonists in minor surgical sedation protocols.