

Balancing Benefits and Risks: Short-term Ventilation Tubes in Pediatric Chronic Otitis Media with Effusion

INTRODUCTION

Otitis media is defined as any inflammation involving the middle ear cavity and is a significant cause of disease around the world.^[1] One variant is otitis media with effusion (OME), a frequent pathology encountered in children, it can progress into cholesteatoma formation.^[2]

The manuscript titled “Use of Short-Term Ventilation Tube (VT) in Children Having Chronic OME” published in *Mustansiriya Medical Journal*^[3] offers fundamental insights into the management of chronic OME in pediatric patients.

This study evaluates the outcomes of using short-term VTs, with a particular focus on recurrence rates and postoperative complications observed over a 1-year follow-up period.

MAIN BODY

Strengths of the study

1. The introduction effectively outlines the clinical significance of OME, and the challenges associated with its management. The rationale of the study is clearly provided, emphasizing the consideration of surgical treatment when no response to medical treatment is achieved
2. A prospective design followed is ranked higher in the hierarchy of evidence than a retrospective design^[4] together with a follow-up period of 1 year, allows for a meaningful analysis of long-term outcomes. The eligibility for the study is clearly stated, ensuring a well-defined sample selection
3. The results section provides specific data on the recurrence rate of OME, the incidence of complications such as myringosclerosis, and the absence of otorrhea or persistent tympanic membrane perforation
4. To help in understanding the implication of the study, the study highlights similarities and differences with previous studies
5. The management of OME remains a significant concern in pediatric otolaryngology. Recent clinical guidelines define the specific indications of surgical intervention, particularly in light of potential complications and varying efficacy^[5]
6. High recurrence rate reported in the study, underscore the need for careful patient selection and ongoing monitoring. These results are consistent with recent literature emphasizing the importance of individualized treatment plans and long-term management strategies.^[6]

Areas for improvement

1. Chi-square test was used for significance testing. Although statistical significance does not necessarily imply clinical

importance^[7], it would be valuable to provide extra details about the Chi-square, especially when analysis of recurrence rates and complications was done. Including a brief explanation of why the Chi-square test was chosen, this would add clarity

2. To have a clear and comprehensive view for the current understanding of VT insertion outcomes in OME, an expansion of the literature review is required to include more recent studies in the past 5 years or meta-analysis. More than 2000 papers on otitis media have been published since 2019^[1]
3. The manuscript admits the high recurrence rate and suggests that longer follow-up periods might yield better data. Future studies should focus on the potential benefits of alternative treatment strategies, as the bioabsorbable intermediate term VT.^[8] Recent advances in alternative ways of treatment, such as balloon dilation of the Eustachian tube, have shown promise and warrant further investigation^[9]
4. Probably adding more audiological details such as specific decibel level of hearing loss and their improvement after surgery will strengthen the findings
5. The sample size selected provided valuable preliminary data, however, hindered the generalizability of the findings. In the future, research should include larger patient populations to confirm these results and explore factors that may predict recurrence or complications. Larger sample sizes are typically better because they reduce the likelihood of sampling errors and provide a more accurate representation of the population.^[10]

CONCLUSION

This study adds significantly to the understanding of short-term VT use in the management of chronic OME in children. It highlights the challenges of achieving long-term resolution and suggests areas for future research.

RECOMMENDATION

Effective management of OME involves not only clinical intervention but also family education and counseling about the condition, probable complications, and the importance of follow-up care.

Ehab T. Yaseen

Department of Surgery, Unit of Otolaryngology, College of Medicine, Mustansiriya University, Baghdad, Iraq

Address for correspondence: Prof. Ehab T. Yaseen,
Department of Surgery, Unit of Otolaryngology, College of Medicine,
Mustansiriyah University, Baghdad, Iraq.
E-mail: dreh_ent@uomustansiriyah.edu.iq

Submitted: 31-Jul-2024 Revised: 07-Aug-2024 Accepted: 20-Aug-2024 Published: 13-Sep-2024

REFERENCES

- Gisselsson-Solen M, Gunasekera H, Hall A, Homoe P, Kong K, Sih T, *et al.* Panel 1: Epidemiology and global health, including child development, sequelae and complications. *Int J Pediatr Otorhinolaryngol* 2024;178:111861.
- Vanneste P, Page C. Otitis media with effusion in children: Pathophysiology, diagnosis, and treatment. A review. *J Otol* 2019;14:33-9.
- Al-Alwan AM, Kadhim S, Alsarhan HW. Use of short term ventilation tube in children having chronic otitis media with effusion. *Mustansiriya Med J* 2023;22:195-7.
- Vandenbroucke JP. Observational research, randomised trials, and two views of medical science. *PLoS Med* 2008;5:e67.
- Rosenfeld RM, Shin JJ, Schwartz SR, Coggins R, Gagnon L, Hackell JM, *et al.* Clinical practice guideline: Otitis media with effusion (Update). *Otolaryngol Head Neck Surg* 2016;154:S1-41.
- Jia D, Chen Y, Wang X, Xu G, Chen J, Li L, *et al.* Outcomes and prognostic factors of balloon Eustachian tuboplasty combined with ventilation tubes insertion in children: A retrospective study. *Ear Nose Throat J* 2023;1455613231188295. doi: 10.1177/01455613231188295. Epub ahead of print.
- McHugh ML. The chi-square test of independence. *Biochem Med* (Zagreb) 2013;23:143-9.
- Skovlund S, Cofer S, Weinreich H. Feasibility of an innovative absorbable ventilation tube designed to provide intermediate-term middle ear ventilation. *Otolaryngol Head Neck Surg* 2022;166:598-600.
- Fieux M, Tournegros R, Biot T, Tringali S. Eustachian tube balloon dilation. *Eur Ann Otorhinolaryngol Head Neck Dis* 2024;141:103-6.
- Andrade C. Sample Size and its Importance in Research. *Indian J Psychol Med* 2020;42:102-103. doi: 10.4103/IJPSYM.IJPSYM_504_19.

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

Access this article online

Quick Response Code:



Website:

<http://www.mmjonweb.org>

DOI:

10.4103/mj.mj_36_24

How to cite this article: Yaseen ET. Balancing benefits and risks: Short-term ventilation tubes in pediatric chronic otitis media with effusion. *Mustansiriya Med J* 2024;23:102-3.