



PREVALENCE OF SECRETORY OTITIS MEDIA IN CHILDREN UNDERGOING ADENOTONSILLECTOMY

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Article Received on 08/03/2024

Article Revised on 28/03/2024

Article Accepted on 17/04/2024

ABSTRACT

Objective: The purpose of this study is to assess the presence of secretory otitis media in patients chosen for adenotonsillectomy for reasons other than this condition. **Patients and Methods:** 100 children with recurrent tonsillitis, obstructive sleep apnea, or chronic tonsillitis, who were chosen for sampling sequentially and aged, 2-14 years, were included in the study. The aforementioned children were admitted to the hospital to undergo an adenotonsillectomy or an adenoidectomy. Failure to acquire permission, craniofacial anomalies, Down syndrome, acute or chronic suppurative otitis media, and patients planned for myringotomy and grommet were our primary exclusion criteria. Pneumatic otoscopy and tympanometry were used to confirm the medical diagnosis of otitis media with effusion, and pure tone audiometry was performed by a hearing professional on inclined children who were five years old or older. The Jerger system was used to classify the tympanometry results (Type A, B, or C). The Type B result demonstrated that there was evidence of a middle ear effusion. In order to check for fluid or glue in the middle ear, all of the children had myringotomies performed on both ears and adenotonsillectomy performed under general endotracheal anesthesia. **Results:** After surgery, all patients were checked on every two, four, eight, twelve, six, and one year to assess the progress of middle ear fluid and their hearing. Evaluations of the eardrums before to surgery revealed that 36% had normal eardrums, 12% had dull appearances, 4% had air bubbles beneath the tympanic membrane, and 48% had retracted eardrums. Bilateral negative pressure was noted during myringotomy in 72% of instances; glue was seen in 5% of cases, unilateral thin fluid was seen in 3%, and bilateral thin fluid was seen in 20% of cases. In our investigation, the incidence of secretory otitis media without symptoms was 28%. **Conclusion:** In children, otitis media with effusion is a serious yet asymptomatic condition. Prompt identification and treatment are essential to avert chronic issues. In cases of secretory otitis media, myringotomy and grommet insertion have shown to be an effective treatment, resulting in the resolution of fluid accumulation and the return of normal hearing.

KEYWORDS: Otitis media with effusion, Secretory otitis media, Myringotomy.

INTRODUCTION

Otitis media with effusion (OME) is an accumulation of mucus or serous fluid in the middle ear without evidence of acute infection. Approximately 20% of the population is affected, and in children it is the second most common disease after the common cold. When OME lasts for more than 12 weeks, it is called chronic OM and is one of the most common treatable causes of childhood hearing loss worldwide.^[1] Around 25 percent of these cases are unintentionally discovered during regular examinations. Even in the absence of obvious symptoms, prompt intervention is essential due to the possible influence on speech, language, hearing, and comprehension.

After viral upper respiratory tract infections, this type of condition is the most frequent chronic ear problem in children. The middle ear cleft's altered mucociliary system, which causes fluid to accumulate under negative pressure, is the way it is recognized.^[3] Several studies have connected URTIs, adenoid enlargement, and chronic tonsillitis to secretory otitis media and other middle ear disorders.^[4,5,6] For the management of secretory otitis media, adenotonsillectomy has been found to be an effective treatment and should be considered.^[7,8,9]

The purpose of this study is to assess the presence of secretory otitis media in patients chosen for adenotonsillectomy for reasons other than this condition.

PATIENTS AND METHODS

The study was carried out at Royal Medical Services' (Amman, Jordan) Otorhinolaryngology unit from July 2020 to May 2023.

Our institution approved the study before it started, and the parents of every participant gave their written permission. 100 children with recurrent tonsillitis, obstructive sleep apnea, or chronic tonsillitis, who were chosen for sampling sequentially and aged, 2-14 years, were included in the study. The aforementioned children were admitted to the hospital to undergo an adenotonsillectomy or an adenoidectomy.

Failure to acquire permission, craniofacial anomalies, Down syndrome, acute or chronic suppurative otitis media, and patients planned for myringotomy and grommet were our primary exclusion criteria.

Pneumatic otoscopy and tympanometry were used to confirm the medical diagnosis of otitis media with effusion, and pure tone audiometry was performed by a hearing professional on inclined children who were five years old or older.

The Jerger system was used to classify the tympanometry results (Type A, B, or C). The Type B result demonstrated that there was evidence of a middle ear effusion.

In order to check for fluid or glue in the middle ear, all of the children had myringotomies performed on both ears and adenotonsillectomy performed under general endotracheal anesthesia.

RESULTS

The participants were evaluated after 2, 4, 8, and 12 weeks, 6 months, and 1 year following the procedure to determine whether the middle ear fluid had resolved and how well they could hear.

Prior to the operation, ear examinations revealed that 36% of the eardrums were normal, 12% had a dull look, 4% had air bubbles beneath the tympanic membrane, and 48% had retracted eardrums.

Only 8 of the patients' hearing evaluations showed mild conductive hearing loss, with 92% of the patients showing normal results. Nevertheless, after 8-month medical evaluation showed that hearing had recovered to normal ranges.

Upon admission, all patients had adenotonsillectomy. They also had bilateral myringotomies performed at the same time to look for middle ear fluid. Individuals displaying indications of Secretory otitis media furthermore underwent grommet placement in order to ventilate their middle ears simultaneously.

During myringotomy, bilateral negative pressure was seen in 72% of cases; glue was seen in 5% of cases, unilateral thin fluid was seen in 3% of cases, and bilaterally thin fluid was seen in 20% of cases.

In our study, 28% of cases of undiagnosed secretory otitis media emerged.

DISCUSSION

Children who experience otitis media with effusion often have persistent fluid in the middle ear space. With no temperature or excruciating ear pain, this illness may be a sub-acute stage of otitis media. The physical features of the eardrum and the middle ear's functionality are assessed in order to diagnose this medical condition.

Verification of an opaque or discoloured membrane containing air bubbles or a level of air fluid is conclusive. But if middle ear function isn't evaluated with pneumatic otoscopy and tympanometry, effusion with less obvious visual signs can go unnoticed.^[10]

Prospective studies are the only efficient way to monitor "silent" effusions in otitis media because these often go unnoticed. For years, otorhinolaryngology and pediatrics have been embroiled in a heated argument about how to manage Secretory otitis media, which has a lasting impact on all parties concerned.

Finding hidden instances of Secretory Otitis Media was the goal of our investigation. Furthermore, we evaluated the effectiveness of myringotomy and adenotonsillectomy in treating these cases—findings that have also been corroborated by other investigations.^[9,11,12,13]

CONCLUSION

In children, otitis media with effusion is a serious yet asymptomatic condition. Prompt identification and treatment are essential to avert chronic issues. In cases of secretory otitis media, myringotomy and grommet insertion have shown to be an effective treatment, resulting in the resolution of fluid accumulation and the return of normal hearing.

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