The Prevalence of Middle Ear Effusion in Chronically Ventilated Children

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Introduction

Middle Ear Effusion (MEE) is common in children but rare in adults. Recent publications suggest that MEE is a common finding in adult patients on chronic mechanical ventilation via tracheotomy tube and can be found in 65% of these patients.

Among children who require mechanical ventilation the occurrence of MEE might be even greater. Nasogastric feeding tube insertion and the absence of swallowing are estimated contributing factors.

Since MEE is associated with hearing loss, attention should be addressed to this matter particularly in children at risk of developmental delay.

The objective of this study was to assess whether mechanical ventilation via tracheostomy affects the occurrence of MEE.

Methods

Prospective cohort study in 22 tracheotomized pediatric patients treated in a rehabilitation center. Middle ear status was determined by otoscopy and tympanometry. Details regarding their medical history, duration and manner of ventilation, modes of feeding and the use of a pacifier were gathered.

Results

MEE was found in 68% of the children. Those on mechanical ventilation via tracheotomy tube had greater incidence of MEE than patients with spontaneous breathing via tracheotomy tube (77.4% vs. 50%). Enteral feeding was associated with greater occurrence of MEE compared to oral feeding (75.9% vs. 57.1%). The use of pacifier was found to reduce the occurrence of MEE in patients on enteral feeding.