



COMPARISON OF THE POST-EXTUBATION OUTCOMES OF CUFFED VERSUS UNCUFFED ENDOTRACHEAL TUBE IN PEDIATRIC PATIENTS: A META-ANALYSIS

KEANE JORDAN A. TOLENTINO, MD, DPBA, TERESITA BATANES, MD, DPBA, FPSA
SECTION OF PEDIATRIC ANESTHESIA

Introduction

Endotracheal tube (ETT) connects the lungs to the ventilator machine. This connection must fit perfectly inside the airway, avoiding excessive air leakage and inadvertent pressure to the tracheal and laryngeal structures. There are two types of endotracheal tubes used in the pediatric population—cuffed endotracheal tube (CETT) and uncuffed endotracheal tube (UETT)—each having their own advantages and disadvantages.

Objectives

To compare the outcomes of cuffed and uncuffed endotracheal tubes in pediatric patients less than 8 years old.

Methods

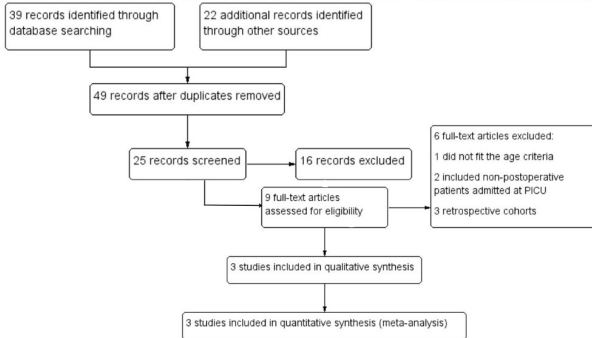


Figure 1. PRISMA diagram of literature search

Results

There were a total of 3 articles for quantitative and qualitative analysis. There was a total of 1169 patients in the cuffed group and 1078 patients in the uncuffed group. Patients in the cuffed group encountered less problematic events and lower number of patients with more than one intubation attempt than the uncuffed group. However, its difference with the uncuffed group did not reach a statistical significance. Patients in the cuffed group had significantly lower air leakage with a risk ratio of 0.09, 95% CI

Conclusion and Recommendation

The use of cuffed ETT has a promising result in pediatric patients less than six years of age, with lower problematic event lower number of intubation attempts, and lower leak rates.

Keywords

endotracheal intubation, cuffed, uncuffed, pediatric