



EFFECT OF NEBULIZED BUDESONIDE ON THE TREATMENT OUTCOME AMONG CHILDREN WITH ACUTE ASTHMA EXACERBATION: A META ANALYSIS

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BACKGROUND

There are different studies claiming that nebulized budesonide can be used as treatment for acute asthma exacerbation among children. However, there is still no consensus on its effectiveness and safety.

OBJECTIVES

To determine the effect of nebulized budesonide on the treatment outcome among children with acute asthma exacerbation

METHODS

A meta-analysis was conducted which included three randomized clinical trials that reported the effect of nebulized budesonide versus placebo on pulmonary index scores of children with acute asthma exacerbation. A systematic search was conducted in different research database such as PubMed, ResearchGate, EMBASE and the Cochrane Central Register of Controlled Trials to come up with the relevant studies. The search items included "Nebulized budesonide" and "Acute asthma exacerbation" and "Children."

RESULTS

The pooled estimate for mean difference showed that post-intervention pulmonary index score is significantly lower in the budesonide group compared to placebo (Mean Difference=-0.99, 95% CI=-1.12 to -0.85, p-value<0.00001). The studies are homogenous ($I^2=0\%$) and have low risk for selection, performance, detection, attrition, and reporting bias.

CONCLUSION

The results of this meta-analysis demonstrated that nebulized budesonide is effective in improving pulmonary index scores compared to placebo in the treatment of acute asthma exacerbation among children.