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TITLE

Levosalbutamol Versus Salbutamol in the Treatment of Acute Exacerbation of Asthma Patient

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Introduction

Levosalbutamol improved pulmonary function significantly more than racemic salbutamol. Though salbutamol is an effective treatment of acute exacerbation asthma but its use is associated with undesirable side effects like tachycardia and hypokalemia

Objective

To compare the efficacy and tolerability of Levosalbutamol and salbutamol for the treatment of acute exacerbation of asthma in children aged 8 to 15 years.

Methods

A randomized double blind clinical study included 60 children of either sex between ages of 8 to 15 years, known case of asthma and was attended in the emergency department as acute exacerbation. The study medicine was salbutamol 2.5 mg and levosalbutamol 0.63 mg, and the total drug volume was 2.5 ml and nebulized over a period of 8-10 minutes. Forced expiratory volume in 1st second was measured using Manual Promoter. Child was made to use the Spiro meter in a standing position 3 times and best of the three values was taken.

Result

The following baseline clinical parameter were recorded initially and after giving 3 nebulization at 20 minutes interval in the 1st hour of presentation- respiratory rate (RR), heart rate (HR), oxygen saturation in room air SPO₂, FEV₁ (forced expiratory volume in 1st second), asthma score and serum K⁺ level. In levosalbutamol group, there was significant increment in FEV₁ and SPO₂ (p<0.05) value with decrease tachypnea and asthma score while no significant difference was found in pre and post treatment HR and serum K⁺ levels. In Salbutamol group although there was clinical improvement in terms of FEV₁, SPO₂ and asthma score, it resulted in significant tachycardia and decrease in K⁺ levels.