# Oral Selenium as an Adjunct in the Treatment of Acute Lower Respiratory Tract Infections in Children: A Double-Blind Randomized Controlled Trial

## **Original Article**

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## ABSTRACT

#### OBJECTIVES

To evaluate the role of oral selenium in clinical recovery of acute lower respiratory tract infections (ALRTI) in under-five children.

#### METHODS

This double-blind, randomized controlled trial included children aged 6 months to 5 years hospitalised with ALRTI at a tertiary care hospital. Participants were randomized in 1:1 ratio to receive oral selenium (20–30 mcg/day) or placebo, once daily until discharge, along with standard treatment. The primary outcome was the time for clinical recovery. The secondary outcomes were the duration of hospital stay, modes of oxygen support required and side effects of selenium.

## RESULTS

A total of 60 children were randomized to either groups. The median (IQR) time required for clinical recovery was 72 (54, 144) h in the selenium group and 96 (54, 120) h in the placebo group (P = 0.346). The median (IQR) duration of hospital stay was 6 (5, 7) days and 6 (6, 8) days in the selenium and placebo groups, respectively (P = 0.680). Mechanical ventilation was required in 10 (16.6%) and 21 (35%) children in the selenium and placebo groups, respectively (P = 0.020). No side effects were reported with the intervention.

## CONCLUSIONS

Oral selenium administered as an adjunct in a daily dose of 20–30 mcg orally for 5–7 days, does not reduce the time needed for clinical recovery or the duration of hospitalization but reduces the need for mechanical ventilation in under-five children with ALRTI.

Keywords: Pneumonia · Oxygen · Under-fi ve children · Sodium selenate

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