



HYDROSTATIC REDUCTION VERSUS PNEUMATIC REDUCTION FOR INTUSSUSCEPTION IN CHILDREN: A META-ANALYSIS



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INTRODUCTION

Current non-surgical methods for the treatment of intussusception include pneumatic and hydrostatic reduction techniques. Pneumatic reduction has been gaining popularity and acceptance because of its advantages such as ease of use and being readily available. However, contradicting results can be seen from different literatures regarding its outcome in terms of effectiveness and safety. It is then important to analyze these studies and be updated with more current evidences that can be used as basis for treatment choice.

OBJECTIVES

To compare the effectiveness of hydrostatic versus pneumatic reduction in the treatment of intussusception in the pediatric age group.

METHODS

A meta-analysis involving randomized controlled trials (RCT) was conducted. A literature search was done to find RCTs and pooled estimates of Risk Ratio (RR) for failure of reduction and occurrence of perforation were computed along with 95% confidence intervals (CI).

RESULTS

A total of three randomized control trials were included in the study. There were no significant differences between the two groups in risk for failed reduction (RR=1.12, 95% CI=0.30 to 4.20, p-value=0.87) and risk for perforation (RR=1.50, 95% CI=0.09 to 25.02, p-value=0.78).

CONCLUSION AND RECOMMENDATIONS

Hydrostatic and pneumatic reduction techniques for pediatric intussusception showed comparable outcomes. Choice of treatment method may then be based on availability of resources and healthcare provider technique competency. Further randomized controlled trials are recommended to validate the study results and improve the generalizability of findings.

Keywords: Intussusception, Hydrostatic reduction, Pneumatic reduction, Meta-analysis