

INTRODUCTION

Leukemia is the most common cancer in children younger than five years of age and accounts for the highest percentage of deaths with ALL as the leading cause of death among children and adolescents. Chemotherapy causes immunosuppression and the disruption of the structural integrity of the epithelial barrier causing infections to play a pivotal role in the morbidity and mortality of childhood leukemia.

To determine the efficacy and safety of probiotics in Pediatric Acute Leukemia patients undergoing chemotherapy in decreasing chemotherapy induced gastrointestinal side effects

METHODOLOGY

A literature search for studies published from 2000 - 2021 was done and RevMan software was used to analyze the data extracted from selected studies. Outcome estimation was done using Odds Ratio (OR) with 95% confidence interval (CI). The heterogeneity in various studies was determined using the I2 test.

PHILIPPINE CHILDREN'S MEDICAL CENTER **EFFICACY AND SAFETY OF THE USE OF PROBIOTICS IN PEDIATRIC CANCER PATIENTS** (ACUTE MYELOID LEUKEMIA (AML), ACUTE LYMPHOCYTIC LEUKEMIA (ALL)) **UNDERGOING CHEMOTHERAPY: A META-ANALYSIS**

OBJECTIVE

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RESULTS

Three studies were included in the qualitative analysis while two studies were analyzed quantitatively. The major finding in our study is that the use of probiotics is significant in decreasing gastrointestinal side effects namely abdominal distention, constipation, dyspepsia, meteorism, nausea, and vomiting but that diarrhea has the same risk in both the probiotic and control group (95% CI 0.16 to 2.29).

CONCLUSIONS AND RECOMMENDATIONS

The study found that the use of probiotics supplementation as adjunct to standard chemotherapy in pediatric acute leukemia patients can reduce the risk of gastrointestinal side effects and may also reduce the occurrence of diarrhea. However, further assessment of more and larger-scale studies is recommended.

KEYWORDS

Pediatric Oncology, Acute Lymphoblastic Leukemia, Acute Myeloid Leukemia, Probiotics