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Effect of bovine colostrum on the absolute neutrophil counts of Acute Lymphocytic Leukemia patients undergoing Chemotherapy: A double-blind randomized placebo-controlled study

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Abstract

Background: Changes in the blood cell counts, such as leukopenia and neutropenia, in patients with Acute Lymphoblastic Leukemia (ALL) are common events following chemotherapy. These commonly delay further administration of chemotherapeutic agents. Furthermore, the risk of infection rises correspondingly with the degree of neutropenia. Bovine colostrum is a rich source of immunoglobulins and other antimicrobial factors. These immunoglobulins are believed to improve the immune function and may be effective in the prevention of neutropenia following chemotherapy.

Objective: To determine the efficacy of bovine colostrum in preventing neutropenia among ALL patients undergoing chemotherapy.

Methods: This study included pediatric patients, aged 6 months to 18 years old diagnosed with ALL undergoing chemotherapy. Twenty-one subjects were randomly assigned to receive bovine colostrum or placebo that were taken twice a day for a week beginning from the first day of chemotherapy. Baseline complete blood count (CBC) and the absolute neutrophil count (ANC) were determined before and after 7 days of giving the colostrum or placebo. A t-test was applied to determine significant differences before and after the supplementation on each group.

Results: Results showed that there was a significant increase in ANC of patients given bovine colostrum as compared to the placebo group with a p-value of 0.007. There were also significant increases in the white blood cells and platelet counts in those who were given bovine colostrum, with p-values of <0.001 and 0.001, respectively. No untoward effects were observed on both groups.

Conclusion: Bovine colostrum is effective in increasing the ANC of ALL patients undergoing chemotherapy and with no noted side effects.

Biography

Edith Cyrill L. Caysido completed her residency in pediatrics at Bguio General Hospital Medical Center Philippines last 2016. She is currently a medical officer in a rural area practicing as a pediatrician in Mountain Province Philippines.

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