A Pilot Study Comparing the Neutropenic Diet to a Non-Neutropenic Diet in the Allogeneic Hematopoietic Stem Cell Transplantation Population

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Background: Historically, dietary restrictions imposed on patients undergoing hematopoietic stem cell transplantation (HSCT) were severe and limited to prevent exposure to foodborne organisms. With improvements in supportive care and anti-infective agents, the necessity of the neutropenic diet for this population has been in question.

Objectives: This study aimed to determine whether the incidence of infection differs and to analyze the nutritional status in patients undergoing myeloablative allogeneic HSCT with a neutropenic diet as compared to those with a diet without restrictions.

Methods: This study was a randomized, controlled prospective pilot study beginning within the first 24 hours of the start of the conditioning regimen. Patients were randomized to receive a neutropenic diet or a diet without restrictions. All patients received care in a high-efficiency particulate air-filtered room on the inpatient adult blood and marrow transplantation unit (ABMTU). All patients received antibacterial and antifungal prophylaxis. Patients were followed until the end of neutropenia (defined as absolute neutrophil count of greater than 500 for three days) or until discharge from the inpatient ABMTU.

Findings: In 46 evaluable patients, no significant difference was found between infection rates or nutritional status. The neutropenic diet did not offer a protective effect against infection in patients undergoing myeloablative allogeneic HSCT. No differences were found in nutritional status between the two groups.