intervention or to a control group receiving usual care. The primary end point was on aerobic capacity measured in VO2 max. Secondary end points were muscle strength, functional performance, physical activity level, QOL, fatigue, psychological wellbeing and clinical outcomes. The multimodal intervention had a significant effect on physical capacity: V02max ($p < 0.0001$), muscle strength: chest press ($p<0.0001$), leg extension ($p = 0.0003$), right elbow flexor ($p = 0.0009$), right knee extensor ($p<0.0001$) and functional performance (stair test) (0.0008). Moreover, changes in QOL related to functional wellbeing ($p = 0.017$), decreased diarrhea ($p = 0.014$) and decreased days of total parenteral nutrition (TPN) ($p = 0.019$) also reached statistical significance. Longitudinal changes in QOL, fatigue and psychological wellbeing favored the intervention group, but did not reach statistical significance. Assignment of a multimodal intervention during allo-HSCT did not cause untoward events, maintained aerobic capacity and muscle strength, reduced loss of functional performance and functional wellbeing during hospitalization.

411

ASSIMILATIVE AND ACCOMMODATIVE BEHAVIORS OF CHILDREN UNDERGOING BONE MARROW TRANSPLANTATION

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The purpose of the study was to explore the experience, assimilative and accommodative behaviors of children undergoing bone marrow transplantation, in the framework of a descriptive qualitative study. Based on the diagram of bone marrow transplantation experiences and the semi-structural interview guide, in-depth interviews were conducted on 11 children who received bone marrow transplantation. Each interview lasted 60–90 minutes and was recorded and later composed into descriptive contexts. Content analysis was further applied to identify and categorize the children's personal experiences, assimilative and accommodative behaviors. From the results of quantifying the qualitative data, a total of 849 experience units were coded. Personal experiences can be categorized in to 3 major aspects, physical experience, therapy experience, and interpersonal experience; and the proportions of each aspect are 38%, 41%, and 21% respectively. The physical experiences include physical perception, physical function, and physical structure. The therapy experiences include the process of medical treatment and the environment of medical treatment. And the interpersonal experiences include interactions with medical staffs, peers, teachers, family members, or being alone. The children's behavioral reactions include assimilative behaviors and accommodative behaviors. The analysis of the interviews shows that assimilative behaviors are in a proportion of 58% and accommodative behaviors 42%. Assimilative behaviors encompass behaviors of identification, comparison, expectation, and evaluation, while accommodative ones contain behaviors of self-preparation, approaching, changing expectations, and expressing emotions. The age of the research subjects and the time between transplantation and interview will affect personal experiences, assimilative and accommodative behaviors. This study provides a reference of clinical nursing care to assist nursing staffs in understanding the subjective perception of children undergoing bone marrow transplantation so that they can provide comprehensive care to make children go through the main development stages in life easily.

412

EXERCISE GAMING DURING HOSPITALIZATION FOR PEDIATRIC AND ADOLESCENT/YOUNG ADULT (AYA) PATIENTS UNDERGOING HEMATOPOIETIC STEM CELL TRANSPLANT (HSCT)

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The treatment of childhood malignancies with hematopoietic stem cell transplant (HSCT) is potentially curative. However, the procedure can detrimentally affect a patient's overall well being. The literature demonstrates that one week post HSCT, distress and anxiety peak and physical activity significantly decreases. These changes may be more profound in pediatric and adolescent/young adult (AYA) patients that require reverse isolation. Together, these changes can lead to persistent fatigue, physical deconditioning and reduced ability to engage in activities of daily living. Emerging literature suggests that engaging in physical exercise during admission for HSCT can stabilize a patient's current level of physical performance, prevent further decreases in performance status, improve mood and enhance overall quality of life. With this knowledge, it is imperative that supportive care measures be developed that will counter these negative effects of treatment. We propose that participation in a developmentally appropriate physical activity program throughout hospitalization for HSCT can decrease patient distress and anxiety and maintain their physical performance capacity. Exercise equipment using video gaming technology (Play Station exercise game bikes, dance pads and Nintendo Wii's) to encourage compliance will be provided to pediatric and AYA patients, ages 7–25, hospitalized for HSCT. Patients will be asked to exercise a minimum of 4 days/week for at least 20 minutes/day during their hospitalization. Adherence to the program, use of the equipment and a quality of life measure, the Behavioral, Affective and Somatic Experiences Scale (BASES), will be assessed before transplantation and then weekly during admission. Performance status measures (six-minute walk test and Timed Up and Go) will be administered at admission and prior to discharge. We hypothesize that use of exercise/gaming devices will maintain current performance status and lead to an improved quality of life in these patients.

413

IS ASSESSMENT OF PSYCHIATRIC DISTURBANCE ENOUGH?: A COMPREHENSIVE APPROACH TO PSYCHOSOCIAL SCREENING FOR ALLOGENEIC HCT CANDIDATES

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Allogeneic transplantation (allo HCT) is a risky procedure associated with high mortality and morbidity. Sorror et al. have developed a tool to predict nonrelapse mortality (NRM) in these patients and to assist in patient counseling before HCT. They have determined that psychiatric disturbance, defined solely as depression and anxiety, contributes to NRM. At our institution, psychosocial screening is performed by a clinical psychologist and social worker. Patients complete demographic and standardized questionnaires of performance status, anxiety, depression, physical and mental quality of life, coping strategies, personality and mood. A brief cognitive assessment is performed to evaluate intellect, memory, attention, language and psychomotor speed. Semi-structured interviews are conducted to obtain information regarding the patients and familys understanding of transplant, need and availability of a dedicated caregiver, trust in the healthcare team, psychiatric history, substance use, financial and employment issues, sleep and appetite. Using information from interview and testing, patients are assigned a risk level of Low, Low-Moderate, Moderate, Moderate-High or High for having psychosocial issues likely to compromise the transplant, recovery and long-term survival. This information helps to target key issues when counseling patients and their families before HCT. Data are available for 350 allo HCT candidates from 2002 to 2007. Table 1 describes the candidate population.

Allogeneic HCT Candidate Population

Characteristic	Incidence
Male: Female	58% : 42%
Diagnosis of AML, Lymphomas, MDS, Other	35%, 16%, 13%, 38%
Married	65%
Caucasian	78%
High school or greater education	92%
Current tobacco use	12%
Current alcohol use	37%
Current illicit drug use	6%
Psychiatric disturbance of Anxiety, Depression	50%, 33%
Psychosocial risk assignment of Low, Low-Moderate, Moderate, Moderate-High, High	38%, 22%, 28%, 4%, 8%