

Oral Abstract Session #2

119

A Pilot Study to Examine Sleep in Pediatric Brain Tumor Patients Hospitalized for High Dose Chemotherapy and Stem Cell Rescue

Michelle Rickard, Susan Clifton, Troy Wallach, Belinda Mandress, Margie Kjellin. St. Jude Children's Research Hospital, Memphis, Tennessee

Topic Significance & Study Purpose/Background/Rationale: Introduction: During a 5 day hospitalization of high dose chemotherapy and stem cell rescue, is sleep quality and quantity more positive for brain tumor patients ages 4-21 years randomized to a sleep environment intervention compared to patients randomized to standard of care.

Methods, Intervention, & Analysis: Methods: Sleep was assessed with actigraph and sleep diary. Those randomized to the intervention arm received "protected sleep time" which consisted of a minimum of 90 minutes of uninterrupted sleep, patient room was darkened and hall light "blackened out" and patients were offered sleep hygiene with white noise, massage, or bedtime story.

Findings & Interpretation: Results: Eighteen patients were randomized to standard of care and 19 to the interventional arm. No differences were found in brain tumor site, risk, presence of VP shunt, gender or age between the groups. Both the interventional and standard of care had disrupted sleep as measured by actigraph; however, a statistical difference in total sleep minutes and wake after sleep onset was found between brain tumor risk groups. Patients treated as high risk had poorer sleep quality and quantity.

Discussion & Implications: Patients and parents were receptive to a sleep intervention during hospitalization, and those on the intervention arm requested sleep hygiene practice with subsequent hospitalizations. Patients treated with high dose chemotherapy and stem cell rescue for CNS tumors have disrupted sleep and those with high risk disease appear to have poorer sleep quality in comparison to average risk. Poorer sleep quality in high risk patients may be a result of more extensive surgery, residual tumor and higher doses of radiation. Lastly, nurses play a role in optimizing the sleep environment for patients; attention needs to be focused on sleep interventions for high risk patients undergoing stem cell transplantation.

Oral Abstract Session #2

120

Hear Our Voices: Patient's Perspective of Financial Impact of Allogeneic HCT

Mary Weise, Dr. Nandita Khera, Dr Pierre Noel. Mayo Clinic Arizona, Phoenix, Arizona

Topic Significance & Study Purpose/Background/Rationale: Medical science has made great improvement in Allogeneic Hematopoietic Cell Transplantation (HCT) over recent decades. Current treatment modalities offer many recipients curative treatment or increased long-term survivorship. Practice guidelines are working to identify and improve patient care outcomes and long-term effects of HCT, offering patients an opportunity to live with their disease post-transplant. However, the reality is that, for many, surviving HCT offers a mixed blessing. Many practitioners have identified frustrations in post-transplant follow-up care related to the financial impact of HCT care. Patients report devastating impacts upon quality of life (QOL), beyond the medical concerns of GVHD or other chronic health problems related to HCT. They report life stressors which may ultimately affect their health and well-being. While much has been done to offer improved survivorship and quality of care with HCT, little seems to have been studied regarding the QOL and financial impact of HCT upon post-transplant survivors.

Methods, Intervention, & Analysis: Data analysis included qualitative analysis based on a questionnaire which was mailed to 482 patients (268 respondents= 56%) who had survived allogeneic HCT at the 3 study sites at Mayo Clinic from 1/06 to 6/12. Questions in the survey were about health insurance, prescription/medical costs, and employment which allowed for subjective data on illness and the impact that HCT has on one's QOL, physical and emotional well-being, personal finances, as well as resource allocation post-HCT. A section in the questionnaire allowed for patient comments. This study discusses their open-ended, candid responses to the impact of transplant. It also allowed for any thoughts in information that could have helped them better prepare financially for post-transplant care.

Findings & Interpretation: Our sample (n=268 respondents) reported issues with employment, insurance, and disability. A majority conveyed an adverse financial impact (>54%) such as a reduction in household income >50%, need to sell/mortgage home, withdraw money from savings, and paying more than they could afford for their medical care. 73% reported that being sick had hurt them financially, with 3% declaring bankruptcy. **Conclusions:** A significant proportion of post-HCT survivors report an impact on their personal finances and QOL, despite having health insurance coverage. Future research could help identify at-risk patients, counsel resources, and support interventions which could improve outcomes of HCT.

Discussion & Implications: As transplant practitioners, we are trying to be advocates of cancer survivorship, yet consideration of QOL and the financial impact of transplant care should be considered if we are to practice ethically. Recommendations for correlating QOL studies in HCT, can help to improve patient outcomes throughout the continuum of care, while helping our patients in what can be lifelong coping with chronic survivorship. Open-ended patient responses help give practitioners a sense of the emotion and depth of impact as they tell us how transplant affected their lives. It is important to let patient's know we are listening, so that we can open paths for conversation and improve outcomes.

Oral Abstract Session #2

122

Away with the Alcohol: The Impact on Clostridium Difficile Infection (CDI) Rate on a Complex Bone Marrow Transplant Unit

Laura Flesch, Melissa Hayward, Kathy Demmel, Ra'Shawn Brown, Michael Cloughessy. Cincinnati Children's Hospital Medical Center, Cincinnati, Ohio

Topic Significance & Study Purpose/Background/Rationale: This Bone Marrow Transplant Unit (BMT) is a 24 bed critical care environment that cares for a highly complex patient population with underlying oncologic, immunologic, marrow failure, and metabolic disorders. Hand hygiene is stressed and alcohol gel products are located inside and outside patient rooms. Infection Control (IC) conducts daily surveys for patient infections and reports them to BMT staff. During 2009, an increase in Clostridium Difficile Infection (CDI) cases was detected on the BMT unit.

Methods, Intervention, & Analysis: Due to the frequency of CDI, isolation and environmental cleaning practices were evaluated. Bleach was implemented for discharge cleaning and hand washing with soap and water on patient room exit was reinforced with education and signage, to both staff and caregivers. BMT staff and IC implemented initiatives to de-clutter the unit and facilitate environmental cleaning. After these initiatives, the number of CDI remained high. After review, in September of 2010, alcohol gels were removed from all patient rooms and a "gel in, wash out" initiative was adopted.

Findings & Interpretation: After alcohol gel was removed from patient rooms, the number of CDI cases has fallen and the days between CDI have increased. In the midst of other interventions, it appears the greatest impact for the decrease was related to the simple intervention of removing alcohol gel from inside patient rooms, and instituting hand washing with soap and water before exiting a patient room. Prior to the alcohol gel removal, the CDI rate was 1.68 infections per 1000 patient days. The intervention decreased the rate to 0.35 infections per 1000 patient days, a significant 79% rate reduction.

Discussion & Implications: Hand washing when exiting patient rooms enhances patient safety by removing Clostridium Difficile spores and other pathogens that may not be killed by alcohol gel products.