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CMR either did not start NIL or stopped at day 110. 4/40 subjects died with progressive leukemia (1 isolated CNS relapse) and 8/40 died with non-relapse causes.

Conclusions: Efficacy data are encouraging, but the post-HCT relapse prophylaxis approach with NIL is limited by QTc prolongation (16% of all registered patients), early relapse before prophylaxis can begin, and by miscellaneous post-HCT events that preclude NIL administration.

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The Significance of Daily Blood Cultures in Febrile Pediatric Hematopoietic Cell Transplant Recipients

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Introduction: Daily blood cultures during febrile illness are standard of care in many centers for post allogeneic hematopoietic cell transplant patients (alloHCT). The clinical significance of obtaining daily blood cultures for febrile illness has not been examined to our knowledge in the literature. Daily blood cultures are associated with iatrogenic blood loss and central line access. We report the incidence rate of bloodstream bacterial infections (BBSI) after four consecutive negative blood cultures between 2000-2013. Other testing modalities for occult infection including CT scan, viral PCR, and fungal cultures were also examined.

Methods: A retrospective chart review between 2000-2013 was conducted. Included were alloHCT patients with febrile illness (defined as greater than four negative consecutive blood cultures). The descriptive statistics was calculated and Fisher's exact test was used for comparison among rates.

Results: Between 2000-2013, 158 cases in 83 patients were identified who met our criteria (mean age 10.6 years). Indication for alloHCT: malignant 62 (74.7%), non-malignant 21 (25.3%); conditioning regimen: myeloablative= 52 (62.7%) reduced toxicity= 10 (12.1%), reduced intensity= 21 (25.3%). Incidence of neutrophil engraftment by day +30 was 67.5%, and incidence of aGVHD was 54.2%.

Of those patients with febrile illness, 12% had BBSIs after 4 consecutive negative cultures. Mean time to developing BBSI was 10.6 (+/- 4.19) days. The most common BBSI was gram positive cocci (GPC) [89%]. Of these infections, 28% grew *Staphylococcus epidermidis*. Gram negative rods (GNR) only compromised 11% of BBSIs found. A significant risk factor for BBSI was length of febrile illness greater than 7 days (p=0.016).

The most obtained modality for identifying other sources of infection were CT scans and viral studies (both culture and PCR) [61.2% and 61.4%, respectively]. The rate of positive results for these tests was 29.1% and 10.9%, respectively. Other tests utilized to find occult infection included fungal cultures (36.1%) and bronchoalveolar lavage (BAL) (15.3%). The rate of positivity for these tests was 0.63% and 4.4% respectively.

Discussion: Twelve percent of patients developed BBSI after 4 sequential days of negative blood cultures, the majority occurring >7 days of febrile illness. Of those infections, the majority were GPCs possible secondary to indwelling catheters colonization. Probability of finding a true BBSI after 4 negative blood cultures is very low. Of the different modalities used to search for occult infection, CT scans have the highest yield in comparison to viral, fungal or BAL studies, suggesting that obtaining CT scans earlier in fever may be beneficial. Utility of obtaining daily blood cultures in febrile alloHCT patients should be prospectively studied.

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Minor ABO Incompatibility Does Not Impact Non-Relapse Mortality in T-Cell Depleted HLA-Matched Sibling Transplantation

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Introduction: ABO incompatibility (ABO-I) in allogeneic stem cell transplantation is known to produce hemolytic complications including acute hemolysis, the passenger lymphocyte syndrome, delayed transfusion dependence and pure red cell aplasia. Hemolysis is a consequence of ABO expression on red blood cells (RBCs) and the natural occurrence of isohemagglutinins. However, ABO antigens are also expressed on tissues other than RBCs such as endothelial cells. It is plausible that donor vs recipient (Minor) ABO-I may adversely impact organ function and survival after transplantation. Indeed, in contrast to historic data, one report found that ABO-I increased non-relapse mortality (NRM) in reduced intensity transplantation (Resnick et al., BBMT 2008). We conducted a large retrospective study to evaluate the hypothesis that Minor ABO-I impacts overall survival (OS) and NRM in allogeneic stem cell transplantation.

Patients and Methods: We analyzed 374 patients who had undergone allogeneic transplants for hematologic malignancies from HLA-matched sibling donors between the years 1993−2014. 71 patients had either Minor (including bidirectional) ABO-I, 55 patients had Major (recipient vs donor) ABO-I, and 248 patients had no ABO-I. The median age at transplantation was 38 years. 162 (43%) had AML/MDS, 120 (32%) had CML/CMMoL, 63 (17%) had ALL, 18 (5%) had NHL/CLL and 14 (4%) had other diagnoses. 344 (92%) received a Cytoxan/TBI-based myeloablative conditioning and 30 (8%) received reduced intensity conditioning. The graft source was either peripheral blood stem cells in 336 (90%) or bone marrow in 38 (10%) and was ex vivo T cell depleted in 99%. There were no significant differences between Minor ABO-I and other groups with respect to baseline variables. Kaplan-Meier estimates were used to determine OS, NRM and cumulative incidence of relapse, with differences between groups determined by the log-rank test.

Results: At a median follow up duration of 11 years, the OS for Minor/bi ABO-I was 43% vs 40% for others (p=0.8). NRM was 38% for Minor/bi ABO-I vs 42% for others (p=0.6). The cumulative incidence of relapse was 58% for Minor/bi ABO-I vs 50% for others (p=0.1). Findings were similar when ABO-I status was categorized into three groups (Major, Minor/bi vs