

of 48% grade II-IV AGVHD (N=12), none (16 Fos/Gan and 9 LDBP) developed systemic CMV infection. No pts developed primary or secondary graft failure or grade III/IV hematological toxicity 2° to Gan. Several pts. developed transient nephrotoxicity and electrolyte imbalances, however all patients were on at least two other nephrotoxins: lipo amphotericin B (n=16), tacro/cyclo (n=14/2), aminoglycosides (n=4), vancomycin (n=10). No pt. developed permanent renal dysfunction, however dose reductions of Fos/Gan occurred in 75% of pts. The probability of 1-yr OS was 72%. In conclusion, CMV prophylaxis in AlloSCT recipients with LDPB in (-)R (-)D and Gan/Fos appears to be tolerable and 100% effective in preventing CMV disease. This approach appears to reduce hematological toxicity of previously reported daily prophylactic Gan, but may be associated with Fos-induced transient nephrotoxicity, especially in combination with other nephrotoxic agents.

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DIGENE HYBRID CAPTURE (DHC) CMV DNA ASSAY COMPARED TO CMV CULTURE AND INCIDENCE OF CMV DISEASE IN ALLOGENEIC HEMATOPOIETIC STEM CELL TRANSPLANTATION (ASCT)

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CMV disease in CMV sero-positive patients post ASCT ranges from 21-43% and can be a significant cause of morbidity and mortality in this patient population. The DHC CMV DNA assay uses CMV RNA probes which hybridize with the patient CMV DNA and when these hybrids are exposed to alkaline phosphatase they can be detected by chemiluminescence. The DHC assay is easy to perform and results are rapidly available in 24 to 48 hours. We retrospectively reviewed 104 ASCT patients transplanted between January 1998 and September 2002. Patients were screened weekly for the detection of CMV in blood, urine, and throat by culture and shell spin. The DHC CMV assay was also done weekly on blood samples from all patients and a value of 2.1 pcg/ml was considered positive. CMV disease was defined as evidence of tissue invasive disease. Thirteen of the 104 patients had positive CMV culture or shell spin results while 46 patients had positive DHC assay results. Twelve of the 13 patients with positive culture or shell spin results also had positive DHC assay results. One patient had a negative DHC assay but a positive urine shell spin. Only one patient had documented CMV disease with viral inclusions consistent with CMV found in the lung on autopsy. This patient had negative cultures, shell spin, and DHC CMV assay results and was on empiric gancyclovir prior to their death. The sensitivity and specificity of the DHC assay compared to CMV culture or shell spin was 92% and 63% respectively. In conclusion, the DHC assay is a sensitive test for detecting CMV and allows for the rapid institution of pre-emptive therapy that has resulted in a low institutional incidence of CMV disease.

| | positive culture or shell spin | negative culture or shell spin |
|--------------|--------------------------------|--------------------------------|
| positive DHC | 12 | 34 |
| negative DHC | 1 | 57 |

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EFFECTIVENESS OF RECOMBINANT HUMAN ERYTHROPOETIN ON RED CELL TRANSFUSIONS IN NON-LEUKEMIC ADULT AUTOLOGOUS STEM CELL TRANSPLANTS: A RETROSPECTIVE EVALUATION

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Recombinant Human Erythropoietin (rHu-Epo) reduces the number of Red Blood Cell (RBC) transfusions and improves performance status in patients receiving myelosuppressive

chemotherapy. Current data, however, does not specifically address whether the use of rHu-Epo in autologous stem cell transplant patients significantly reduces the number of RBC transfusions, leading to improved quality of life. Retrospectively, we evaluated RBC transfusion usage in similar patient cohorts before and after the introduction of rHu-Epo in a single institutional setting. Data were reviewed from 111 non- rHu-Epo treated and 58 rHu-Epo treated adult non-leukemic autologous stem cell transplant patients drawn from a 5-year period. Beginning March 2002, a uniform institutional protocol for rHu-Epo usage was established (40,000 units sq qweek through day +40 or upon achieving a sustained HCT level of 35%). All patients received similar dosages of GM-CSF post transplant (300mcg/day +4 through ANC recovery of 1.5). All patients had similar disease types, identical mobilization protocols (using G-CSF alone), similar infused CD34+ counts and followed identical protocol guidelines for RBC transfusions. The rHu-Epo treated cohort resulted in an average of 3.2 units of RBCs transfused through day +28 as compared to 3.8 units in the non- rHu-Epo treated group (p=.07). In conclusion, the data suggests that the use of rHu-Epo in autologous stem cell transplant patients may reduce the need for RBC transfusions by 15%. Future studies using various sequencing or dosing of erythropoietin may provide a greater reduction in RBC usage in autologous stem cell transplant patients.

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UTILIZING A CUSTOMIZED EPIDEMIOLOGICAL, DRUG-SUSCEPTIBILITY DATABASE TO MONITOR RESISTANCE PATTERNS AND TRENDS TO MAKE APPROPRIATE EMPIRIC ANTIBIOTIC SELECTIONS FOR BLOOD AND MARROW TRANSPLANT RECIPIENTS

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We followed all blood and marrow transplant patients over a 2 year period, monitoring epidemiological trends and drug susceptibility information to choose the most appropriate empiric antibiotic selection for our febrile, neutropenic patients. The most commonly seen bacterial bloodstream organisms isolated during this time period were coagulase negative staphylococcus (n=323), Enterococcus species (n=54) and Pseudomonas species (n=42). Each time a gram-negative organism was isolated, it was tested against the institutions standardized drug susceptibility panels. Of all the gram negative isolates tested, Piperacillin/Tazobactam (pip/tazo) performed the best in our patient population, being reported as susceptible 107 times it was tested, resistant 41 times, and intermediate 5 times. The next 2 antibiotics with the highest susceptibilities were ceftazidime and cefepime. When monitoring Pseudomonas resistance patterns over the 2 year period, the least resistance was seen with pip/tazo and cefepime, with an average resistance of approximately 30 percent. The lowest sensitivities were observed with imipenem and the quinolones. Based on the data gathered in this database, the use of pip/tazo appears to be the most appropriate beta-lactam selection for our patient population for empiric management of febrile neutropenia. In addition to providing coverage against most strains of Pseudomonas seen in our population, it also offers the advantage of providing some enterococcal coverage, which was also observed to be one of our most predominant organisms. Such a database allows for a prospective means of developing rotational antibiotic selections.

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SUDDEN BILATERAL VISUAL LOSS DUE TO DISSEMINATED FUSARIO-SIS DIAGNOSED BY CULTURE AND POLYMERASE CHAIN REACTION

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Invasive fungal infections (IFI) have become a major cause of morbidity and mortality in the bone marrow transplant population. One of the greatest challenges in these patients is to make an early diagnosis of an IFI. We describe a patient with AML who