infection. Procalcitonin (PCT) is a novel marker that reflects the severity of infection. Allogeneic Hematopoietic Stem Cell Transplantation (allo-HSCT) patients often have febrile episodes, but it is not easy to conclude that the fever is caused by infection. In this study, we assessed the diagnostic usefulness of PCT for allo-HSCT patients with fever.

Patients and Methods: We retrospectively analyzed among the 41 patients who underwent allo-HSCT at our hospital between January 2008 and July 2010, 17 patients with fever above 37.5°C and for whom PCT was measured (total of 28 febrile episodes). The number of cases of underlying hematologic diseases were as follows: 11 acute myeloid leukemia, 2 myelodysplastic syndrome, 1 myeloproliferative disease, 6 acute lymphoid leukemia, 4 malignant lymphomas, 2 aplastic anemia, 1 multiple myeloma, and 1 other disease. Fifteen and thirteen febrile events were from patients who had myeloablative and non-myeloablative conditioning regimens, respectively.

Results: We documented infection in 16/28 febrile episodes (13 bacterial infections, 2 fungal infections, and 1 viral infection), while 12 febrile episodes were not related to infection (10 acute GVHD, 1 drug, and 1 not specified). To determine whether the presence of infection can be predicted by PCT, we divided the 41 patients into two groups, one with neutrophil counts < 100/μL (N < 100 group) and the other with ≥ 100/μL (N ≥ 100 group). In the N < 100 group, the sensitivity, specificity, likelihood ratio, positive predictive value, and negative predictive value were 42.8%, 75%, 1.7, 90.9%, and 27.2%, respectively; in the N ≥ 100 group, these values were 50%, 75%, 2.0, 33.3%, and 85.7%, respectively. During neutropenia, positive PCT tended to show the presence of infection. However, when the neutrophil count gradually increased, fever with positive PCT tended to have non-infectious factors, such as allograft immunoreactions. These results suggest that the cause of fever could not be predicted by PCT alone when the neutrophils reach a certain level. However, the probability of a false negative prediction of infection by PCT tended to decrease with the increase of neutrophil count. Further analysis will be needed with inflammatory markers and clinical signs together with PCT in a prospective study to determine the utilization of PCT for allo-HSCT patients.

Supporting caregivers is essential in stem cell transplantation to decrease stress, increase morale, and create support. By providing a week of activities focused on caregivers, staff acknowledges the essential role they play in promoting positive patient care and outcomes. Future plans include continuation of the Caregiver Week activities, incorporating additional supportive measures, as well as creating new innovative events, while continuing to monitor progress and meet caregiver needs.

Caring for a sick person, especially one with cancer can be a long term, overwhelming responsibility. Caring for these patients often requires support across the continuum, to address physical, psychosocial, spiritual, and emotional well-being. Expectations include, managing an increasingly complicated healthcare system, remaining optimistic, and taking care of personal needs, usually without support for themselves. This is especially true in stem cell transplantation settings where patient hospitalizations can last for several weeks and daily outpatient clinic visits for several months. Unaddressed caregiver needs present risks to physical and mental health, which in turn may affect the care provided for loved ones.

To address this concern, Caregiver’s Week was implemented on a stem cell transplantation unit. This event was designed to address caregiver stress by using techniques such as relaxation, diversion, support, meeting spiritual needs, and providing an opportunity to respond to concerns and questions of caregivers. Program components include Bingo, Tea/TLC, crafts, relaxation, and holiday themed events. Nursing staff is present to address questions, concerns, and listen to caregivers discuss their experiences. A chaplain is available to provide spiritual support as appropriate. This collaborative approach allows caregivers to receive support, as well as support one another.

The response to Caregiver’s Week is overwhelmingly positive. Participants report feeling rejuvenated, relaxed, and in better mood. In addition, they report making friends who are going through the same experience and whom they feel understand their feelings, and many of these friendships continue long-term, after patients are discharged.

The effect of donor cytomegalovirus (CMV) serologic status on outcome and survival in patients undergoing allogeneic stem cell transplantation in the era of CMV-preemptive therapy

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Background: Cytomegalovirus continues to be a common cause of morbidity and mortality after allogeneic hematopoietic stem cell transplantation (SCT) despite major advances in diagnostic techniques and antiviral prophylactic strategies. Recipient CMV-seropositivity is a major predictor of adverse outcomes. Data regarding the effect of the donor serologic status on seropositive recipient outcomes remains controversial, with some studies reporting a beneficial effect of seropositive donor, either reduction in relapse or reduction in nonrelapse mortality (NRM), whereas other studies have found no benefit from seropositive donor.