

and level of supportive care given was significantly higher in patients with icterus than without ($P = 0.224$) and $P = 0.0081$) respectively. Total days for disease resolution in patients with icterus was 32 days compared to 16 days for those without ($p = 0.022$). Nine of the patients with icterus received specific treatment compared to only one in the anicteric group. Seven cases were diagnosed with VOD by the Seattle criteria at a median of day +15 post HSCT, but treatment was delayed by 1–11 days for lack of hyperbilirubinemia, 2 of these never developed hyperbilirubinemia; 4 of 7 cases died. Overall 2 with anicteric and 12 cases with icteric VOD died.

Discussion: The Baltimore criteria appear to be more stringent and cases with anicteric VOD do not meet these diagnostic criteria. This retrospective study describes the features of anicteric VOD at a single center. Even if the patients met the Seattle criteria, treatment was delayed for lack of hyperbilirubinemia or flow reversal on hepatic ultrasound, neither of which are required criteria. Patients with anicteric VOD had a better outcome than those with hyperbilirubinemia, but our study shows that there can be significant morbidity and even mortality associated with anicteric VOD. There seems to be a poor understanding and awareness of anicteric VOD as a diagnosis. Earlier disease recognition could lead to more prompt and aggressive treatment leading to improved outcomes.

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Preservation of Ovarian Function after Hematopoietic Cell Transplantation (HCT): More Possible Than We Thought?

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Background: Gonadal failure is a major long-term health and quality of life concern in survivors of HCT. While ovarian dysfunction is nearly universal following myeloablative (MA) conditioning, it is likely variable after reduced-intensity conditioning (RIC) HCT where there are substantial differences in intensity. GnRH agonists, such as leuprolide, have been shown to decrease the rate of ovarian failure in those receiving conventional chemotherapy, but little is known about leuprolide's effectiveness in the HCT population. We sought to determine the impact of leuprolide on ovarian function in recipients of MA conditioning and evaluate the incidence of ovarian failure in women undergoing RIC HCT.

Methods: Post-menarchal females <50 years of age who were scheduled to undergo HCT were recruited for the study. Adequate ovarian function, as defined by a baseline FSH level less than 40 and normal menstrual cycles, was required. Those undergoing MA HCT were treated with leuprolide (long-acting 11.25 mg IM once + short-acting 0.2 mg daily for 14 days) prior to conditioning. MA regimens were variable. Those undergoing RIC HCT were observed with no

intervention. RIC regimens generally included cyclophosphamide (50 mg/kg), fludarabine (150–200 mg/kg) and TBI (200–300 cGy). FSH was measured at baseline, day 100, 180, 1 year, and 2 years following transplant.

Results: A total of 19 women were included (9 in the intervention arm and 10 observation only). In the intervention arm (age 17 to 45 years), 6 of the 7 evaluable patients had malignancies and one had an inherited bone marrow failure syndrome (IBMFS). The observation arm (age 13 to 45 years) included 6 patients with aplastic anemia, 1 with a hemoglobinopathy, 1 with a metabolic disorder, 1 with an IBMFS, and a single patient with a malignancy. Two patients in the intervention arm were not evaluable (one died 34 days following HCT and the other was lost to follow-up). There were no adverse events related to leuprolide therapy. Five out of the 7 intervention patients were heavily pretreated with chemotherapy for their malignant conditions prior to HCT. The incidence of ovarian failure in women undergoing MA transplant who received leuprolide was 57% (4 out of 7 subjects) at day +180 compared to historically reported rates of ovarian failure of >90% after MA transplant. In RIC HCT, the ovarian failure rate was 20% (2 out of 10 subjects).

Conclusions: Leuprolide is not only safe, but it appears to have a substantial impact on ovarian function preservation after MA conditioning. These results were found despite the majority of these women having received significant gonadotoxic chemotherapy prior to being referred for HCT. In addition, early data demonstrate that RIC with cyclophosphamide, fludarabine and low-dose TBI is associated with a low risk of ovarian failure. Further studies are needed to confirm these exciting findings.

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Bone Health Assessment in Patients Undergoing Hematopoietic Cell Transplantation

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Introduction: The increased survival of hematological patients has required to widen the care of these patients, with emphasis in factors related to quality of life and late mortality. Among them, osteoporosis (OP) is a fundamental problem. Patients undergoing hematopoietic cell transplantation (HCT) are at great risk of OP, mainly due to prolonged exposure to chemotherapy, immunosuppressants and the hypogonadism frequently associated to these treatments. Despite this, there is lack of strong evidence on this matter and HCT guidelines are not clear on this problem.

Objectives: To evaluate parameters related to bone health in patients undergoing HCT. To measure the frequency and severity of the alterations in this group of patients.

Patients and Methods: Observational and retrospective analysis of patients undergoing HCT at the Catholic University Hematology-Oncology Department. All patients undergoing HCT were recommended to have determination of 25-OH vitamin D, PTHi, Calcium, Phosphorus and bone densitometry (DXA). We included all patients with the evaluation before HCT (preHCT) and 1 year after HCT (postHCT). Statistical analysis was performed by SPSS v.21 software.

Results: We obtained data from 20 patients preHCT and 22 patients postHCT. Main diagnosis were acute myeloid leukemia ($n = 13$; 32%), multiple myeloma ($n = 11$; 26%), acute lymphoblastic leukemia ($n = 9$; 21%) and Hodgkin's Lymphoma ($n = 5$; 12%). Mean age was 40 years (range: 17–67) and 67% were males. In the preHCT group, the median 25-OH vitamin D levels