were 13,6 ng/ml (range: 4,9-26,7 ng/ml) and 100% of the patients were in the insufficiency range levels (<30 ng/ml). Median PTHi levels were 62,6 pg/ml (range: 24,4-223,7 pg/ml), and 46% of the patients had secondary hyperparathyroidism. In the postHCT group, median 25-OH vitamin D levels were 11,4 ng/ml (range: 4-29,4 ng/ml) and 100% had insuficiency levels. Median PTHi levels were 68 pg/ml (range: 37,4-135,8 pg/ml), and 56% of the patients had secondary hyperparathyroidism. 12 patients had DXA before HCT and 3 (25%) of them had DXA lumbar Z score less than -2.0. In 19 patients postHCT, 4 (21%) had decreased DXA Z score < 2.0. No difference could be established between autologous or allogeneic HCT in any measurement. Only the presence of chronic graft vs host disease (GVHD) was associated with higher PTH levels by ANOVA test. None of the other variables were associated with acute or chronic GVHD.

Conclusions: HCT patients represent a high-risk group of developing severe vitamin D deficiency, secondary hyperparathyroidism and decreased DXA levels. These data are a warning that this population of patients requires early intervention to prevent long-term complications. This report is the initial evaluation for the development and treatment of bone health in a prospective matter in HCT patients in our center.

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Donor Cell Leukemia: A Prospective Study of Its Identification and Treatment

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Leukemia relapses occurring in donor cells, so-called donor cell leukemias (DCL) after allogeneic hematopoietic stem cell transplantation have been reported in several cases and still are considered as rare diseases. Cytogenetic analysis, flow cytometry and molecular testing have been used to confirm this event in the cases so far reported. The incidence of this condition is largely unknown, as well as the results of its treatment. We have prospectively searched for DCL in a 12-year period, in a single institution. In a group of 106 consecutive patients allografted because of leukemia we have identified 7 cases of DCL; six of them were allografted because of relapsed acute lymphoblastic leukemia (ALL) and one because of paroxysmal nocturnal hemoglobinuria/aplastic anemia; these figures suggest that the real incidence of DCL has been underestimated in previous studies. All the patients were allografted from HLA-identical siblings, employing a reduced-intensity conditioning regimen. The cases appeared with median of 10 months after the allograft; the number of blast cells when the leukemic activity ensued was above 50% in all cases, whereas the chimerism studies revealed more than 90% cells of donor origin. The origin of the leukemia cells was shown by microsatellites and with sex mismatch. Six patients with lymphoblastic DCL were treated prospectively with a pediatric-inspired combined chemotherapy schedule designed for "de novo" ALL patients. A complete response was obtained in 3/6 patients with lymphoblastic DCL, these patients being alive in a complete remission at 11,12 and 98 months after the diagnosis of DCL. The long-term DCL survivors remain full chimeras and did not need a second transplant. It is concluded that the prevalence of DCL may be higher if it is prospectively looked for, and that acceptable therapeutic results are obtained if patients are treated as "do novo" leukemias employing combined chemotherapy.

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Health-Related Quality of Life in Survivors of Allogeneic Hematopoietic Stem Cell Transplantation Employing the Mexican Reduced-Intensity Conditioning

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Background: Quality of life (QOL) is an important consideration in the counseling, implementation, and post treatment management of arduous treatments for life-threatening conditions, such as allogeneic hematopoietic cell transplantation (allo-HCT).

Material and Methods: QOL was analyzed in leukemia patients who underwent allo-HCT using reduced intensity conditioning (RIC) on an outpatient basis at either the Centro de Hematología y Medicina Interna de Puebla of the Clínica Ruiz or the Hematology Service of the Internal Medicine Department of the Hospital "Dr. José Eleuterio González" of the Universidad Autónoma de Nuevo León, and who had survived above 12 months after the allograft, who could be approached, who were in a continued complete remission-with or without graft versus host disease and who were willing to respond to the questionnaire. Thirty-five patients fulfilling these requirements were included, and a sex and age-matched group of 35 reference subjects was also studied.

Results: Allografted patients were found to have a slightly better mental component summary than the reference subjects (53.23 versus 48.66 points, $p = 0.01$), whereas the physical component summary did not show a difference (54.53 versus 52.05 points, $p = 0.59$). Most of the differences between allografted individuals and reference subjects controls were not significant.

Conclusions: These data suggest that allografted individuals employing our RIC regimen, enjoy a health-related quality of life similar to that of reference subjects, adding, another advantage of this method of conducting stem cell allografting. However, more work needs to be done to elucidate the impact of RIC on QOL post-allo-HCT.

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Increased Incidence of Fatigue in Pediatric Hematopoetic Stem Cell Transplant Recipients

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