lent alternative source of MSCs. The aim of this study was to compare different enrichment methods of obtaining MSCs from CB, to generate sufficient numbers of MSCs for transplantation. The plastic adhesion method (PAM) and the depleting method RosetteSep (DMR) on fresh CB units were compared. Both cell fractions were grown in Mesencult complete medium. Their proliferative capacity and their phenotype during culture were tested. The MSC phenotype was evaluated by expression of CD105, glycophorin A, CD29, CD44, CD45, CD31, CD34, CD64, CD62L, CD106, CD117, CD133, CD90, HLA-class I, HLA-DR, CD1a, CD3, CD51, and CD58. Sufficient numbers of cells (56.6 ± 9.2%) were recovered after the PAM and only a few cells (5.3 ± 2.6%) were isolated from the whole CB using the DMR. After the second passage, the PAM allowed 155.5 ± 62.9% of MSCs to be obtained, whereas 108.3 ± 0.99% of MSCs were obtained by the DMR. For both methods, 3 passages were needed to obtain comparable homogeneity, corresponding to an average of 45 days. The CB-derived MSCs were positive for the matrix receptors CD44, CD58, and CD105; the integrins CD29 and CD51; and the markers CD90 and HLA-class I. They were negative for the matrix receptors CD31 and CD62L, as well as the hematopoietic markers CD45, CD34, CD133, CD64, CD117, CD1a, CD3, and HLA-DR. In conclusion, both methods may represent an easy way of obtaining MSCs from CB with the aim of potential use in CB transplantation, because MSCs facilitate and promote the overall engraftment level of multidonor CB grafts.

	>1 Organ Involved	1 Organ Involved	P
Number of patients	11	7	
Age at HSCT	10.2 years (5.7–14.5)	14.5 years (11.8–17.3)	0.1
Age at cGVHD diagnosis	10.5 years (5.8–15)	14.7 years (12.1–17.3)	0.14
Length of therapy	19.5 months (10.9–28.1)	14.2 months (12.2–16.3)	0.3
Sites of involvement			
Skin/MS	11/11	2/7	0.002
Liver	3/11	5/7	0.08
Oral	7/11	0/7	0.01
GI	2/11	0/7	0.3
Lung	1/11	0/7	0.6
Max BMI change	−9% (−17.6%–−1.2%)	10.2% (−2%–20.8%)	0.003
Max weight change	−4% (−13%–5%)	14.8% (2.2%–27.4%)	0.01
Median # quintiles dropped	1.5 (0-4)	0 (0-0)	—
Weight under 25%ile	6/10	0/7	0.01
Weight under 10%ile	5/10	0/7	0.04
Deaths	3/11	0/7	0.2

Continuous variables expressed as mean with 95% CI unless where noted. Frequencies are compared using Fisher's exact test.

LATE EFFECTS/QUALITY OF LIFE

212

WEIGHT LOSS IN PEDIATRIC PATIENTS WITH CHRONIC GRAFT-VERSUS-HOST DISEASE (CGVHD)

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Weight loss and malnutrition are major problems in patients with cGVHD. In adults, a low body mass index (BMI) is a predictor for mortality; however, weight loss and BMI have not been studied in pediatric patients with cGVHD. A retrospective study of 18 patients at Children's Memorial Hosptial with extensive cGVHD based on the revised Seattle Classification was completed. Median age at SCT was 11.5 years (range, 1–22 years); age at cGVHD diagnosis was 12 years (range, 1–23 years). Median duration of immunsuppressive therapy was 15.5 months (range, 3–51 months). Maximum height, weight, and BMI change were calculated from date of SCT through the duration of cGVHD treatment. Patients were also graphed on standard growth charts. Patients were stratified into groups based on the number of organ systems involved. Patients with multiorgan involvement had a mean maximal BMI decrease of &minus9%, and 50% of these patients had a decrease of 1–4 quintiles on standard weight-for-age growth charts and remain at less than the 10th percentile in expected weight for age. This change in BMI not only indicates a significant decrease in weight but also often a plateau in stature. The resolution of oral and GI symptoms did not appear to reverse this weight loss trend, which indicates a structural alteration in the GI tract or an increased metabolic rate. All of the patients with multiorgan involvement required salvage therapy beyond steroids and CSA, and 3 of them died due to complications of cGVHD. All patients with single organ involvement have resolved their cGVHD with standard therapy. Weight loss and malnutrition are clinically significant issues in pediatric patients with multisystem cGVHD. Weight loss is likely another systemic manifestation of the disease and may contribute to increased mortality in this group. Studies measuring resting energy expenditure and intestinal permeability are underway to further understand the nature of weight loss in this population.

213

EVALUATION OF ORAL MUCOSITIS USING A SELF-REPORTED QUESTIONNAIRE IN PATIENTS WITH HEMATOLOGIC MALIGNANCIES UNDERGOING HIGH-DOSE CHEMORADIOTHERAPY FOLLOWED BY PERIPHERAL BLOOD PROGENITOR CELL TRANSPLANTATION

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Background: Oral mucositis (OM) is a frequent complication experienced by patients with hematologic malignancies (HMs) undergoing high-dose chemoradiotherapy (CRT) followed by peripheral blood progenitor cell transplantation (PBPCT). Patients rate OM as the most debilitating side effect of hematologic transplantation. In clinical trials, physicians assess the severity of OM using 1 or more established clinical scales such as the WHO, WCCNR, or RTOG. In a pivotal phase 3 randomized, placebo-controlled, double-blind clinical trial of palifermin (a rHuKGF molecule) in HM patients, patients assessed their OM severity and impact on daily functions through a self-reported OM daily questionnaire (OMDQ). We compared these patient self-reporting results with established clinical OM scales (WHO, WCCNR, and RTOG) and report the findings here. Methods: Over a period of 40 days, patient reported mouth and throat soreness (MTS) and its impact on swallowing, eating, drinking, talking, and sleeping (MTS-AL) were assessed daily using the OMDQ in 212 patients (placebo, n = 106; palifermin, n = 106). The mean daily compliance rate for completing the self-reporting questionnaires over the entire study period was 84% in the placebo group and 89% in the palifermin group. The Pearson correlation coefficients between MTS/MTS-AL scores and clinical OM scales at days 7 and 14 posttransplantation and between the change in scores in MTS/MTS-AL and clinical OM scales between days 7 and 14 posttransplantation were calculated. The daily OM severity grades, as measured by OMDQ, WHO, WCCNR, and RTOG, were graphed for comparison. **Results:** Patients were able to detect the increases