the A and B mutated Hoxb4 expressing progenitors had a significantly greater contribution to the PBL recovery in comparison to Hoxb4(WT) ($p < 0.05$). Together, these studies strongly suggest that different intracellular levels of Hoxb4 protein are affecting different types of hematopoietic progenitors. Early *ex vivo* expansion of clonogenic progenitors was achieved with mutated Hoxb4 proteins without impairing HSC long-term reconstituting ability. Thus, mutated Hoxb4 could represent a useful tool to accelerate engraftment after HSC transplantation.

SUPPORTIVE CARE

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THE USE OF RECOMBINANT HUMAN ERYTHROPOIETIN (RHUEPO) AFTER REDUCED INTENSITY CONDITIONING (RIC) ALLOGENEIC HEMATOPOIETIC PERIPHERAL BLOOD STEM CELL TRANSPLANTATION (ASCT) REDUCES RED BLOOD CELL (RBC) TRANSFUSION REQUIREMENTS

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We previously reported that hemoglobin (Hb) recovery was hastened after RIC ASCT as compared with ASCT after myeloablative conditioning (Transfusion, 44:501-8, 2004). In this setting pretransplant Hb level becomes the major predictive factor for early Hb recovery posttransplant and RBC transfusion (RBCT) requirements. We subsequently reported the efficacy of early rHuEpo administration after RIC ASCT to hasten Hb reconstitution (BMT, 36:901-6, 2005). Here we further confirm that early post-transplant rHuEpo after RIC reduces also RBC requirements. 40 pts surviving at least 60 days were analyzed. Pts characteristics were as follow: age: 50 (27-64); M/F: 28/12; with myeloid (4), lymphoid (29) or solid (7) malignancies. They received a RIC (Fludarabin (150 mg/m; Busulfan (8mg/kg) and thymoglobulin (2.5 to 5 mg/kg)) followed with an ASCT (all PBSC) from a HLA identical sibling. Aranesp(Amgen, France) was started on day 1. The 20 first pts received an infusion of 150 mcg/week while the 20 last pts were subsequently treated with 500 mcg/ 3 weeks. Aranesp was administered intravenously when inpatient and subcutaneously when outpatient. Aranespadministration was sustained until day 60 or when pts reached a Hb level of 140 g/L, whichever occurred first. Overall pts were treated for a median of 7 weeks post transplant. No serious adverse effect or thrombosis episode was reported. This cohort of 40 pts experienced a quicker Hb recovery and lower RBCT requirements than a historical and comparable control group of 27 pts (Day +30 Hb: 114 (94-141) vs. 100 (80-129), $p<.0001$; pts with 0 or 1 RBCT: 83% vs. 55% ($p=.02$)). Thirteen of the 40 pts (33%) presented with an Hb level of 120 g/L or more prior to conditioning. Over the first 60 days, these pts received 0 (0-2) RBCT as compared with 1 (0-2) RBCT for pts with a pre-RIC Hb level < 120 g/L ($p=.05$). On this basis, we hypothesized the interest of increasing Hb level prior to RIC by adequate rHuEpo stimulation. With this perspective, we have treated 13 pts with Aranesp(500 mcg, SC) 3 weeks prior RIC. Nine of these 13 pts (69%) reached an Hb level of 120 g/L or more on day -7 as compared to 35% in patients not receiving Aranesp prior to RIC ($p=.04$). This indicates that Aranesppost RIC ASCT is efficient to hasten Hb recovery and decrease RBCTs. In addition, a comprehensive strategy to minimize RBCT in this setting might include pre-transplant stimulation. We will prospectively assess this hypothesis.

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PROSPECTIVE ORAL MUCOSITIS AUDIT (POMA): OCCURRENCE AND CONSEQUENCES OF SEVERE ORAL MUCOSITIS IN HIGH DOSE MELPHALAN AND BEAM CONDITIONING

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Oral mucositis (OM), an adverse effect of myeloablative regimens, seriously affects patient well-being and may increase systemic infection risk and delay recovery. Trial-based reports of OM vary widely, with evidence of underreporting and limited data on the incidence and impact in routine practice. Initiated by the EGBMT, this study observed pts with multiple myeloma (MM) or non-Hodgkin's lymphoma (NHL) from 25 transplant centres across 13 EU countries receiving high dose melphalan or BEAM then autologous stem-cell transplant. Aims were to assess duration and incidence of severe (WHO oral toxicity scale Grade III-IV) and ulcerative (Grade II-IV) OM, resource use for OM prevention and treatment, and associations with infection and hospitalisation duration. Prospective OM assessments were done daily from the conditioning start to 30 days post-transplant or hospital discharge. To achieve high and consistent quality of assessment, nurse assessors had multimedia-assisted face-to-face training prestudy. Of 197 evaluable pts, 110 (56%) had MM and 87 (44%) had NHL. Mean age was 57±8 yrs for MM (36% women) and 50±13 yrs for NHL (51% women); 94% had ECOG status ≤1. Severe OM incidence was 46% (95% CI 37-56%) for MM and 41% (95% CI 31-52%) for NHL. Severe OM mean duration was 5.4±3.3d (95% CI 4.6-6.3d) in MM and 5.3±3.2d (95% CI 4.3-6.4d) in NHL. Ulcerative OM incidence was 67% (95% CI 58-76%) in MM and 60% (95% CI 49-70%) in NHL (mean duration 6.6±4.4d [95% CI 5.6-7.6d] and 6.5±3.8d [95% CI 5.6-7.7d]). WHO scale results and symptom indicators showed similar temporal patterns (max ~ day 12 post-conditioning) in both groups. Clinically relevant associations with disease/conditioning type or gender were not detected. A non-significant trend hinted at an association of OM duration with age. Fever ≥38°C incidence was 68% in pts with severe OM v 47% in pts without (univariate $p=.004$; odds ratio 2.4 [95% CI 1.3-4.4]). Mean length of stay±SD (truncated at 30d posttransplant) was 21±4d in pts with severe OM v 20±5d in pts without (univariate $p=.023$). Preliminary multivariate analyses adjusting for other potential predictors confirmed these effects. Severe OM was a substantial clinical problem with high dose melphalan or BEAM conditioning chemotherapy. Associations with fever occurrence and length of stay indicate potentially harmful clinical sequelae and economic consequences. Associations with confirmed infection and resource use remain to be assessed.

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COST ANALYSIS OF ALLOGENIC PERIPHERAL BLOOD TRANSPLANTATION: IMPACT OF DEGREE OF MUCOSITIS AND USAGE OF PALIFERMIN

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Background: Oral mucositis is associated with increased clinical events and healthcare resource utilization in patients receiving hematologic stem cell transplantation (HSCT) following myleoablative therapy. Palifermin is a recombinant human keratinocyte growth factor approved to prevent severe oral mucositis. The impact of palifermin in the allogenic peripheral blood (PBSCT) and the costs associated has not been quantified.

Aim: To assess the clinical and economic impact of palifermin use in allogeneic HSCT patients.

Method:

This was a retrospective review of 21 patients undergoing allogenic HSCT following myeloablative chemotherapy at The Alfred from June 2004-October 2005; versus allogeneic HSCT patients receiving palifermin from October 2005-July 2006. We calculated descriptive statistics on duration and grade of oral mucositis; hospital length of stay (LOS), antibiotic use; antifungal use; and total parenteral nutrition (TPN). Costs were determined through data extracts from the hospital's clinical costing system and through retrospective medical record review.