Bone Marrow Transplantation (2021) 56:344–362
https://doi.org/10.1038/s41409-021-01345-3

ABSTRACTS COLLECTION

The 47th Annual Meeting of the European Society for Blood and Marrow Transplantation: Nurses Group – Poster Sessions (NP001 – NP028)

Published online: 24 June 2021

14 – 17 March, 2021 ● Virtual Meeting

Sponsorship Statement: Publication of this supplement is sponsored by the European Society for Blood and Marrow Transplantation. All content was reviewed and approved by the EBMT Committee, which held full responsibility for the abstract selections.

Nurses group poster session

NP001.

Nurses' training needs for advanced therapy medicinal products EG CAR T: key findings from questionnaire-based survey on behalf of the nurses group of the EBMT

Michelle Kenyon[1], Rose Ellard[2], Katerina Bakunina[3], Anne Kozijn[3], Daphna Hutt[4], Isabel Salcedo[5], Christian Chabannon[6], Annika Kisch[7], Sarah Liptrott[8], John Murray[9]

[1]King's College Hospital NHS Foundation Trust, London, United Kingdom, [2]Royal Marsden Hospitals NHS Foundation Trust, London, United Kingdom, [3]EBMT Data Office Leiden, Leiden, Netherlands, [4]Sheba Medical Centre, Tel Aviv, Israel, [5]Hospital Universitario Puerta de Hierro, Majadahonda, Spain, [6]Institut Paoli-Calmettes Comprehensive Cancer Center/ Aix-Marseille Universite, Marseille, France, [7]Skane University Hospital/ Lund University, Lund, Sweden, [8]European Institute of Oncology, Milan, Italy, [9]The Christie NHS Foundation Trust, Manchester, United Kingdom

Background: Advanced Therapy Medicinal Products (ATMPs), represent one of the most significant breakthroughs in healthcare in recent years. Delivery of ATMPs involves a complex supply chain and ATMPs including CAR T cells can trigger serious and potentially life-threatening complications. Consequently, this breakthrough is accompanied with additional nurse training needs ranging from basic to advanced depending on centre and country experience. We aimed to determine the ATMP training needs of nurses working in centres delivering or aiming to deliver ATMPs and those caring for repatriated ATMP patients.

Methods: A cross-sectional survey using an online questionnaire on ATMP training needs was distributed among all nurse representatives of EBMT transplant member centres and nurses known to be employed at centres delivering CAR T therapy. The 25-question survey was based on a previously developed, tested and implemented UK-wide survey, with permission. Questions addressed experience, training level, local procedures, organizational structure and self-assessed priority ranking for ATMP education. Participation was voluntary and anonymous. Survey data were analyzed and presented using descriptive statistics.

Results: From 145 questionnaires returned, the majority of respondents were nurses (95.2%) having 15 or more years of relevant experience (46.2%). Most respondents work at academic centres (84.1%) and mainly care for adult patients (64.8%). ATMP delivery is performed or will be performed in the near future by 64.8% and 13.1% of centres, respectively. Personal experience levels in delivering licensed ATMPs were equally represented, ranging from none (21.4%) or some experience (33.1%) to experienced (34.5%). However, experience in delivering unlicensed ATMP was significantly lower, with fewer respondents reporting to be experienced (17.9%) compared

to having none (31.0%) or some experience (38.6%). Experience levels associated with training on ATMP basic and procedural knowledge. General introductory and patient management knowledge regarding ATMP was received by the majority of the respondents (37.9–51.7% and 38.6–43.4%, respectively). These were also ranked as the knowledge areas having high training priority, together with visual inspection of products and the management of ATMP spills. Knowledge areas on cryopreservation and thawing, chain of identity/custody and local procedures for ordering or taking receipt of ATMPs were most often ranked as low priority. Additionally, respondents suggested benefit from sharing experiences and receiving more nursing-focussed education, especially with regards to therapy side effects and patient management (e.g., patient/family education, expectation management, supportive care).

Conclusions: Our findings reveal a clear need for nursing focussed ATMP education and training throughout Europe. Nurses caring for advanced therapy patients should undertake education and training specific to this field. General information as well as specific training on patient management, therapy side effects, visual inspection of the product and management of spills are core topics emerging from respondents. Further product specific training needs should be met and opportunities for nurses to maintain competency levels incorporated. Importantly, the self-expressed need for sharing nursing experiences identified via our survey offers future opportunities for collaborative projects and knowledge sharing.

Clinical Trial Registry: NA

Disclosure: Nothing to declare

NP002.

Improvement of oral mucositis in hematopoietic stem cell transplantation using povidone-iodine mouthwash under direct nursing supervision

Napassaya Khanthum[1], Piyanuch Aupara[1], Chantiya Chanswangphuwana[2], Udomsak Bunworasate[2], Manunya Chumphon[1]

[1]Department of Nursing, King Chulalongkorn Memorial Hospital and Thai Red Cross Society, Bangkok, Thailand, [2]Faculty of Medicine, Chulalongkorn University and King Chulalongkorn Memorial Hospital, Bangkok, Thailand

Background: Oral mucositis (OM) is a common painful toxicity of hematopoietic stem cell transplant (HSCT) which can result in significant morbidity and impact patients' quality of life. Despite several available guidelines, various management patterns and outcomes are observed among different practice setting.

Methods: We enrolled all adult patients who underwent HSCT at the King Chulalongkorn Memorial hospital between 2018 and 2020. We have implemented the new local practice protocol of OM prevention and management. All patients who underwent HSCT received 1% povidone-iodine mouthwash 4 times daily under direct supervision of registered nurses (RN) from the initiation of conditioning regimen to the day of hospital discharge. OM was assessed three times daily by RN using the WHO OM severity grading scale. The incidence and clinical outcomes were compared with transplanted patients from the historical cohort from 2016 to 2017 using the conventional OM care protocol encouraging 4 times daily of sodium bicarbonate mouthwash without direct observation of the uses. Both protocols recommended gentle tooth-brushing, flossing and lip moisturizer as well as cryotherapy (melphalan).

Results: The new protocol was applied to 139 patients comprising 85 autologous HSCTs (ASCTs) and 54 allogeneic HSCTs (alloHSCTs). The conventional protocol cohort was analyzed in 76 patients (44 ASCTs and 32 alloHSCTs). The median age was 47 (range 15–66) years old for new protocol patients and 44.5 (range 17–64) years old for conventional cohort. The male to female ratio was 1:1 in both groups. The new protocol, compared with the conventional protocol, was significant associated with lower incidence of any OM (74.8% vs. 92.1%, $p = 0.002$) and severe (grade 3–4) OM (13.6% vs. 44.7%, $p < 0.001$), respectively. The association between new protocol and reduction of OM was observed in both ASCT and allo-HSCT subgroups. Among patients who underwent ASCT, the incidence of OM (any grades) and severe OM were significantly lower in patients treated with the new protocol than patients from the control cohort (64.7% vs. 86.4%, $P = 0.009$ and 1.2% vs. 20.5%, $P < 0.001$). The respective rates in the allo-HSCT setting were 90.7% vs. 100% ($p = 0.028$) for OM, and 33.3% vs. 78.1% ($p < 0.001$) for severe OM. For severe OM patients, the utilization of patient-controlled analgesia (PCA) was significantly lower among patients using the new protocol compared with the conventional cohort (63.2% vs. 97.1%, $P = 0.001$, respectively). However, the duration of OM under the new and old protocols were not different, 9 (range 2–29) vs. 10 (range 4–39) days.

Conclusions: Oral care during HSCT using 1% povidone-iodine mouthwash in conjunction with direct observation approach to ensure patient adherence could significantly reduce the incidence and severity of OM in our center. The frequent assessment of OM played a critical role on early OM detection and might contribute patients' awareness and engagement of oral care during HSCT. The decrease in PCA prescription in severe OM patients may imply less severe

pain using the new protocol. In conclusion, patient adherence to povidone-iodine mouthwash and close monitoring by nurses could effectively prevent OM in HSCT patients.

Disclosure: Nothing to declare

NP003.

Comprehensive geriatric assessment to predict outcomes in older patients received CAR-T cell therapy

Mercedes Montoro-Lorite[1], Estel Güell-Porteros[1], Silvia Lahoz[1], Valentín Ortíz-Maldonado[1], Alexandra Martínez-Roca[1], Montserrat Duch-Serra[1], Ariadna Domenech[1], Montserrat Valverde-Bosch[1], Mª Teresa Solano[1]

[1]*Hospital Clínic de Barcelona, Barcelona, Spain*

Background: CAR-T cell therapy is a personalized immunotherapy indicated in patients under 75 years with refractory or relapsed diseases previous hematological treatment. In recent years, life expectancy of older adults with cancer (OWC) has considerably increased due to a development of early detection programs and improvements in oncospecific treatments. International Society of Geriatric Oncology recommend to perform a Comprehensive Geriatric Assessment (CGI) to OWC to identify and implement the best nursing interventions. Advanced Practice Nurses have a very important role in prevention, detection and management in OWC. The aim of our study is to describe the profile of OWC who are treated with CAR-T cell therapy at Hospital Clínic Barcelona and to analyze the relationship between age, comorbidities, geriatric syndromes (GS) and days of admission (DA).

Methods: An observational retrospective study (June 2019–September 2020) was performed. Patients that met inclusion criteria were recruited: men/women ≥50 years, who received CAR-T therapy. Socio-demographic, clinical care and CGA variables were from digitalized medical history. Data were anonymously extrapolated to a team-conceived database.

Results: We recruited 16 participants, 56% men with a median ($\dot{X}$) of 62.8 years (SD 2.9). The most frequent diagnosis was LAL (38%) followed by LDCG (32%). In relation to the functionality a 62% presented an ECOG 0, moderate asthenia and moderate risk of UPP, slight dependence according to the Barthel scale (56%). The $\dot{X}$ of comorbidities was 5.2 (SD 0.5). They present a $\dot{X}$ of 6.4 GS (SD 0.7), more frequent: Iatrogenic (100%), alteration of the senses and insomnia in 89%. In relation to toxicities secondary to treatment, 50% presented a SLC grade 1–2, and a 20% an ICANS grade, 1–2. A 25% of neurotoxicity such as headache or tremor was observed. A 50% of patients presented cytopenias that required transfusion either with platelets or red blood cells and 56% infections. Three participants required admission to ICU. All participants were referred for educational program and were evaluated by a social worker, an 82% by physiotherapist and a 75% by nutritionist. 50% of the participants required less than 10 AD with a $\dot{X}$ of 14.6 (SD 3.76) AD and the most common destination for discharge was home. 56% were discharged early and were followed by the Home Care Unit after 6.9 days (SD 0.48). By correlation (r) of Spearman, we found between SG and DA (r 0.94 SD 0.24 $p > 0.0001$), between comorbidities with DA (r 0.83 SD 0.51 p 0.0034) and age with DA (r 0.58 SD 0.71 p 0.0003).

Conclusions: The study demonstrates the utility of performing CGI systematically in OWC. We have observed a greater correlation between DA and altered GS than with age or comorbidities. The analysis of the OWC profile will allow to identify the needs of OWC and, therefore, to standardize the nursing procedures. The OWC with altered GS could benefit from more personalized care including physical therapy interventions, nutrition, psychology, and social work.

Disclosure: Nothing to declare

NP004.

CAR-T—Recognition and treatment management of neurologic toxicities and cytokine release syndrome

Naama Nevo[1], Nimer Khatib[1], Sigal Torati[1]

[1]*Sheba Medical Hospital, Ramat Gan, Israel*

Background: Immunotherapy using T cells genetically engineered to express a chimeric antigen receptor (CAR) is rapidly emerging as a promising new treatment for different hematological malignancies such as DLBCL, ALL, CLL, NHL, and MM. CAR-T therapy has evolved in the last few years and managed to achieve remission in patients with previously incurable malignancies. This immunotherapy is performed daily on patients all around the world and was performed 150 times in the BMT department in Sheba Medical Hospital.

Despite its success and effectiveness, that has been proven already, CAR-T therapy may cause damage to normal tissues and to non-tumor tissues by cross-reacting with the antigen that is not expressed on tumor cells. Therefore toxicities such as CRS (cytokine release syndrome) that has symptoms such as fever, hypotension, hemodynamic instability, respiratory distress, and neurologic toxicities with symptoms such as tremor, motor dysfunction, delirium, hallucinations, language disturbance and seizures, can occur. These toxicities are usually treated

with steroids and/or Tocilizumab, according to the ASTCT CRS Consensus Grading.

Methods: With the help of an anonymous questionnaire for members of the nurse's staff, about the treatment according to Likert scale, and a knowledge test with four optional answers, to examine their knowledge on this subject.

Results: We found that among the new staff members (0–2 years of seniority), 12 nurses (80%) felt some level of insecurity regarding CAR-T conditioning therapy, recognizing the signs and symptoms of CRS and neurologic toxicities, and treatment management. The knowledge test was in line with these results. We preformed virtual trainings to all the new staff members, according to the results of the questionnaire, including the conditioning lymphodepletion chemotherapy before the infusion of CAR T-cell products, toxicities grading according to the CARTOX chart, early sings of toxicities recognition and treatment management. In addition, we hung the CARTOX chart in the nurse's station and gave all the nurse's staff a small information note attached to their ID card that contains information for toxicity recognition and treatment management. After the trainings we redistributed the questionnaire, and it showed that the results had significantly improved, with 14 nurses (93.3%) of the new staff members feeling more secure treating CAR-T patients during their hospitalization, and the knowledge test results climbed to 98% of all staff members answering only correct answers.

Conclusions: The nurse's staff have a meaningful and central role by knowing the patient over his hospitalization, understanding this therapy and its principles, and knowing its predicted side effects. The nurse's staff can catch deteriorations on time and prevent further complications. Therefore, there is a great importance in knowing these toxicities, how to diagnose and identify early sings, and improving the recognition of these side effects.

Disclosure: Nothing to declare

NP005.

Home platelet transfusion in autologous stem-cell transplantation: improving home-care strategies during SARS-COV-2 pandemic

Laura Villa Rodríguez[1], Cristina Gallego Miralles[1], Arianna Rosich Soteras[1], M Teresa Solano Moliner[1], Núria Ballestar Dot[1], Maria Carreras Figuerola[1], Estel Güell Porteros[1], Pilar Ayora Quiles[1], Gloria Garcia Barriga[1], M Adelina Hernando Vicioso[1], Susana Segura Lérida[1], Montserrat Carreño Mendez[1], Gemma Viché Piñas[1], M Rosa Claraso Garcia[1], M Lourdes Coromines Bosch[1], Montserrat Valverde Bosch[1], Anna Gaya Valls[1], Francesc Fernández Avilés[1]

[1]*Hospital Clínic, Barcelona, Spain*

Background: Platelet transfusions (PT) are an essential part of supportive care in the early phase of haematopoietic stem cell transplantation. Since November 2000, our group has been performing autologous stem-cell transplantation (ASCT) on an early discharge at home (AH) regime. Need for PT is the main reason patients on AH have to go to hospital. In March 2018, the Home-Care Unit (HCU) and the hospital Blood Bank (BB) designed a home-platelet transfusion (HPT) programme aimed at minimizing the number of hospital visits, which has become a relevant issue at the peak of SARS-CoV-2 pandemic.

Methods: From April 2018 to April 2020, patients who met the inclusion criteria for the ASCT home-care programme (ECOG ≤ 2, caregiver 24h/day, distance home-Hospital ≤30 min and voluntary acceptance) and who had already been uneventfully transfused with platelets were included in the HPT programme. At the peak of the SARS-Cov-2 pandemic, the programme was expanded to all patients requiring PT. Prophylactic HPT was aimed at maintaining a platelet count $>20 \times 10^9$/L.

Platelets were collected from the BB by home-nurses according to our local transfusion policy guidelines and transported to the patients' home in temperature-controlled containers. We used premedication with oral paracetamol and cetirizine, taken 1 h before PT. This premedication was unnecessary in patients on prednisone as primary prophylaxis for engraftment syndrome. Both patients and caregivers were previously trained to recognize and manage PT-related adverse events.

Transfusions were performed according to local protocol. The home-nurse was present throughout the PT (about 20 min). On completion, each platelet bag was returned to the BB and all the related information was registered into the patient electronic medical record.

Results: Ninety two patients were included on the HPT, including 68 who received the first PT in-hospital (cohort A) and 24 whose first PT was already done at home (cohort B). Median age (range) in both cohorts was 56 (24–70) years and 61 (27–68) years, respectively. Multiple myeloma was the main diagnosis for ASCT in both cohorts (39 cases, 57% in cohort A, and 14 patients, 61% in cohort B). Cohort A received a total of 119 platelet units; median (range) of 1 (0–6); and 48 (40.3%) of them were given on AH regimen. In this group, only one patient presented a mild urticarial rash that quickly remitted with oral medication. In cohort B, 37 platelet units were administered; median (range) of 1 (0–4); 32 (86.5%) of them on AH regimen. Two patients presented urticarial rash, safely managed at home.

Conclusions: The HPT service demonstrated to be feasible and safe from the first PT. An expert team is crucial to provide appropriate training to both patients and caregivers. Helping to avoid unnecessary travel to the hospital for PT, especially during SARS-Cov-2 pandemic, contributes to improving the care provided to ASCT patients managed at home.

Disclosure: Nothing to declare

NP006.

Improving long-term quality of life for patients living with multiple myeloma: a service evaluation

Sarah Henshaw[1]

[1]*Nottingham University Hospitals - City Campus, Nottingham, United Kingdom*

Background: Multiple Myeloma (MM) is an incurable malignancy of the bone marrow. With improving survivorship patients are developing late effects and long-term consequences due to the treatments, alongside the disease itself. The 2017 guidance for screening and management of late and long-term consequences does not suggest where in the MM pathway this screening should be.

Methods: A quantitative, formative service evaluation using audit of the current screening and a correlational design, using one-way MANOVA evaluating the effect the stage of pathway has on symptom burden and distress. Symptom burden is assessed using the palliative outcome score MY-POS and distress using the distress thermometer.

Results: Patients ($N = 60$) are currently frequently screened for adjusted calcium (96%), urea and electrolytes (96%), liver function tests (90%) and blood pressure (62%). LH/FSH (0%), testosterone (10%), oestrogen (0%), T-SAT (30%), Vitamin D (15%) and BNP (3%) are least likely to be screened.

Completed questionnaires ($N = 223$) demonstrated that frequently reported symptoms were pain (76.2%), weakness or lack of energy (86.1%), drowsiness (69.1%), poor mobility (70.1%) and tingling in the hands and feet (65.5%). Distress is perceived higher by those patients on treatment ($M = 4.01$, SD:2.486). Higher levels of distress were demonstrated by patients post first line ($M = 3.33$, SD:2.446) and post third line ($M = 4.6$, $SD = 2.510$). MANOVA analysis demonstrated an effect on overall wellbeing of the patients in relation to position in the treatment pathway ($F = 13.35$, $p \leq 0.005$).

Conclusions: Screening and management of late effects and long-term consequence can improve quality of life. This evaluation has demonstrated the need for formal screening and management of these complications from diagnosis. Evaluation of symptoms and distress in the pathway has demonstrated that assessment at diagnosis, at the end of first line treatment or one year after starting a continuous treatment and repeated annually from when patients start third line treatment will improve QOL.

Disclosure: Nothing to declare

NP007.

At-home hematopoietic stem cell transplantation during SARS-CoV-2 pandemic

Núria Ballestar[1], *Cristina Gallego Miralles*[1], *Estel Güell*[1], *Pilar Ayora*[1], *Gloria García Barriga*[1], *Adelina Hernando Vicioso*[1], *Laura Villa Rodríguez*[1], *Susana Segura Lerida*[1], *Maria Carreras Figuerola*[1], *Alexandra Patrícia Martínez Roca*[1], *Mª Lourdes Corominas*[1], *Ariadna Domenech*[1], *Montserrat Rovira*[1], *Montserrat Valverde*[1], *Francesc Fernández Avilés*[1]

[1]*Hospital Clinic, Barcelona, Spain*

Background: The WHO classified severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) a pandemic on March 11th. This situation posed a significant pressure and previously unprecedented challenges to hematopoietic stem cell transplantation (SCT) procedure. Outpatient/at-home SCT it's a safe alternative to the conventional model, especially autologous-SCT. Before SARS-CoV-2 pandemic, 60% of patients underwent auto-SCT were managed at-home, while 25% were excluded due to lack of caregiver and 15% for clinical criteria. We aimed to describe how we adapted our home-based auto-SCT program, in force for almost 20 years in our institution, during the peak of the first wave of the SARS-CoV-2.

Methods: For patients with only one caregiver, a RT-PCR for SARS-CoV-2 in nasopharyngeal swab (NPS) for patient and caregiver before admission by conditioning was mandatory. If the RT-PCR in both was negative patient and caregiver were advised to maintain quarantine and a logistic support was activated (patient relatives or voluntaries) in order to avoid caregiver exposure. For patients with multiple co-habitants, the RT-PCR for SARS-CoV-2 was performed only in the patient and, if it was negative, the patient was confined at one bedroom home and adopt protective measures (FFP2 mask, gloves and protective reverse isolation) if occasionally needed to share common area. Patients were only allowed to leave residence for hospital visits, which were drastically reduced.

Results: On the SARS-CoV-2 pandemic, the safety of the ambulatory SCT model requires of news conducts of working, enhancing telemedicine visits, and use proper protective equipment as recommended by national and

international competent authorities. Home visits were about 30 min longer. During Spain´s government lockdown due to SARS-CoV-2, from March 13th to May 25th 2020, 14 SCT (8 auto and 6 allo-SCT) were performed at the Hospital Clínic of Barcelona, the same number as the same period in 2019. All six allo-SCT were managed in-hospital and 7 of 8 (87%) auto-SCT at home. The only patient who was not allowed to manage at home was for clinical criteria (Crohn's disease). No patient needed readmission on the early period after transplant. Neither patients nor caregivers developed symptoms of SARS-CoV-2 during the home-care attention.

Conclusions: At-home auto-SCT during SARS-CoV-2 pandemic is a safe procedure. For it, empowering patient and family education by nursing team is crucial.

Disclosure: The home confinement commanded by the central government made it easier for patients to have caregivers among their families. The adaptation in auto-SCT home-care program was a relevant contribution to maintain the SCT activity during the lockdown period.

NP008.

The nursing search coordinator (NSC) of the Rome transplant network (RTN), a jacie accredited metropolitan transplant program

Ilaria Mangione[1], Antonio Bruno[1], Raffaella Cerretti[1], Gottardo De Angelis[1], Benedetta Mariotti[1], Andrea Mengarelli[2], Francesco Marchesi[2], Laura Cudillo[3], Michele Cedrone[3], Giuseppe Avvisati[4], Maria Cristina Tirindelli[4], Paolo De Fabritiis[5], Teresa Dentamaro[5], Maria Giovanna Cefalo[5], Agostino Tafuri[6], Antonella Ferrari[6], Gaspare Adorno[1], Marco Andreani[7], Maria Troiano[7], Silvia Micciche[1], Alessandra Picardi[1], William Arcese[1]

[1]University Tor Vergata, Rome, Italy, [2]Regina Elena National Cancer Institute, Rome, Italy, [3]San Giovanni Addolorata Hospital, Rome, Italy, [4]University Campus Bio-Medico, Rome, Italy, [5]Sant' Eugenio Hospital, Rome, Italy, [6]Sant'Andrea Hospital, Sapienza 2nd University, Rome, Italy, [7]Bambino Gesù Hospital, Rome, Italy

Background: Allogeneic hematopoetic stem cell transplantation (HSCT) is the therapy of choice for many patients with hematological malignancies. For approximately one-third of the patients, a HLA identical sibling is available. Therefore, for the remaining two-third of the patients candidated to HSCT a search for an alternative donor is demanded. From 2006, the Rome Transplant Network (RTN), a JACIE accredited Metropolitan Transplant Program, adopted an algorithm which according to established criteria considers volunteer unrelated donor, cord blood unit and haploidentical related donor, respectively, as first, second and third choice for the identification of a potential alternative donor. Therefore the RTN has invested in a new role of nursing search coordinator (NSC) cooperating with the HLA laboratory and medical team in identifying the best donor for the patients.

Methods: The NSC continuously interacts with the Italian Bone Marrow Donor Registry (IBMDR) which supports donor identification and coordinates the procurement of HSCs for all Italian transplant Centers accredited to perform unrelated allogeneic transplantation. Concerning the timing of donor identification, the data are collected since 2011, when IBMDR standardized the use of patients' high resolution HLA typing form the beginning of the search activation. Within a Metropolitan HSC Transplant Program such as RTN, the work of the NSC is conducted on the day-to-day base communication with the different transplant Centers, the IBMTR and other Registries through phone, fax and e-mail. Once a month, a meeting between RTN Director, NSC and representatives of RTN Centers and HLA Laboratory is planned in order to update search progress, discuss patient status and in the case consider alternative search strategies. Finally, the NSC works closely with IBMDR to facilitate donor work-up and transportation of donor stem cells to transplant Center.

Results: From January 2011 to June 2020, 515 patients affected by different hematological malignancies received an allogeneic HSCT transplant. 156 pts were transplanted from HLA-identical sibling donors, 114 pts from haploidentical donors, 6 pts from syngeneic and 239 pts from unrelated donors. Following the donor algorithm described previously, the NSC and transplant physicians were able to identify 78% of alternative donors in a median time of 57 days (range, 29–111).

Conclusions: In a Metropolitan Transplant Program, the Nurse Search Coordinator plays a pivotal role among the Transplant Centers participating in the RTN, HLA Laboratory, Collection Centers, IBMTR, International Registries and Cord Blood Banks providing the identification of the most suitable donor in the shortest possible time.

Clinical Trial Registry: Not applicable

Disclosure: Nothing to declare

NP009.

EBMT (GEC) & LABMT collaboration project. LABMT nurses group 2020 continuing education program

Mariela Blanco[1], Eugenia Trigoso[2], Julia Ruiz[3], Patricia Perez Vargas[4], Ana Grace Barrantesa[5], Lucia Valzquez[6], Paola Viveros[7], Maika Garcia[8], Silvana Jubin[8], Liliana

Torres Ajalla[9], Cristina Vogel[10], Cristina Gallego[11], Lidiane Costa[10], Cristobal Frutos[6], Sebastian Galeano[8]

[1]Hospital Universitario Fundacion Favaloro, Caba, Argentina, [2]EBMT, Valencia, Spain, [3]EBMT, Madrid, Spain, [4]Fundaleu, Caba, Argentina, [5]LABMT, San Jose, Costa Rica, [6]LABMT, Asuncion, Paraguay, [7]LABMT, Santiago, Chile, [8]LABMT, Montevideo, Uruguay, [9]LABMT, Lima, Peru, [10]LABMT, Sao Paulo, Brazil, [11]Barcelona Clinic, Barcelona, Spain

Background: Continuous education is crucial in any Haematopoietic Stem Cell Transplantation (HSCT) program as established by the international JACIE_FACT standards, with a minimum of 10 h of annual training for nursing staff. However, these courses are often expensive and obtaining financial support for nursing staff challenging in many Low-Middle income Countries (LMICs) despite the key role of nurses for transplanted patients care.

Objective: In order to provide continuous education to Latin American nurses working in HSCT units, LABMT nurses group together whit EBMT, created an annual online training program in Spanish language, also translated to English.

Methods: A program of 10 topics of basic interests HSCT was carried out. Monthly presentations of 60 min each using EBMT educational platform were completed from March to December 2020. Presentations were delivered by Latin American and Spanish expert nurses in the field of HSCT. At the end of the training program, December 2020, participants must pass a multiple-choice online exam to achieve LABMT-EBMT training certification.

Results: Nine of the ten virtual meeting have been held, whit a total of 798 live attendees. It is worth mentioning that throughout the training program, a total of 1554 nurses registered the meetings and will be able to access all the presentations via EBMT eLearning platform after the 10 meeting are completed and the program finalized.

Conclusions: This first experience of virtual continuous training in Latin America has positive aspects: strengthening the community of nurses in the region with a common language, adapting international standards to our realities. Some difficulties found were accessibility limitations of the live connection for a significant number of nurses, due to the time difference between Spain and different Latin American countries. All nurses will be able to access the entire content that will be available at the end of the program.

Given the satisfactory results, we are working on the implementation of the second edition of the continuous online training program in Spanish for 2021 for nurses who provide care to HSCT patients.

Disclosure: Nothing to declare

NP010.

Prevention of nosocomial SARS-COV2 infections among hematological patients just by following well established nursing care standards

Isabel Salcedo de Diego[1], Pablo Cazallo Navarro[1], Begoña de Andrés Gimeno[1], Mireia Cantero Caballero[1], Beatriz Sánchez Sevillano[1], Rosa María Bodes

[1]Hospital Universitario Puerta de Hierro Majadahonda, Majadahonda, Spain

Background: Spain was one of the most affected European countries by COVID-19 pandemic during the first wave, with 22% of excess mortality from until May-2020 (1). One in three cases were diagnosed in Madrid and 25% were healthcare professional. Hematological patients may be especially vulnerable for COVID-19 infection. The aim of this work was to describe nursing staff standards in infection control and team management decisions in a hematology unit during COVID-19 pandemic.

Methods: Descriptive experience of measures and decisions taken to maintain safe nursing standards on hematological patients while addressing the hospital nursing demand for COVID19 patients, during the first wave of SARS-CoV-2 pandemic in a Spanish teaching hospital.

Results: Our hospital is a tertiary centre in Spain with highly specialized services, including a hematology transplant program accredited by JACIE since 2014. Following recommendations, like EBMT COVID19 guidelines, patients on the hematology ward with confirmed diagnosis/high suspicion of SARS-CoV2 infection, were transferred to COVID wards. The hematology ward consists of 17 single HEPA-filtered rooms with positive pressure. Nineteen Registered Nurses (RN) and ten nurse assistants assigned to the unit. Between March 1 and May 15, a total of 58 patients were admitted, a 21.6% reduction compared to 2019. To assist with the high hospital nursing demand due to the pandemic, senior nurses were kept at the unit while four junior RN and one nurse assistant were relocated to COVID wards, always assuring a ratio of 1 RN for 3–4 patients in HSCT patients and 1/5 in non-transplanted.

Between March 17 and April 15, six nurse assistants (67%) and six RN (40%) went on sick leave due to confirmed and/or symptomatic SARS-CoV2 infection. This event, although not formally studied, could point out toward an outbreak among the ward nursing staff as the cases grouped in space and time, moreover considering that the seroprevalence study performed at the hospital in May, showed a much lower incidence (19.1%) of nursing staff who developed SARS-CoV2 IgG or IgM.

Prior to development of COVID19 symptoms, all nursing staff had been looking after patients following JACIE-accredited nursing procedures, protocols and plans (accessible for all staff through the electronic quality management system e-BDI), to care for immunocompromised patients, including protective isolation practices with use of surgical masks, strict hand hygiene, infection control education and supervision of patients and carers. Only one inpatient was transferred to a COVID ward for suspicion of SARS-CoV2 community acquired infection prior to admission. None nosocomial SARS-CoV2 infections occurred on the transplant ward during the study period, neither in patients nor in other professional categories.

Conclusions: The compliance of nursing staff with well-established JACIE-accredited nursing care plans and an appropriate staff management of a hematology ward in a COVID19 highly affected hospital, may have contributed to protect vulnerable hematological patients against SARS-CoV2 infection. Conditions permitting, it would be advisable to use structure, process and results indicators to objectively measure nursing infection control practices during the pandemic. The authors would like to acknowledge the excellent work performed by the hematology nursing staff in such a challenging context.

Clinical Trial Registry: Not applicable

Disclosure: Nothing to declare

NP011.

A tale of 2 collections: CAR -T 'V' PBSC. Our single centre experience

Caroline Jupp[1], Crischi Magsipoc[1], Deirdre Moloney[1], Janet Baker[1]

[1]Royal Marsden NHS Trust, Sutton, United Kingdom

Background: Axicabtagene ciloleucel (Axi-cel) was approved as a therapeutic intervention at our institution in 2019 for high grade B-cell Non Hodgkin Lymphoma (NHL). Previously, peripheral blood stem cell collections (PBSC) for NHL accounted for 28% of our Apheresis service. However, CAR-T cell collections are a growing part of our workload for this same patient population. We therefore wanted to compare and contrast various aspects of both procedures. An additional aim was to promote nurse engagement with the collection and application of patient data, advocating the 'collect once and use often' approach.

Methods: We have so far performed 13 lymphocyte collections for the manufacture of Axi-Cel. Patient and procedural characteristics were obtained from our Apheresis data and patient electronic records. These were then compared with data from the last 13 PBSC collections for high grade B-cell NHL patients.

Results:

	CAR T collection (13)	PBSC collection (13)
Male	54%	54%
Average age	59 years (range 27–74)	57 years (range 27–71)
Average TBV processed	2.7 (range 0.9–3.7)	2.4 (range 1.8–3.0)
Average procedure time	300 min (176–412)	335 min (range 231–379)
Symptoms during Apheresis procedure	53%	31%
CMNC programme	92%	31%
Peripheral IV access	69%	69%
Average product volume	309 mls (range 260–390)	350 mls (range 180–500)
Target met:		
Target Met in single apheresis session:	85%	100%
	85%	62%
Treatment dose achieved:	92%	100%

Patient and procedural characteristics are shown in the table.

CAR-T collections: The target for these CAR-T collections was the processing of 12–15 litres of blood. 11 patients reached this target (85%), (13,264–15,000 mls). 2 patients were only able to process 10,327 and 3903 mls. All but 1 had a CAR-T product successfully manufactured from a single Apheresis procedure.2 patients developed mild citrate toxicity (18%). Documentation identified that 4 patients were very anxious and a further 5 patients (38%) experienced symptoms related to their disease (3 × pain, 1 × nausea and 1 × extensive cutaneous wound).

PBSC collections: The target yield for this patient cohort was $1.8 - 2 \times 10^6$ CD34 cells/kg. All patients achieved this; 8 from one Apheresis session (62%), 4 (30%) required a second session, and 1 (8%) patient completed three Apheresis sessions over 2 mobilization episodes. Although 4 patients experienced mild-moderate citrate toxicity (31%), none experienced any other symptoms.

Conclusions: In terms of patient characteristics, many similarities were identified. However, there were notable differences in procedural characteristics. Patients completing CAR-T collections were more likely to experience disease related symptoms on the day, some severe, (these

patents are not in remission), and greater anxiety, which can make the procedure more challenging. Using the CMNC programme, we were able to process more blood in less time with a smaller product volume. Additionally, there was a more predictable finish time for courier pick up, and a smaller volume to pack for transport.

It would be useful to explore the patient experience of this procedure in the future, in addition to collecting qualitative data.

Disclosure: Nothing to declare

NP012.

Creation of the first course on hematopoietic stem cell transplantation (HSCT) nursing in Latin American. Argentine society of hematology

Mariela Blanco[1], Patricia Perez Vargas[2], Ana Mendoza[3], Claudia Nuñez[3], Juan Real[4], Gonzalo Ferini[5], Belen Rosales[6], SIlvina Palmer[6], Miguel Gonzalez[7]

[1]Hospital Universitario Fundacion Favaloro, Caba, Argentina, *[2]Fundaleu, Caba, Argentina*, *[3]Hospital Garrahan, Caba, Argentina*, *[4]Hospital Aleman, Caba, Argentina*, *[5]Hospital Italiano de Buenos Aires, Caba, Argentina*, *[6]Gatmo, Caba, Argentina*, *[7]SAH, Caba, Argentina*

Background: As an initiative of the Nursing Subcommittee of the Argentine Society of Haematology (SAH) motivated by the lack of academic training in the specialty, work began with the Argentine Group for Bone Marrow Transplantation-Cll Therapy (GATMO_TC) in the creation of an online HSCT course for nurses. The objective is to create an online nursing course for Latin American nurses.

Methods: A group of coordinators, 3 teaching nurses and 2 specialist doctors was formed who, for a year, drew up the course program and summoned specialists from different hemopoietic transplantation centres to address the contents with a multidisciplinary approach. The development of the course was defined in 8 theoretical modules and the requirement of passing 5 partial exams of multiple options and a final written and oral exam, as well as the delivery of a standardized operating procedure. In September 2020, the diffusion of the course bedins whith the technical and administrative support of the SAH.

Results: The online classes began on October 5, and it is expected to end in July 2021. After the announcement and diffusion for 29 days, enrol 125 nurses began, 99 Argentines and 26 Latin Americans, from Bolivia, Chile, Colombia and Peru. With the possibility of taking the course according to the schedule. Online classes have the option of interacting on Mondays with teachers and course coordinators. Obligatory and optional specific bibliography is provided. During November 2020, the first two modules and the first partial exam have already been completed. In the first opinion survey about the tools and topics presented, the result was 97% with a positive opinion.

Conclusions: The experience has been satisfactory, considering that the beginning of the course was carried out in the context of the Covid 19 Pandemic in addition to the short period of application, which shows the need for academic training in the specialty of nurses and graduates from Latin America.

It is a path of recent beginning, which requires continuity of the first edition of the HSCT course for nurses and incorporating the necessary improvements.

Disclosure: Nothing to declare

NP013.

Management of patients suffering from an hemato-oncology malignancy and those undergoing hematopoietic cell transplantation during the COVID-19. How do we protect them?

Anna Serrahima - Mackay[1], Laia Guàrdia - Roca[1], Noemí Bartolomé[1], Dennis Heng Lin[1], Ana Garcia - Monzó[1], Sara Benítez[1], Cristina Grima[1], Laura Doutres[1], Selma Vallecillos[1], Cristina Casado[1], Tanit Garcia[1], Desiré Vigo[1], Maria Corbella[1], Maria Angeles Ulloa[1], Cassandra Ixena Andersson[1], Laia Ginestà[1], Ariadna Doménech[1]

[1]Hospital Clínic de Barcelona, Barcelona, Spain

Background: Due to the growing demand for hemato-oncology inpatient beds, on February 12th a new twenty-bed ward was opened at our center. By that time, the Hospital Clinic of Barcelona (HCB) admitted the first COVID-19 patient who tested positive in Catalonia. Then, the pandemic spread, reaching its peak in April, in Spain. The restrictions where implemented all over to contain the virus. The hematology ward sealed up: visits strictly limited, all having to wear day long surgical masks, one-way valve patients' masks avoided, and staff PCR periodically performed. In this context, aiming to provide specialized cancer care for those who contracted the virus, it was decided that the brand-new hospitalization ward will treat hemato-oncology patients with suspected or diagnosed COVID-19. This would allow to continue usual activity at the Hematology and Oncology units, including highly specialized cancer care such as Stem cell transplantation (SCT), acute leukemia or palliative care.

Methods: All Arrangements were aimed to contain the virus in the "COVID-19 specific ward": only cancer COVID-19+ and doubtful patients were admitted. Exclusive personnel, cancer trained, assigned to work in that unit

and nowhere else. All the ward common areas were considered "clean" and rooms "dirty", so the processes for donning and doffing personal protective equipment (PPE) was mandatory for all entering each patient' room. Regular treatment route adjustments and schedules were made to minimize nurse-patient exposure. Premade material kits were prepared to facilitate procedures, and patients were empowered from monitor some of their own vital signs to flushing their ports were promoted.

Results: During Spanish lockdown due to SARS-CoV-2, from March 16th to May 10th, 2020, 12 SCT were performed at the HCB, being six of them allogenic, the same number as the same period in 2019. Six CAR-T infusions were performed, one more compared to the same period the year before.

COVID-19 patient suffering from hemato-oncology disease received care by oncology nurses, continuing their care plans and even being able to administer chemotherapy if needed even with the persistence of SARS-CoV-2 virus.

Conclusions: Having a COVID-19 hemato-oncology monographic ward was determinant, allowing to actively treat the underlying cancer condition during pandemic restrictions, such experience and service reorganization may help to face future situations.

The previous knowledge of oncology nurses on protective isolation measures against opportunistic infections has been a great advantage to face COVID. At the same time hematologic patients and caregivers were also used to deal with infection prevention having hygienic habits integrated into their everyday routine. It also made easier for them to assimilate new care provision and preventive measures to prevent COVID-19.

Patient isolation increased patient care needs during hospitalization so nurses' ratios should be revised to decrease exposure and not having to rush.

Lockdown measures and fear of being infected, keep patients at home avoiding essential hospital visits, highlights once more the need for a specific emergency pathway only used by oncologic patients.

Disclosure: The authors whose names are listed immediately above certify that they have no conflicts of interest to declare.

NP014.

COVID-19 challenges—To the point of cell delivery - The reality

lindsey Ashton[1], Angela Leather[1]

[1]*The Christie Hospital, Manchester, United Kingdom*

Background: Here we intend to highlight the new challenges of organizing cell donation from a donor medical through to cell delivery at the Transplant centre during the COVID-19 pandemic. Activity within the Transplant program has been reduced in 2020 due to the Covid 19 pandemic. However this hasn't come with a reduced work load. The Pandemic has presented Transplant teams with new challenges, hurdles and obstacles to consider.

Methods: The donor is pivotal and the starting point of the allogeneic transplant. We are requiring more commitment from our donors in these unprecedented times. The risk of visiting a hospital environment from both an emotional and physical wellbeing. Weighing up the balance of protecting the donor and minimizing the risk. When to Screen, the number of Covid tests required. The additional inconvenience of isolating that's required prior to donation. Financial cost, employer and family support. The guidelines are available for us to follow and interpret in addition to internal trust specific guidelines and policies, all of which are forever changing.

Results: During the first 4 months of the pandemic being a treating cancer centre, we were unable to continue as a collection centre. There were concerns for donor and patient safety, capacity issues and staff numbers all considered too greater risk. We recommenced in September prior to the second outbreak and were faced with certain challenges. In 2019 we saw 99 unrelated donors of which 77 Proceeded to donate. From January to April 2020 when the pandemic started to hit and the service was put on hold, we saw 28 donors for medical and 20 donors proceeded to donate.

Since, recommencing our service as a collection centre in September, we have been faced with new challenges. Two donors were found to be positive prior to donation. One at medical and the other post medical pre GCSF. Both resulted in a delayed transplant for the recipient, with additional support being required for the donors. We also experienced a positive Covid result after donation with uncertainty for the transplant centre if to use the cells—ultimately a transplant centre decision. Most harvested cells are being cryopreserved, increasing the risk of donated cells not been used. Throughout this process we are learning there are no easy answers. Further hurdles include Donors living overseas and the logistics of cell collection and time scales transporting the cells with bans and restrictions on travel, closed borders, cancelled flights and courier restrictions.

Conclusions: How did we manage and overcome these challenges. At what cost? Psychological, physical and financial. For whose benefit? Donor, Recipient or both. This pandemic is forever evolving with no end in sight. We can only learn from what we know so far and improve on our practice supporting our donors at every step of their altruistic journey of their donation

Disclosure: none

NP015.

Transition from paediatric to the adult clinic in sickle cell disease: the role of the specialized nurse

Marijke Quaghebeur[1], Johan De Munter[1], Sophie Van Lancker[1], Evi Sprangers[1], Sofie De Wilde[1], Nicolas Albrecht[1], Alexander Schauwvlieghe[1]

[1]*University Hospital Gent, Gent, Belgium*

Background: Sickle Cell Disease (SCD) is a devastating inherited red blood cell disorder where patients produce unusual shaped red blood cells which can lead to vaso-occlusion. Stem cell transplant is the only cure but is limited to a minority of patients and for most patients there is no cure. Management of SCD is primarily aiming to avoid pain crises and its complications. Treatment demands regular hospital admissions for pain relief, hyperhydration, oxygen support, IV antibiotics and sometimes exchange transfusion. Literature describes barriers in SCD patients, e.g., lack of disease knowledge, health decision-making experience, compliance and financial problems. The incidence of SCD is increasing worldwide and migration has led to the spread of SCD across the world. With more than 93% of children with SCD reaching adulthood, an effective transition to adult care provides continuity between paediatric and adult healthcare settings. A unprepared transfer to adult clinics for young adults and adolescents (AYA) with SCD is associated with declining health outcomes, including increased acute care use and mortality. Specialized nurses play a vital role in the transition period within a interdisciplinary team.

Methods: A retrospective case study is presented. Data are extracted from the patient file. Informed consent was obtained and approval was given by the institutional review board.

Results: The case concerns a male patient from Jamaica diagnosed with SCD in 2001. He migrated Belgium in 2005. His first visit to the paediatric department took place in July 2006, with complains of periodic episodes of pain. He never had blood transfusions, his vaccination status was unclear and there was no medication history for SCD, only prophylactic antibiotics. As there were no available HLA identical siblings, he was not eligible for transplant. He was admitted for the first time in 2007 with a sickle cell crisis and had a difficult social and financial situation. Since 2011, he mostly came alone to the hospital, despite efforts to engage his mother. He started with hydroxyurea since July 2011 due to many crises with the need for hospital admission. Despite multidisciplinary actions, noncompliance and several care gaps staid a problem. In 2019 chronic transfusion therapy (RBCX) were started after several periods of noncompliance and multiple emergency admissions due pain crises. An emergency admission in 2020 and a temporary shortage of paediatric beds, forced a hospitalization on the adult haematological ward where RBCX was no common practice.

Conclusions: Above case inspired physicians and nurses to change the overall SCD management on both, paediatric and adult department, including the set-up of a SCD transition program. A multidisciplinary SCD transition pathway and structured meetings were organized between both teams. A meticulously planned transition is important to establish a new professional relationship between patient and health profession avoiding loss of follow-up. Nurses play a key role in assessing the need of young adults for transition, a process where adolescents are prepared to take charge of their own healthcare management to increase future quality of life outcomes.

Disclosure: no conflicts of interest

NP016.

Nursing interventions to prevent hypertensive emergencies in children undergoing hematopoietic stem cell transplantation

Deepa Karmegam[1], Jerlin Robin[1], Jeevitha Sambath[1], Viveka Veeramani[1], Revathi Raj[1]

[1]*Apollo Cancer Centre, Chennai, India*

Background: Hypertension is the most common side effect of calcineurin inhibitors seen in children undergoing hematopoietic stem cell transplantation (HSCT). Early recognition and treatment of hypertension can prevent progression to hypertensive crises such as seizures and posterior reversible encephalopathy syndrome (PRES). In our study, we aim to analyze the risk factors for hypertension in children and the incidence of PRES in our unit. We have used this information will help identify the children at risk early and guide aggressive control of hypertension and prevent seizures.

Methods: The study was conducted at the Blood and Marrow Transplantation unit at our hospital from January 2017 to December 2019. All patient families had been counseled in detail regarding the complications of HSCT and informed consent was obtained. Hypertension was defined as a blood pressure above the 90th centile for the age and was followed up by the standard age wise normogram from a measurement using a multiparameter monitor and an appropriate size cuff. Hypertension related emergencies were defined as seizures and PRES.

Results: A total of 425 children underwent HSCT in our unit of which 68 developed hypertension (16%). The children aged 5 months to 18 years with a male female ratio of 1.6:1. The majority of the HSCT were performed for benign hematological disorders at 73% with leukemia accounting for 27%. The incidence was higher in infants and in children undergoing matched unrelated donor

transplantation for thalassaemia major. The incidence was high when calcineurin inhibitors were used along with steroids. We documented PRES in 17/68 (25%) and these children needed care in the pediatric intensive care unit including mechanical ventilation in 4 children. The timing of the event was statistically significant with over 90% seizures due to hypertension occurring early morning. The interventions included fluid restriction, antihypertensive agents including nifedepine, atenolol, enalapril, prazocin, clonidine and intravenous sodium nitroprusside or labetolol. Seizure control was achieved with the use of intravenous levitiracetam or fosphenytoin along with 3% sodium chloride infusion to reduce intracranial pressure. The calcineurin inhibitor was withdrawn in only 3 children and tacrolimus was replaced with cyclosporine in all infants with hypertension. All children recovered completely with no neurological deficit.

Conclusions: Hypertension occurs in 16% of children undergoing HSCT. The high-risk groups include infants with primary immune deficiency and children undergoing alternate donor HSCT for haemoglobinopathies. Progression from hypertension to its complications such seizures and posterior reversible encephalopathy syndrome can be prevented by working with physicians. Early morning vigilance and serial recording of blood pressure by nurses at the bedside is the single most important factor in the management.

Disclosure: No conflict of interest.

NP017.

Neurological assessment in paediatric patients after CAR-T infusion

Giovanna Locatelli[1], Giulia Del Giorno[1], Giulia De Riso[1], Marta Canesi[1], Nadia Mandelli[2], Claudia Negri[2], Adriana Balduzzi[3], Silvia Nucera[3], Sara Napolitano[1], Laura Russo[1]

[1]Fondazione Monza Brianza per il Bambino e la Sua Mamma, Monza, Italy, [2]Hsgerardo, Monza, Italy, [3]Università degli Studi di Milano Bicocca, Monza, Italy

Background: A.Z., 5 years old, was infused with tisagenlecleucel, due to refractory relapsed ALL. He presented with seizures 11 days after CAR-t infusion. The child "looked strange" to his caregivers and nurses in the few hours prior to the event, despite a normal neurological examination.

The event was consistent with post-CAR-T neurological toxicity, known as immune effector cell-associated neurotoxicity syndrome (ICANS).

The earliest pattern of ICANS is tremor and dysgraphia, that's why the patient's neurological status is daily assessed with a writing test by healthcare providers in our center. In addition, physicians perform a complete neurological examination daily.

These tests have some limitations, first of all they depend on the child's age and his/her cognitive skills.

The aim of this literature review is to identify validated tools for neurological assessment to be extended to daily practice.

Methods: We performed an advanced research in Pubmed and Cinhal using these term associations: neurotoxicity assessment AND Car T and nursing.

We have limited the range of the findings to patients aged from 0 to 18 years and we have chosen only publications of the last 5 years.

Results: ASBMT suggests two different tools to score ICANS associated with CAR T therapy: ICE (Immune Effector Cell Associated Encephalopaty Score) and CAPD (Cornell Assessment of Paediatric Delirium).

ICE consists of 5 items: impairment in speech, orientation, handwriting, concentration and ability to follow simple commands.

CAPD is an 8 items screening tool that evaluates: level of consciousness, communication, motor symptoms (restlessness or hypo-activity) and responsiveness to interaction.

ICE can be used in adults and children ≥12 years old with sufficient cognitive ability, whereas CAPD is the most suitable tool for children <12 years old or all children with baseline developmental delay.

A lower score in ICE and an higher score in CAPD, is associated with a neurological impairment

The tools are very easy to perform in routine practice; CAPD takes only 2 min to be completed and can be slightly adjusted according to the child age.

A joint assessment by two nurses, at bedside, upon shift change, is recommended in order to reduce subjective variability.

Conclusions: Cognitive assessment should be routinely performed besides the evaluation of the neurological status in patients undergoing treatment with CAR-T.

The earliest signs and symptoms of ICANS can be subtle, particularly in children, so a pediatric tool is required in order to investigate the child baseline and level of cognitive performance.

Literature shows that CAPD and ICE are suitable tools to assess ICANS in CAR-T patient, but only CAPD is suitable for younger children and has been validated for Italian users by Simeone (2019), even if not in the pediatric hematological setting.

In conclusion, a pattern similar to the one presented by A. Z. will be more timely and more precisely assessed in the future by means of the objective CAPD tool, which opens the possibility to improve staff skills in our unit.

Disclosure: Nothing to declare

NP018.

The work of the rehabilitation department with volunteers during the COVID-19 pandemic

Rashida Bikulova[1], Tatiana Kozlova[1], Svetlana Oleshko[1], Evgenia Misiavichute[1], Anastasiia Popova[1], Irina Artemeva[1], Alisa Volkova[1], Inna Markova[1], Ludmila Zubarovskaya[1], Alexander Kulagin[1]

[1]*RM Gorbacheva Research Institute, Pavlov University, St. Petersburg, Russian Federation*

Background: Volunteers and charities play a large role in creating the emotional wellbeing of patients and their families during cancer treatment. The patient rehabilitation program includes various options for recreational activities. The pandemic posed a challenge for everyone and required an isolation regimen for our patients and their caregivers. The staff of the department made efforts to organize events for communication with children online. The aim of the work was to study the forms of work and analyze the effectiveness of volunteer organizations in a new format.

Methods: In a prospective single-center study, we analyzed events organized by volunteers and charitable foundations in cooperation with the staff of the rehabilitation department from April to October 2020. The work focused on both children aged 5–18 and their caregivers. At the time of the study, all patients were at different stages of treatment and observation for various types of hematological and / or hereditary diseases in the form of high-dose polychemotherapy and hematopoietic stem cell transplantation. The events were carried out to patients both in the hospital and on an outpatient basis. We evaluated the types, format, duration and effectiveness of online meetings.

Results: During the study period, 6 organizations took part in online events, among which were employees of 4 funds, 1 art space and 1 library. During 7 months, 25 meetings were held, of which 33% were focused on parents as well. A total of 169 patients and caregivers participated. The types of meetings were distributed as follows: 8%—lectures for parents, 12%—reading fairy tales to children, 28%—masters of art therapy classes and competitions for children's works, 16%—play therapy, 32%—meetings with Olympic champions and a coach for carers and employees and 4%—beauty days with a dermatologist and psychologist for mothers of patients. Predominantly ZOOM platform was used and recordings were placed on the you-tube channel.

We noted positive feedback from all the meetings and special thanks for the opportunity to watch off-live, which was convenient for the patient regimen.

Conclusions: A variety of online resources can be used for educational and entertainment programs.

The experience of telecommuting during a pandemic is new, but very interesting and useful and can be used during long-term treatment of patients.

Online events can be not only an emergency replacement for the usual events, but also complement and diversify them.

Disclosure: no conflict of interest

NP019.

Evaluation of the effectiveness of nasogastric catheterization as a measure of nutritional support in pediatric patients undergoing allogeneic hematopoietic stem cells transplantation

Andrea Galdon[1], Eugenia Trigoso Arjona[1], Pablo Garcia Molina[2]

[1]*Hospital University and Polytechnic La Fe, Valencia, Spain*, [2]*University of Valencia, Valencia, Spain*

Background: In the pediatric patient, the absence of artificial nutritional support can quickly trigger multifactorial malnutrition. This situation increases the risk of malnutrition and for this reason, nutritional support is vital. Traditionally, parenteral nutrition has been considered the choice for practical reasons, even though it carries a greater risk of complications, with enteral nutrition being relegated to a secondary role.

Aim: To evaluate the effectiveness of a nutritional intervention based on feeding through nasogastric catheterization vs. that performed through an intravenous catheter, on the nutritional status of pediatric patients undergoing allogeneic hematopoietic stem cell transplantation from a third level pediatric hospital.

Methods: 168 pediatric patients between 1 and 19 years old undergoing allogeneic hematopoietic stem cells transplantation, distributed in two groups. Group A: patients to whom nutritional intervention was applied and group B formed by patients to whom only parenteral nutrition was administered or enteral nutrition was not tolerated. In order to evaluate their nutritional status on days −7, 0, +7, +14 and +21 of the transplant and to analyze the incidence of acute malnutrition in both groups through the variable nutritional improvement.

Results: The scarcity of published studies regarding nutritional aspects in the pediatric oncology population in general and more specifically in the transplant population generates doubts in its multidisciplinary approach. Among the independent variables proposed in the present study, the variable nutritional status stands out, with a qualitative polytomical character. For its creation, the z score was used;

based on the WHO child growth standards. Through the analysis of the variable nutritional improvement, it is deepened in the knowledge of the variations observed in acute malnutrition according to selected nutritional support modality, throughout the allogeneic transplant process, in a wide range of pediatric ages. The findings of the present study aimed to demonstrate the supremacy of the modality of enteral nutrition carried out by means of nasogastric catheterization, as opposed to the modality of parenteral nutrition, as a less invasive and more effective measure in the control of acute malnutrition during the hospitalization.

Conclusions: The assessment of the nutritional status of pediatric oncology patients is a vital parameter and should be carried out before, during and after antineoplastic treatment. This fact justifies the need to create studies that deeply evaluate all aspects related to nutrition. Malnutrition, as an early indicator of deviation in nutritional status during all phases of transplantation. It is vital for the creation of new projects that promote the scientific search of knowledge betting as a last resort in the adequate development and growth of the oncological child, avoiding malnutrition.

Disclosure: Nothing to declare

NP020.

Nursing care for acute leukemia children with complicated BCG vaccination during chemotherapy. Description of clinical cases

Anton Silov[1], Zhemal Rakhmanova[1], Olesya Paina[1], Ludmila Zubarovskay[1], Alexander Kulagin[1]

[1]*Pavlov University, Sankt-Peterburg, Russian Federation*

Background: In Russian Federation, the BCG vaccine is included in the vaccination schedule. Infant leukemia is a rare disease; usually the diagnosis of infant leukemia is established later than BCG-vaccination. Patients during chemotherapy are in a high risk of complicated BCG-vaccination. These children require specific nursing care in hematologic department.

Methods: We describe two clinical cases of infant leukemia children with complicated BCG vaccination during chemotherapy before allogeneic hematopoietic stem cell transplantation. Special methods of nursing manipulation for these children were: examination of the patient skin, BCG papule/pustule measurement, body temperature measurement, local treatment of the skin.

Results: Clinical case №1: In February 2020, 9 day old neonate was diagnosed infant AML. Patient received BCG-M vaccine on the 3rd day after birth. Patient received 1st course of chemotherapy according to age and diagnosis. After the chemotherapy patient was admitted to continue treatment to Gorbacheva Memorial Institute. Objective examination: in the field of vaccination BCG-m there was skin hyperemia in the vaccine site and in the elbow area. Patient had febrile fever. The antimicrobial therapy prescribed by physician was as follows: Meropenem, linezolid, anidulafungin. The patient was also prescribed local therapy: lotions with Dimexide, hypertonic solution. Lotions with dimexide in 5 days led to increased skin hyperemia with no signs of increase of area. Then, physician prescribed only lotion with hypertonic solution for times a day. A month after local and systemic antimicrobial therapy, local BCG-itis resolved through a pustule and crusting. In April 2020, the patient underwent hematological recovery of peripheral blood. After chemotherapy a haploidentical allogeneic stem cell transplant was performed. By December 2020, the patient has complete donor chimerism, no signs of AML, and no signs of BCG infection.

Clinical case №2: 2nd of August 2019 1 month neonate was diagnosed B-I acute lymphoblastic leukemia. Patient received chemotherapy according to the Interfant-05 protocol. After hematological recovery after the 1st course of chemotherapy 21th of September 2019 at the BCGm vaccination site (upper third of the left shoulder), the appearance of an infiltrate $d = 9$ mm, in the center a pustule up to 4 mm. The patient received the same systemic antimicrobial therapy, chemotherapy was suspended. This child also received local therapy with hyoertonic solution for times a day. In the end of October the localization of BCG-itis was noted, infiltrate regressed and resolved through formation of pustules and crusts. Match related allogeneic stem cell transplantation was performed 12th of November 2019 By December 2020 patient is alive in remission with full donor chimerism and no signs of BCG infection.

Conclusions: Joint and attentive management of patients with infant leukemia by nurses and doctors allows timely diagnosis of a complicated BCG vaccination, to treat this complication with the success, and to timely perform allogeneic stem cell transplantation in patients with a high-risk acute leukemia.

Disclosure: no disclosure

NP021.

Infusion of chimeric antigen receptor T Cell (CAR-T CELL) therapy in paediatric patients receiving: one-center experience

Alba Fernandez-Arroyo Garcia[1], Pedro Gil Lacalle[1], Maria Teresa Alvarez Gomez[1]

[1]*Hospital Universitario La Paz, Madrid, Spain*

Background: In December 2017, the University La Paz Children's Hospital started with Chimeric Antigen

Receptor-T cell therapy (CAR-T cell). Until now 14 patients have been treated with CAR-T cells in our centre. Patients' median age was 8.2 years (range 1.7–19.4). Eleven patients were diagnosed with B-ALL and three patients with B-cell lymphoma (DLBCL).

Patients were hospitalized for a median of 23 days (17–47), from lymphocyte depletion chemotherapy until patient discharge.

To provide nursing care to these patients, SOPs and protocols were developed, describing care from infusion to short-term toxicities.

Methods: Review of written age-specific Standard Operating Procedures for nursing care related to the administration of CAR-T cell therapy in University La Paz Children's Hospital.

Results: The CAR-T cell infusion process is scheduled because it requires coordination with other Services. The first step is to contact the person responsible for intrahospital transport in the Collection and Processing Unit to agree on the time at which the CAR-T cell will be infused and administer premedication. Once the product is thawed, it should be infused as soon as possible, within a maximum of 20–30 min.

To ensure safety during administration, there is a software application that allows the registration of the validation act related to the treatments that are going to be administered. Through mobile devices (PDA) it guarantees the fulfillment of the correct steps of administration referred, among others, to patient, drug, route, dose, time and order.

According to our protocol, during the infusion:

There should be at least two nurses with the patient.
Nurses handling these CAR-T cells should take the necessary precautions (nitrile gloves and safety glasses).
Monitoring of vital signs during infusion and up to 2 h afterwards.
Do NOT use a leukocyte-depleting filter.
Prime the tubing prior to infusion with normal saline and infuse all contents of the infusion bag.
Rinse the infusion bag with 10–30 mL normal saline while maintaining a closed tubing system to assure as many cells as possible are infused into the patient.

We have infused 14 pediatric patients, only one of them (7.14%) has experienced incidents related to the infusion of CAR-T cells which required administration of antihistamines, IV fluids, transfer to ICU Unit for close monitoring.

Conclusions: The implementation of the Advanced Cell Therapy Program at La Paz Children's Hospital has been a challenging process. There were no other incidents observed during the administration of CAR-T cells.

The care of these patients are the core competencies for nurses in CPH transplantation. It is important to establish an education and training program for nurses in CPH transplantation and cell therapy.

Disclosure: Nothing to declare.

NP022.

Implementation of the advanced cell therapy program: Experience AT LA PAZ university hospital

Alba Fernandez-Arroyo Garcia[1], Pedro Gil Lacalle[1], Maria Teresa Alvarez Gomez[1]

[1]*Hospital Universitario La Paz, Madrid, Spain*

Background: The development of CAR-T cell therapy is a challenge for nursing teams. JACIE includes the cell therapy of immune effectors in the 7th edition of the international standards. Specific training is required for each nurse involved in the care of patients with immune effector cell therapy.

Methods: We have identified the critical topics in our service for establishing a care process for pediatric patients.

Results:

JACIE accreditation: Standards for Administration of Immune Effector Cells (IEC) were developed in FACT-JACIE Standards for Hematopoietic Cellular Therapy in edition 7 in 2018. In recent years, the focus has been on CAR-T cells which are principally being applied in the HSCT setting. To be eligible for accreditation that includes immune effector cells, the program must have treated at least one such patient. In addition, all other standards applicable to these cells must be met.

Definition and review of outcome analysis and/or product efficacy for immune effector cells:

Time to white cell and platelet recovery,
Incidence of cytokine release syndrome and neurotoxicity,
Performance status: Lansky (<16 years) y Karnofsky (>16 years),
Target disease response, and disease-free survival.

Written agreement with Intensive Care Unit (ICU): facilities must document a plan for immediate transfer to an ICU. There shall be written guidelines for communication, patient monitoring, and prompt triage or transfer of patients.

Policies and Standard Operating Procedures (SOP): There shall be written age-specific SOPs or guidelines for nursing procedures including care of immunocompromised recipients, central venous access device care, administration of cellular therapy products, detection and management of immune effector cellular therapy complications including cytokine release syndrome, neurologic toxicity; and

recognition of cellular therapy complications and emergencies requiring rapid notification of the transplant team.

Staff training: training may be part of formal job orientation and a specific continuing education program for immune effector cellular therapy should be established. These are the core competencies for nurses in Hematopoietic progenitor cells (HPC) transplantation and cell therapy. In this Unit we have established an education and training program for nurses on HPC transplantation that consist of an initial education program, and a formal training, including two supervised HPC infusions.

Conclusions: The implementation of the Advanced Cell Therapy Program at La Paz Children's Hospital has been a challenging learning and training process for the entire team. Since 2018 we have infused 14 pediatric patients, so we believe we are an experienced team that can serve as a reference to other centers that want to incorporate this therapy and increase the quality of patient care. Centres need to continually review how patients´ needs are met and keep on improving pediatric care.

Disclosure: Nothing to declare.

NP023.

Role of nursing in the care of patient's skin with cutaneous chronic graft-versus-host disease after allogeneic haemopoietic stem cell transplantation: a questionnaire-based survey

Jacqui Stringer[1], Katerina Bakunina[2], Anne Kozijn[3], Marta Canesi[4], Sarah Liptrott[5], Michelle Kenyon[6], John Murray[1]

[1]The Christie NHS Foundation Trust, Manchester, United Kingdom, [2]EBMT Statistical Unit, Leiden, Netherlands, [3]EBMT Data Office, Leiden, Netherlands, [4]MBBM Foundation, Pediatric Department, University of Milano-Bicocca, Monza, Italy, [5]Division of Hemato-Oncology, European Institute of Oncology IRCCS, Milan, Italy, [6]King's College Hospital NHS Foundation Trust, London, United Kingdom

Background: Chronic GvHD (cGvHD) is a common long-term consequence of allogeneic haemopoietic stem cell transplantation. As cutaneous chronic Graft versus Host Disease (ccGvHD) can have a profound effect on quality of life, supportive care is crucial for ccGvHD patients. We aimed to gain an understanding of current practice in ccGvHD management within EBMT member centres, including level of access to extracorporeal photophoresis (ECP) as a supportive therapy.

Methods: In this cross-sectional survey, a self-designed online questionnaire on ccGvHD management and ECP was distributed among all nurse representatives of EBMT transplant member centres. The questionnaire included 41 questions, addressing: ccGvHD management policy, monitoring, patient education, treatments provided (with a special focus on ECP), and referral. Participation was voluntary and anonymous. The survey data were analyzed using descriptive statistics. In case of non-response on a given question in the questionnaire, the response was classified as 'Don't know'.

Results: A total of 110 questionnaires were returned, the majority of respondents being nurses (92.7%) and having 15 or more years of relevant experience (53.6%). While most centres reported to have a policy for monitoring a possible ccGvHD patient (71.8%) and affiliation of a dermatologist for referral (59.1%), few have access to a specialist nurse (e.g., tissue viability nurse) to support the transplant department with the management of ccGvHD patients (21.8%). All respondents indicated that assessment of ccGvHD is undertaken by the physicians, sometimes a nurse is involved (39.1%). Education is routinely provided (80.9%) in the majority of the centres, delivered mostly in a combination of oral and written information by physicians (76.4%) as well as nurses (68.2%). Topical management of ccGvHD skin is not standardized in most centres ($n = 58$, 52.7%) and treatment is increasingly tailored with worsening severity. Most centres have ECP available for ccGvHD patients (65.5%) or can refer to another centre for ECP treatment (10.0%). ECP is primarily provided as a therapy to patients with moderate to severe ccGvHD (40.0% and 66.4%, respectively) and is not routinely used for management of patients with mild ccGvHD (8.2%). QoL and/or emotional impact is assessed by most centres (60.9%), usually by informal questioning (43.6%).

Conclusions: Our findings identify little standardization in the topical management of ccGvHD, despite skin being the most commonly cited organ affected by cGvHD. Treatment is increasingly tailored with worsening severity and ECP is reported to be used for moderate to severe ccGvHD primarily. Our results indicate that additional research into appropriate treatment of ccGvHD skin is needed to establish guidelines for treatment selection.

Disclosure: Nothing to declare

NP024.

Intraventricular injections via ommaya reservoir may be performed by a trained nurse as a part of pediatric neurooncology transplant team effort

Lubov Shepeleva[1], Asmik Gevorgian[1], Ilya Kazantsev[1], Ludmila Zubarovskaya[1], Olga Zheludkova[1], Alexander Kulagin[1]

[1]Raisa Gorbacheva Memorial Institute for Children Hematology and Transplantation, Saint Petersburg Pavlov State Medical University, Saint-Petersburg, Russian Federation

Background: Brain cancer forms a group of most common pediatric solid tumors. Most patients require a complex intensive treatment, which in some cases require high-dose consolidation. Our Institute has formed a dedicated pediatric neurooncology transplant team including pediatric oncologists, neurologist, interventionist and nurses in order to provide optimal care for recipients of high-dose chemotherapy (HDCT) with autologous hematopoietic stem-cell transplantation (auto-HSCT). Beside high-dose intravenous therapy, intraventricular chemotherapy via Ommaya reservoir also plays an important role in patients with embryonal brain tumors. Although these injections are usually performed by a doctor, we have established a training routine enabling a neurooncology team nurse do the procedure with minimal supervision.

Methods: From 2010 to 2020, a total of 130 patients with a median age of 6.5 (1–37) years were treated by pediatric neurooncology team. All these patients had a diagnosis of embryonal brain tumor, most commonly medulloblastoma ($n = 93$), different PNET NOS ($n = 15$), pineoblastoma ($n = 7$), atypical teratoid rhabdoid tumor ($n = 4$), ETMR ($n = 9$), or neuroblastoma ($n = 2$). All these patients received after surgical resection and chemotherapy a single or tandem HDCT with auto-HSCT and about half of them ($n = 63$) were also administered concurrent intraventricular therapy via Ommaya reservoir consisting of intraventricular methotrexate injections in small children with primary ($n = 59$) or etoposide in patients with relapsed embryonal brain tumors ($n = 71$). The Ommaya reservoir injection was performed by a trained neurooncology team nurse supervised, when needed, by a physician. After clearing the patient's skin a 25–27 gauge butterfly needle was inserted perpendicularly to skin and an amout of spinal fluid equal to injection volume (2 ml) was withdrawn, then chemotherapy was slowly injected and internal tubing was filled by free saline.

Results: A total of 731 intraventricular injections via Ommaya reservoir were performed, most (684) of them were performed by a trained neurooncology team nurse. The procedure was safe, no immediate complications were observed. The following delayed adverse events were observed: headache in 15%, hyperthermia in 20%, vertigo in 3%, nausea and vomiting in 2%, infection in 0.02% of patients. These events are expected in transplant recipients and their rate correspond to one described in similar populations. As the procedure was safely performed in transplant unit settings, it was later adapted for use in outpatients receiving metronomic therapy.

Conclusions: Intraventricular injections via Ommaya reservoir may be safe in pediatric transplant settings when performed by a trained nurse working as a part of dedicated neurooncology team. This procedure may be transferred to different units providing care for patients with brain cancer.

Disclosure: There is no conflict of interest.

NP025.

The role of a nurse in nutritional counseling development in hematopoietic stem cell transplantation: from practice to science

Natalya Rotan[1], Maxim Kucher[1], Alexander Kulagin[1]

[1]*Pavlov University, Sankt-Peterburg, Russian Federation*

Background: An important objective in hematopoietic stem cell transplantation (HSCT) is to maintain adequate nutritional status (NS), which may affect overall treatment effectiveness. Timely monitoring of the gastrointestinal toxicity syndrome onset and patients nutritional counseling, improves the quality of nutrition therapy (NT) and creates the basis for supportive care development.

Methods: To evaluate the effectiveness of antiemetic therapy and to improve NT quality, we analyzed the amount of food consumed using "plates" method and a questionnaire. The intensity of nausea and vomiting was determined according scale by Snegovoy AV et al., 2016 and PeNAT (pediatric nausea assessment tool) in children (Dupuis LL et al., 2006). In addition to routine NS measurements, children's body weight centile intervals were evaluated, dynamometry (mechanical hand grip dynamometer) and bioimpedance measurement were performed in patients older than 6 years (Tanita BC-418, Japan) once a week. From March 2019 to April 2020, 125 patients were enrolled to the prospective study, which underwent 37 autologous and 88 allogeneic HSCT. Among them, children—44.4% ($n = 56$), median—6 years and adults—55.6% ($n = 69$), median—34 years, with acute leukemia ($n = 58$), solid tumors ($n = 29$), aplastic anemia ($n = 10$) and other diseases—28.

Results: At the time of treatment initiation, 74.4% ($n = 93$) of patients had normal NS, 12% ($n = 15$)—hypotrophy, and 13.6% ($n = 17$) had obesity. Anorexia developed in 76.8% of patients ($n = 96$). Nausea was present in 57.6% of patients ($n = 72$), including 10 with severity grade 3; the average duration was 5.5 days (1–21 days). Vomiting was observed in 36% of cases ($n = 45$), in 6 patients with severity grade 3, the average duration was 4.9 days (1–20 days). Acute vomiting was observed in 29 patients, and delayed—in 16 patients. The median BMI in adult patients did not change from D-7 (15.2–40.6) to D+30 (15.5–34.2)—24.4, respectively. However, bioimpedance data indicate a change in body composition, especially lean body mass loss −2.9 kg: D-7—30–93.3 kg, average

51.5 kg, D+30—30.1–72.9 kg, average 48.6 kg, $p < 0.05$. It is thought that BMI remained unchanged due to increased body water. Catabolism elevated rate was also confirmed by a significant decrease in arm muscle strength by −4.7 kg from D-7 (10–78 kg, average 34.8 kg) to D+30 (6–58 kg, average 30.1 kg), $p < 0.05$. In children to analyze NS, the dynamics of the body weight centile interval was assessed: it didn't change from D-7, average – 4.75 to D+30, average – 4.23, $p > 0.05$.

Conclusions: Nurse's nutritional counseling in HSCT patients increases the effectiveness of supportive therapy and NT due to detailed gastrointestinal toxicity syndrome evaluation and its timely treatment.

Disclosure: no disclosure

NP026.

Long-term survivors after allogeneic haematopoietic stem cell transplantation in childhood and adolescence in a developing country: how are they now?

Priscila Oliveira da Silva[1], Gabrielli Mottes Orlandini[2], Caroline Siviero Dillenburg[2], Fernanda Fetter Scherer[1], Alessandra Aparecida Paz[2], Mariana Michalowski[1], Liane Daudt[1]

[1]Universidade Federal do Rio Grande do Sul, Porto Alegre, Brazil, [2]Hospital de Clínicas de Porto Alegre, Porto Alegre, Brazil

Background:

Haematopoietic stem cell transplantation (HSCT) is a curative treatment for patients with malignant and non-malignant diseases, which has led a higher percentage of children and adolescents to survive. For this reason, the aim of our study was to describe the profile of patients who underwent HSCT during childhood and adolescence at the Transplant Center, in southern Brazil.

Methods:

This is a cross-sectional study in which all patients over 18 years of age who had undergone HSCT during childhood or adolescence at our center were included. Data were collected until November 2019.The data available for analysis included information on patient age and sex, schooling, marital status and if they have children. Ethical and Research Committee Institucional approved this study.

Results: 34 patients were included. The median age was 21 years (18–38). 58.8% are men. At the time of analysis, the median follow-up was 11.5 years (2.0–23.0 years). Most patients are Caucasian / white (91.2%). Two patients have had 2 transplants. Regarding schooling, 14.7% completed graduation, 11.8% not completed graduation, 23.5% completed high school, 29.4% not completed high school, 8.8% completed elementary school and 5.9% completed vocational education. 2 survivors (5.9%) did not finish elementary school. 65% were working at the time of the survey and only 3 patients do not work and are dependent on financial support from the government because of the transplant. For the patient after HSCT, returning to school activities is an opportunity to lead a normal life, improving quality of life and reducing social isolation. Unfortunately, patients may have cognitive, physical and psychological deficiencies after HSCT. These barriers make many patients give up on studies and this has an economic impact. Most survivors were not married (76.5%) and had no children (97.1%). Regarding fertility, although we know that sterility can be a late complication of HSCT, patients could to adopt. However, only one patient had a child at the time of the research.

Conclusions: Through our study we observed that patients undergoing HSCT in childhood/adolescence at a center located in a developing country are able to work, form personal relationships and families, but have difficulty maintaining school progress. Measures in this direction are essential to ensure the best social integration of these patients.

Disclosure: Nothing to declare.

NP027.

Epidemiological screening for bacterial drug resistance in candidates for allo-hsct and medical employees of hematological departments

Olga Prokofieva[1], Oleg Goloshchapov[1], Evgenii Goncharov[1], Ruslana Klementeva[1], Aleksandr Shcherbakov[1]

[1]Pavlov University, Saint Petersburg, Russian Federation

Background: Infectious complications occur in 75–85% of hematopoietic stem cells transplantation cases. The aim of our research was to investigate the spread of multidrug-resistant bacterial strains among patients and medical staff being in contact.

Methods: The study included 12 patients as candidates for HSCT and 46 medical employees that were in contact with these patients (nurses of the intensive care unit and the hematology department for adults). The patients median age was 36 years (17–62 years), primary diagnoses were the following: AML ($n = 5$); ALL ($n = 3$); CML ($n = 3$); NHL ($n = 1$). A rectal smear was taken from all the subjects for determination of bacterial pathogens (Klebsiella, Enterobacter, Citrobacter, E.coli) with the extended-spectrum beta-lactamases (ESBL) and carbapenemases using the chromogenic medium CHROMagar (France).

Results: CHROMagar test results for allo-HSCT candidates were the following: 2 patients (17%) were ESBL positive at the start of the research (day 0), then other 8 patients (67%) revealed microbial intestinal colonization (Klebsiella, Enterobacter, Citrobacter, E.coli) at the day +30 with the decline to 6 patients (50%) at the day +120. The screening using CHROMagar test showed the presence of multidrug-resistant pathogens in 22 of 46 medical employees (48%): Carbapenem KEC (Klebsiella, Enterobacter, Citrobacter) in 4 cases (9%), ESBL E. coli in 14 cases (30%), (KPC) Carbapenem E. coli in 9 (20%) cases. 4 employees (9%) had 2 or more multidrug-resistant pathogens.

Conclusions: Medical employees with intestinal multidrug resistant microorganisms can cause the spread of infection among patients before allo-HSCT and worsen the post-transplant prognosis due to the infectious complications.

Disclosure: Nothing to declare

NP028.

Early coronavirus warning score in hematology diseases

Silvia Sangüesa Domínguez[1], Cristina Martín Benito[1], Noelia Magro Macías[1], Yolanda Pizarro Aguado[1], Marina De la Iglesia Caceres[1], María Cristina Gonzalez Rodríguez[1]

[1]*Complejo Asistencial Universitario, Salamanca, Spain*

Background: Hematological patients are considered high-risk patients for infectious diseases, COVID-19 included, and even more so if they are undergoing hematopoietic progenitor transplantation. Therefore, they require higher-level protective measures to treat and prevent infection.

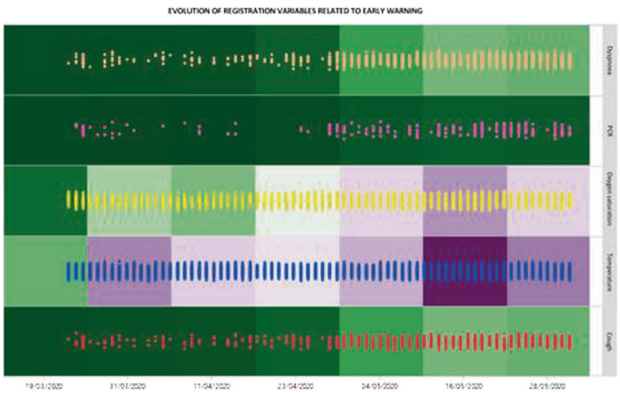
The Health Network of Castilla y León (Sacyl) has designed an early warning system within the Application of Advanced Open Online Nursing Care Management (GACELA Care) for the detection of patients with COVID-19 compatible symptomatology.

It is called Coronavirus Warning Score, consists of taking a series of clinical vital signs (temperature, dyspnoea, O2 saturation, cough and PCR) and categorizes the patient into four alert levels defined with colors. Gray color describes a level of normality not COVID-19, yellow would involves preventive monitoring by COVID-19, orange a risk of COVID-19, and red color isolation according to hospital protocols.

The main objective is to analyze the implementation of this algorithm in hematological patients.

Methods: Cross-sectional descriptive study from 25 March to 31 May 2020. The analysis of the data is carried out on the registration of demographic variables and clinical variables collected by the early warning. The Gacela Care program is the tool used to review episodes of hematological patients admitted to the hospital in that interval of time.

Results: The total sample of hematological patients evaluated was 114, with a median age of 60 years (26.25 IRQ). The distribution by gender was 42% female and 58% male. Alert levels at the gray level were 96.23%, at the yellow level 3.65%, in orange 0.08% and in red 0.05%.The total number of nursing records related to the Coronavirus Warning Score was 14,952 in patients admitted to the hematologic unit, where 82.88% corresponds to nursing records of that unit and the rest to other services.The most recorded clinical variables were temperature and oxygen saturation with 48.69% and 32.63%, respectively. The PCR variable was used in 1.91% of the nursing records, and 8.43% for dyspnoea and cough. In the interval of time analyzed, only three patients had a positive record in the PCR variable.



Conclusions: The hematology nurse, in addition to providing high-quality health services to patients, has an adequate training for the implementation of electronic health records.

The last level of early warning, which is confirming of COVID19 infection, identifies patients who, without much symptomatology, have a PCR+.

Early warning in hematological patients is an instrument that can help the early detection of COVID19 infections, facilitating the spread of the virus with early isolation and therefore, increasing patient and professional safety.

Disclosure: Nothing to declare