O081

Success of an International Learning Healthcare System in Hematopoietic Cell Transplantation: the American Society of Blood and Marrow Transplantation Clinical Case Forum

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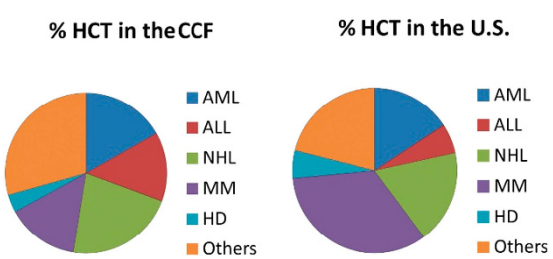
Introduction: The ASBMT Clinical Case Forum (CCF) was launched in 2014 as an online secure tool to enhance interaction and communication among hematopoietic cell transplantation (HCT) professionals worldwide through the discussion of challenging clinical care issues.

Material (or patients) and methods: After 14 months, we reviewed the information generated by the CCF in order to evaluate the initial experience, determine the potential impact of the CCF worldwide, and identify areas of unmet needs in HCT. All clinical and demographical data on cases posted in the CCF from 1/29/2014 to 3/18/2015 were reviewed by 3 different investigators. Urgency was defined as a case requiring an answer in < 72 h based on clinical information posted and an assessment by the reviewers. The prevalence of most frequent diseases in the CCF was compared with the US transplant activity reported by the US Department of Health and Human Services by Fisher's exact test. All other statistics were descriptive.

Results: A total of 137 cases were posted during the study period. Ninety-two cases (67%) were allo-HCT, 29 (21%) auto-HCT and in 16 (12%) the type of transplant (auto vs. allo) was still under consideration. Most frequent diseases NHL ($n = 30$, 22%), AML ($n = 23$, 17%) and multiple myeloma ($n = 20$, 15%).

Figure 2. Distribution of Diseases in Patients undergoing HCT in the CCF and in the U.S.



When compared with the US transplant activity, NHL and acute lymphoblastic leukemia cases were overrepresented in the CCF while myeloma was underrepresented ($P < 0.001$) (Figure). Twenty cases (14%) were classified as urgent, most of them ($n = 14$, 70%) addressing questions about post-HCT complications. A total of 259 topics were addressed in the CCF with a median of 2 topics/case (range 1-6). Particularly common topics included transplant indication ($n = 57$, 41%), conditioning regimen choice ($n = 44$, 32%), and post-HCT complications after day 100 ($n = 43$, 31%). A total of 522 comments were posted with a median of 4 comments/case (range 0-12). Median time to first comment was 1 day (range 0-26), while 5 (4%) cases did not receive any comment. Sixty-two cases (45%) had at least one comment supported by bibliographical references. Comments were discordant with the poster's opinion in 33 cases (24%) while in 56 cases (42%) there were discordant opinions among commentators. Sixty unique case presenters and 97 unique case commentators participated in the CCF, and a total of 668 individuals logged in. Participants in the CCF included individuals from 4 continents and 12 countries. Most frequent geographic location for presenters were the USA ($n = 105$, 77%) and India ($n = 19$, 14%). Cases were mostly posted by HCT attendings ($n = 120$, 88%), but cases were also posted by fellows, advanced practice providers, pharmacists and nurses.

Conclusion: The ASBMT CCF is a successful tool for collaborative discussion of complex cases in the HCT community worldwide and may allow identification of areas of controversy or unmet need from clinical, educational and research perspectives.

Disclosure of Interest: None declared.

O082

Global Risk Analysis of the Management Process of Adults Patients Undergoing Hematopoietic Cellstransplantation in the Setting of JACIE accreditation process

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Introduction: The objective of the FACT-JACIE accreditation for hematopoietic cell transplants (HCT) is to promote quality medical and laboratory practice in hematopoietic progenitor cell transplantation[1]. Moreover, the impact of the JACIE accreditation on clinical outcomes after transplants has clearly been demonstrated[2]. However, no standard can guarantee the successful outcome of such therapies the correct establishment or accomplishment of the quality standards.

Aim: The use of the a priori the Global Risk Analysis (GRA), to answer the requirements of JACIE accreditation process.

Material (or patients) and methods: The methodology used for the a *priori* risk analysis was the method taught to Centrale Supelec, the Global Risk Analysis (GRA). *The* analysis was performed by a multidisciplinary team within the hematology unit with the support and guidance of the Quality and Performance Management unit of the center. The GRA is decomposed in two main stages. Firstly, as a result of the interaction of all phases of the HCT patients' process and a list of hazardous events that the patient will face over for those

process. A mapping of 161 hazardous situations was performed. A semi-quantitative evaluation of each of these interactions is performed, in order to characterize them by level of priority: to be treated urgently, secondarily or at a later stage. Secondly, for each of the priority hazardous situations recognized, different scenario were established and sorted according to their severity, using the likelihood and severity scales. The criticality matrix enables the division of the risk in 3 categories: acceptable, tolerable under control or unacceptable (1, 2, and 3 criticality score respectively), resulting in an initial risk mapping.

Results: The number of dangerous situations identified for the risk analysis was 66, for whom 258 scenarios were proposed: 84 (33%) with criticality 1, 158 (61%) with a criticality 2 and 16 (6%) with a criticality 3. This third group was formed by situations concerning auto and allogeneic HCT for hazards regarding management, material, operational and human and professional factors. 41 corrective actions were proposed, evaluated by effort scale and finally planned. The residual risk mapping for the evaluation of the corrective action did not find situation of criticality 3 situation but 40 situations of criticality 2 treated by 12 security parameters or monitoring indicators were set up.

Conclusion: The action plan, standards accomplishments and GRA implemented in the clinical management of adults HCT process enabled the setting up of 41 corrective actions, based in scenarios and not in incidences, and these corrective actions are in line with the different JACIE standards and included in the different quality indicators, in particular those of the 6th version regarding risk management (B2.14). Their impact includes the health and safety of employees, patients, donors, visitors, and volunteers.

References: 1. The sixth edition of the FACT-JACIE International Standards for Hematopoietic Cellular Therapy Product Collection, Processing, and Administration.
2. Use of the quality management system "JACIE" and outcome after hematopoietic stem cell transplantation. Gratwohl A *et al* Haematologica. 2014 May;99(5):908-15. doi: 10.3324/haematol.2013.096461. Epub 2014 Jan 31.

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O083

Safety and cost effectiveness of outpatient administration of salvage chemotherapy for relapsed/refractory lymphomas

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Introduction: High dose chemotherapy (HDCT) and auto-SCT is the standard therapy for relapsed/refractory lymphomas. Prior to this, these patients undergo 2-3 cycles of salvage chemo to assess chemo sensitivity. These regimens require 3-5 days for administration and are equivalent. Due to social/cultural reasons, our patients have always gotten all therapy for relapsed/refractory lymphoma as inpatients, placing significant financial and resource burden on our institution. To reduce delays in chemotherapy due to lack of beds and reduce financial burden, we decided to move first two cycles of salvage chemotherapy to outpatient setting.

Material (or patients) and methods: We developed a comprehensive plan with the help of our clinical nurse coordinator (submitted abstract EBMT16-NG-1157, approved as poster NP027). A representative from hospital finance department performed cost analysis. Indirect costs i.e. housing, travel, etc. were also assessed. Comparative costs of outpatient chemotherapy were compared to the calculated cost of same chemotherapy, if it were administered inpatient. Drug costs, outpatient visits, hospital days and investigations were recorded and expressed as cost per patient from the healthcare provider perspective. All costs were classed as either medical (associated with planned chemotherapy follow-up, clinic visits and associated tests and medicines) or non-medical (time costs and housing expenses) and assessed based on sources required and are expressed in US dollars (US$). Data on side effects and toxicity were available from our HDC auto-SCT database to assess safety.

Results: All patients who started salvage chemotherapy for a 46 month period between February, 2012 to December, 2015 and present in our lymphoma database were included. Chemotherapy regimens used were ESHAP (etoposide, solumedrol, cisplatin and Ara-C), IMVP-16 (ifosfamide, methotrexate and etoposide) or IGEV (ifosfamide, gemcitabine, vinorelbine and prednisone). Rituximab was given in case of a B-cell non-Hodgkin's lymphoma. A total of 104 patients started outpatient salvage chemotherapy and completed a total of 213 cycles of salvage chemotherapy (ESHAP;154 cycles, IGEV;53 cycles, IMVP-16;6 cycles). This resulted in saving of 934 days of inpatient stay. Medical and non-medical cost of 213 cycles delivered in outpatient setting was estimated to be US$ 377,871 and US$ 116,409 respectively (total US$ 494,280). If the same were to be given as inpatient, the cost was estimated to be US$ 1,112,754 and US$ 669,954 respectively (total US$ 1,782,708). Outpatient administration of salvage chemotherapy resulted in a cost saving of US$ 1,288,428 representing 72% reduction in the financial cost to the healthcare administration. We have found no evidence of decreased efficacy or excess toxicity among these patients when compared to results of same regimens administered inpatient in a separate analysis.

	Inpatient	*Outpatient*	*US$ Amount saved*	*Percentage saving*
Medical	1,112,754	377,871	734,883	62.04
Non-Medical	669,954	116,409	553,545	82.62

Conclusion: We find outpatient administration of salvage chemotherapy for lymphomas to be efficient, safe and equivalent in efficacy to inpatient administration in our setting. This approach resulted in prevention of delays in administration inherent in inpatient chemotherapy, better patient satisfaction and significant saving of financial costs and hospital resources.

Disclosure of Interest: None declared.

O084

Trend Analysis of Incidents on a Newly Opened Transplant Ward

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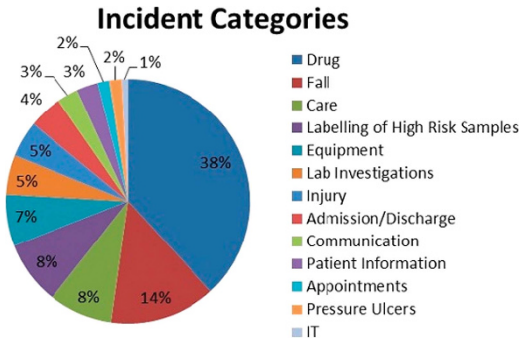
Introduction: Learning from mistakes and errors is a key aspect of risk management, ensuring patient safety and quality of care is maintained and improved. Staff are encouraged to incident report all potential and actual harms. The learning from these should be embedded into practice to prevent escalation and reoccurrence.

In order to highlight areas for improvement and to seek assurance of patient safety a trend analysis was undertaken. The areas highlighted were then targeted as weaknesses and increased measures implemented.

Material (or patients) and methods: All incidents reported between June 2014 and March 2015 were assessed. Incidents were split into category types for grouping and the severity assigned on a 5 point scale between no harm and death.

Of the 249 reports 73% were no harm incidents. There were 3 moderate reports and no major or death incidents. The number of admissions to the ward was 820 equating to 1 incident per 3.3 admissions. There was 1 incident with harm per 12.1 admissions.

The largest category of incidents were drug errors with subcategories including delays, omissions, controlled drug errors and incorrect storage.



Results: A detailed breakdown of each of the categories was assessed and an action plan constructed to reduce the risk of occurrence. Bi-weekly incident review meetings have been instigated to monitor the progress of the actions, with targeted meetings held to discuss specific trends.
To reduce the number of drug errors training has been increased and additional nurses identified to be chemotherapy trained. The storage of modified release controlled drugs has been reviewed for ease of access and staff educated on the appropriate location for storage of medication. A chemotherapy workbook has been created to aid this with the cost of waste also highlighted.
Work has also commenced on reducing the number of patient falls. A safety risk review has been added to handovers, including falls risk information. "Call, don't fall" signs have been created to remind patients not to mobilise independently and falls prevention leaflets are given to all patients on admission.
To feedback to staff the learning and outcomes of incidents the ward manager now holds weekly team meetings and summative newsletters are also to be developed. The clinical practice facilitators organise training days tailored to the key incident themes to aid in the reduction of these incidents.
Conclusion: Incident management is an ongoing process and staff should continue to highlight both incidents with harm and near misses. The high reporting of no harm incidents shows a strong reporting culture and this is encouraged amongst staff.
The trend analysis will be undertaken annually to ensure preventative actions have had a remedial affect and any new risks are identified. In order to aid meaningful analysis the categorisation criteria needs to be reviewed, ensuring duplicate categories are removed and consistency across all reports.
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FOUNDATION FOR THE ACCREDITATION OF CELLULAR THERAPY & JOINT ACCREDITATION COMMITTEE OF ISCT AND EBMT (2015) *FACT-JACIE International Standards for Cellular Therapy* 6th Ed. (B4.10) p.33.
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O085

Failure to identify an unrelated donor in due time for HSCT: reprospective analysis of the causes in a single centre

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Introduction: Although Hematopoietic stem-cell transplantation (HSCT) constitutes a curative treatment for various hematologic malignancies, many patients fail to benefit from it because of donor unavailability and excessive time span to HSCT. The continued growth of worldwide unrelated donors (UD) network contributes to increase the number of available UD. Unfortunately, even with an urgent procedure for UD search, it remains difficult to identify the donor when a recipient has a rapidly declining clinical condition. Our conviction is that there is room for improvement.
Material (or patients) and methods: We retrospectively analyzed 101 UD searches conducted between 2011 and 2015 to compare response time duration from the national registries (NR) and to evaluate objective time required to identify a matched UD. These searches leaded to 493 Typing Requests (TR) within 26 NR and 198 Blood samples for Confirmatory Typing (BCT) within 14 NR. 79% of TR ($n = 370$) were received (183 Urgent Requests (UR) and 187 Standard Requests (SR)) and 73% of BCT ($n = 145$) were confirmed (81 UR and 64 SR).
Results: Median time of responses for TR is highly variable among registries, ranging from 7,5 to 50 days for UR and from 3 to 33 days for SR.

Typing Requests			*Median Time in days for result received*					
NR	*nb of requests*	*Requests received*	*Urgent request*	*n*	*Range*	*Standard request*	*n*	*Range*
DE	163	142	10	63	1-61	10	79	1-49
USA	126	86	8,5	54	4-52	8	32	3-33
BR	64	52	27	22	7-42	20,5	30	3-56
IL	30	29	15	13	5-41	8	16	3-36
AU	16	7	7,5	6	6-19	3	1	3-3
SPA	12	9	22	6	5-50	21	3	13-36
P	10	5	16	3	7-20	33	2	33-33

Milder differences were observed in terms of time BCT delivery, always ranging from 8 to 22 days (for UR) and 6 to 20 days (for SR). Thus, even with an urgent procedure the median time was similar compared to the standard procedure (excepted for TR from Portugal and BCT from with Brazil).
Responses delays must be adjusted according to requests cancelled by DC: 80% of the **TR** for Italy, 67% for China, 56% for France, Australia 54%, 44% for Portugal, 35% for USA, 12% for Germany and Austria, 3% for Israël (IL). No cancelation accounted for Spain, Cyprus and England. Concerning **BCT:** 16% for Germany, 25% for Brazil, 31% for NMDP, 50% for GB and Italy and 60% for China. No cancelation accounted for France, Spain, Argentina, Belgium, Canada, Israël, and Portugal. Taking these observations into account we favoured registries with faster responses and lower rate of cancelation. Additionally since 2013, we benefited from Prometheus support, centralizing EMDIS registries datasets with integrated regular match program. As a consequence, we were able to reduce the time for identifying matched UD from 61 days in 2011 to 31 days in 2014, which definitely contributed to improve our success rate to find an optimal UD from 48% in 2011 to 80% in 2014.
Conclusion: 1/ The delay to receive a response for a TR and the cancelation rate varied widely between registries.
2/ Similar delays where observed between urgent and standard procedures, raising a legitimate doubt about the validity of extra fees related to emergency procedures.
3/ A quality control procedure should also be applied to international registries to improve some unacceptable delay, potentially leading to a lack of UD - in due time - for a transplant recipient.
Disclosure of Interest: None declared.