characteristics were recorded. GT was administered to patients with an absolute neutrophil count (ANC) $<0.5 \times 10^3/\mu L$ for at least three days, evidence of bacterial and/or fungal infection, and no response to appropriate antimicrobials for at least 48 hours. **Results:** The median age was 42 years (min-max, 19-66 years). The majority of patients were diagnosed with acute myeloid leukemia (AML) (50%)(11/22). The median CRP value was 168.5 mg/dl (min-max, 31.1-360 mg/dl). In 40.9 % of patients who received GT, their primary disease was in complete remission, while in 59.1 %, their primary disease was relapse. The infection etiologies included pneumonia (n=5), sepsis (n=2), pneumonia and sepsis (n=11), pneumonia + sepsis + catheter-associated infection (n=4), catheter-associated infection + mucositis (n=1), and abscess (n=1). Each patient received a median of 3 GTs (min-max, 1-6). The median transfused granulocyte dose per transfusion was 3.5×10^{10} (min-max, 0.8-9.4 $\times 10^{10}$). The median dose transfused, calculated based on the recipient's body weight, was 5.1×10^8/kg (min-max, 0.8-17 $\times 10^8$/kg). On average, the median number of granulocytes transfused per patient was 5.3×10^8/kg (min-max, 1.9-11.3 $\times 10^8$/kg). The median time from HSCT to the first GT was 192 days (min-max, 50-795 days). The median duration of fever before GT was three days (min-max, 2-6 days), and the time until the fever defervescence was 2 days (min-max, 1-5 days). The median duration of neutropenia before GT is 25 days (min-max, 8-30 days). After GTX treatment, A favorable response was observed in 16 of 24 infection episodes (66.7%) regarding the resolution of infections. In 4 of the 8 infection episodes where the infection did not resolve, the patient also had a relapse of the disease. In 5 of 12 infection episodes that required intensive care, the need for intensive care was eliminated after GT. A statistically significant difference was found between the time of GT initiation and the ANC, TLC, and PLT counts on the fourth-day post-GT (p =0.001, p=0.001, p=0.003, separately for ANC, TLC, and PLT). The median follow-up in our cohort of patients is 600 days. The 30-day and 100-day OS were 67.7% and 50%, respectively. A mortality rate by day-28 was 3.8% and mortality rate by 100 was 19.2%. Acute, chronic GVHD, and CMV reactivation were not observed. **Conclusion:** GT therapy may be effective in many critically ill patients with prolonged and profound neutropenia. It may be more beneficial in select patients, as it provides more time to overcome infections resistant to broad-spectrum antibiotics. Larger randomized trials are needed to confirm the effectiveness of GT in such patients.

https://doi.org/10.1016/j.htct.2025.106130

OP 21

CATATONIA FOLLOWING IFOSFAMIDE CHEMOTHERAPY IN A PATIENT WITH HISTIOCYTIC SARCOMA: A RARE NEUROPSYCHIATRIC COMPLICATION

Hüseyin Koçak *, Esra Nur Saygeçitli, Ali Turunç, Birol Güvenç

Çukurova Üniversitesi, Türkiye

Introduction: Histiocytic sarcoma (HS) is a rare, aggressive malignancy of monocyte–macrophage lineage, typically presenting with extranodal disease and lacking B- or T-cell markers [1]. Because of its rarity, there is no standard treatment, though salvage regimens such as ICE (ifosfamide, carboplatin, etoposide) have demonstrated some benefit. Ifosfamide, a DNA-alkylating prodrug metabolized by hepatic CYP3A4 and CYP2B6, is associated with central nervous system (CNS) toxicity in 10–30% of patients [2,3]. Encephalopathy is the most common presentation, while catatonia—characterized by stupor, mutism, negativism, posturing, and waxy flexibility—is rarely reported in oncology patients [4]. **Case Presentation:** A 27-year-old male with stage IV HS, confirmed by biopsy of an 80 × 70 mm terminal ileum mass, was admitted for ICE chemotherapy. On day three, he developed acute psychomotor symptoms including stupor, mutism, and negativism. The Bush–Francis Catatonia Rating Scale (score 7) and Kanner Catatonia Screening Instrument (score 4) confirmed retarded-type catatonia. Neurological evaluation (cranial CT, diffusion-weighted MRI) and laboratory studies were unremarkable. Vital signs remained stable. He was treated with intravenous diazepam 10 mg every 8 hours (two doses total), leading to full resolution of catatonic symptoms. The patient was discharged clinically stable. **Conclusion:** Discussion Ifosfamide-induced neurotoxicity typically appears within 48 –72 hours, mediated by toxic metabolites such as chloroacetaldehyde that disrupt mitochondrial function and neurotransmission [2,3]. While encephalopathy is well-documented, catatonia is extremely rare and underrecognized. In this case, the temporal relationship to ifosfamide, absence of structural CNS pathology, and rapid benzodiazepine response strongly support ifosfamide-induced catatonia. Similar observations have been described rarely; Gupta et al. [5] reported an analogous case in lymphoma. Benzodiazepines remain first-line therapy, often producing rapid resolution, even in drug-induced catatonia [6].Conclusion This case highlights catatonia as a rare neuropsychiatric complication of ifosfamide. Recognition of such unusual adverse effects is critical, as early diagnosis and benzodiazepine treatment can prevent delays in cancer therapy and improve outcomes.

https://doi.org/10.1016/j.htct.2025.106131

Stem Cell Transplantation

OP 22

RESULTS OF AUTOLOGOUS HEMATOPOIETIC STEM CELL TRANSPLANTATION IN REFRACTORY MULTIPLE SCLEROSIS: TWO CASE REPORTS

Yakup ÜNSAL [1], Muhammed MURATI [1,*], Güler DELİBALTA [2], Serdar Bedii OMAY [1], Mücahit GÜR [3]

[1] *Özel Emsey Hospital Hematoloji ve Kök Hücre Nakil Merkezi, İstanbul*
[2] *Özel Emsey Hospital Enfeksiyon Hastalıkları, İstanbul, Türkiye*

[3] *Özel Emsey Hospital İç Hastalıkları, İstanbul, Türkiye*

Multiple sclerosis (MS) is a chronic, inflammatory, demyelinating disease of the central nervous system. Being an autoimmune disease, MS usually begins in young adulthood and may lead to permanent neurological damage over time. In the pathogenesis of the disease, immune responses mediated by T and B lymphocytes play a central role, causing damage to myelin and axonal structures[1]. Clinically, the most common form is relapsing-remitting MS (RRMS), while in some cases a transition to the secondary progressive MS (SPMS) form is observed over time[2]. The Expanded Disability Status Scale (EDSS) is widely used to assess neurological impairment in MS patients. This scale ranges from 0 to 10, with 0 indicating no neurological deficit. Higher scores represent greater neurological impairment. Disease-modifying therapies (DMTs), which modulate the immune system, are used in the treatment of MS. Major DMT agents include fingolimod, natalizumab, ofatumumab, ocrelizumab, siponimod, alemtuzumab, and interferon beta[3]. Despite high-efficacy treatments, a subset of patients continue to experience relapses and disease progression. Autologous hematopoietic stem cell transplantation (AHSCT) is a therapeutic option that aims to "reset" the immune system (immune reconstitution) by administering high-dose immunosuppressive therapy followed by reinfusion of the patient's own hematopoietic stem cells[4]. Recent prospective studies have demonstrated that AHSCT prevents relapses and ensures disease stabilization, especially in RRMS cases with high inflammatory activity and resistance to conventional therapies[5]. However, in progressive MS patients, while disease stabilization may occur, functional recovery remains limited. During the AHSCT process, hematopoietic stem cells are first mobilized into peripheral blood using cyclophosphamide and/or G-CSF, collected via apheresis, and cryopreserved with dimethyl sulfoxide (DMSO). Subsequently, high-dose chemotherapy (e.g., BEAM or CY+ATG regimen) is administered as a lymphoablative conditioning treatment, followed by reinfusion of the previously collected autologous stem cells[6]. In this study, we present two RRMS patients with refractory disease who underwent AHSCT in our clinic. Case-1: The first case is a 33-year-old female patient diagnosed with MS in 2018. She had been treated with DMT agents including ocrelizumab, without significant clinical response. With an EDSS score of 5, she was classified as RRMS, and AHSCT was planned. Mobilization was achieved with cyclophosphamide (2.4 g/m^2) and G-CSF. Hematopoietic stem cells were collected by apheresis and cryopreserved with DMSO. Following administration of the LEAM conditioning regimen (lomustine, etoposide, cytarabine, melphalan), a total of 4.54×10^6/kg autologous stem cells were reinfused on 05.06.2025. Neutrophil and platelet engraftment occurred on day 11 post-transplant. During the 3-month follow-up, no relapse occurred, and neurological status remained stable. **Case-2:** The second case is a 47-year-old male patient diagnosed with MS in 2014. He had received DMT agents including ocrelizumab and siponimod, without adequate response. With an EDSS score of 7 and progressive walking disability for the last 2 years, the patient was classified as SPMS, and AHSCT was planned. Mobilization was performed with cyclophosphamide (2.4 g/m^2) and G-CSF. Stem cells were collected via apheresis and cryopreserved with DMSO. After the LEAM conditioning regimen, a total of 5.19×10^6/kg autologous stem cells were reinfused on 19.01.2025. Neutrophil and platelet engraftment occurred on day 12 post-transplant. During the 8-month follow-up, no relapse occurred, and neurological status remained stable. **Discussion:** AHSCT has emerged as an effective treatment option for RRMS cases with high inflammatory activity refractory to conventional therapy. Studies have shown that AHSCT reconstitutes the immune system, thereby preventing relapses, avoiding new lesion development, and slowing neurological disability progression[7,8]. Clinical studies indicate that AHSCT can suppress MS disease activity in approximately 70–80% of patients for up to 5 years. This response rate is higher than with any other available MS treatment. While treatment-related mortality was reported as 3.6% in studies before 2005, this rate has decreased to approximately 0.3% in more recent studies[4]. A meta-analysis published in 2017 evaluated 764 MS patients who underwent AHSCT between 1995 and 2016, reporting event-free survival of 67%[9]. Another meta-analysis published in 2022, including 4,831 MS patients, found event-free survival in 68% of cases[10]. According to EBMT guidelines, cyclophosphamide (2–4.5 g/day) combined with G-CSF (5–10 μg/kg) is most commonly recommended for mobilization. Conditioning regimens typically include BEAM+ATG or cyclophosphamide+ATG[11]. In our cases, mobilization was performed with cyclophosphamide (2.2 g/day) followed by G-CSF (10 μg/kg). LEAM was used as the conditioning regimen, while ATG was not administered. It has been reported that AHSCT is more effective than DMTs in stabilizing neurological status, with ongoing trials continuing to evaluate this comparison[12]. Conclusion: AHSCT has shown favorable outcomes, particularly in RRMS patients. Large-scale analyses have demonstrated disease-free survival rates exceeding 60%. With advances in stem cell therapy, transplant-related mortality has significantly decreased. Therefore, AHSCT represents a safe and effective therapeutic option in RRMS.

https://doi.org/10.1016/j.htct.2025.106132

OP 23

VITREORETINAL INVOLVEMENT IN NASAL CAVITY B-CELL LYMPHOMA: A RARE FORM OF RELAPSE

Songül Beskisiz Dönen *,
Vehbi Demircan Abdullah,
Karakuş Mehmet Orhan Ayyıldız

Dicle University Faculty of Medicine, Department of Hematology

Introduction: Non-Hodgkin lymphomas are malignant neoplasms of lymphoid tissue, and a subset present with extranodal involvement. The head and neck region represents one of the clinically relevant localizations. Sinonasal B-cell lymphomas are a rare subtype, most often manifesting as diffuse large B-cell lymphoma (DLBCL), and typically show aggressive