was higher and platelet count was lower. O blood group were diagnosed with MISC at a later age. Patients with A blood group have a statistically significantly less serious course compared to other blood groups. **Conclusion:** In our study, we found that individuals with A blood group had MISC more frequently than other blood groups, and MISC was less severe in these patients compared to other blood groups.

https://doi.org/10.1016/j.htct.2021.10.997

OP 31

EVALUATION OF APPROPRIATE USE OF PEDIATRIC FRESH FROZEN PLASMA IN A TERTIARY CARE HOSPITAL

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Objective: Fresh frozen plasma (FFP) is the primary source of coagulation factors. Indications of FFP use are very limited such as disseminated intravascular coagulation, massive bleeding, thrombotic thrombocytopenic purpura, biopsy for chronic liver disease, and reversing warfarin anticoagulation with severe bleeding. In clinical practice, FFPs are reported to be used inappropriately either in respect of the particular indication or excessive in adult studies. Therefore, we aimed in this study to evaluate indications of pediatric FFP usage in our tertiary care hospital **Methodology:** Patients aged 0-18 years, who were hospitalized in Ankara City Hospital Children's Hospital between September and December 2020, were analyzed retrospectively. Demographic information, diagnosis, FFP transfusion indication, pre-transfusion coagulation results, surgical procedure and bleeding status, and the amount of FFP administered were recorded. Statistical analysis was done with SPSS 18.0 program. **Results:** 1110 units of FFP were transfused to 324 patients (57% males) in 987 transfusion episodes. The mean age of the patients was 5.4±5.7 years68% of the transfusion episodes had a pre-transfusion coagulation testing. 249 (25%) of the transfusion episodes were given before or after minor or major surgery, and 226 (23%) were for plasmapheresis. The most FFP usage was in pediatric and cardiovascular surgery intensive care and hematology/oncology clinics. 69% of the FFP transfusions were appropriate. **Conclusion:** Misuse of FFP exposes patients to unpredictable adverse effects such as allergic reactions, infectious complications, hemolysis, fluid overload, and transfusion-induced acute lung injury (TRALI). In this study, the use of FFP in children was evaluated for the first time in our country, and it was found that the 31% of the FFP transfusions was inappropriate. Regular audit and education programs for the efficient use of FFP by hospital transfusion committees can improve transfusion practices.

https://doi.org/10.1016/j.htct.2021.10.998

STEM CELL TRANSPLANTATION

OP 32

COMPARABLE OUTCOMES OF ALLOGENEIC PERIPHERAL BLOOD VERSUS BONE MARROW HEMATOPOIETIC STEM CELL TRANSPLANTATION IN CHILDREN

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Objective: Hematopoietic stem cell transplantation (HSCT) is used in many malignant and non-malignant diseases in pediatric patients. Peripheral blood (PB), bone marrow (BM) or cord blood can be used as a graft source. In this study, it was aimed to compare the transplantation results of patients who used bone marrow as a graft source and those who used peripheral blood in pediatric patients who underwent allogeneic HSCT. **Methodology:** We retrospectively analyzed the transplant results of 349 pediatric patients who received a transplant between April 2010 and August 2021 considering their stem cell source as a comparative variable. Engraftment days, development of acute graft versus host disease (aGVHD) or chronic graft versus host disease (cGVHD), development of relapse and overall survival of patients were evaluated. The source of stem cells was BM in 240 and PB in 109 patients. **Results:** The mean age of patients was 96.8±60 and 94.5±63 months in BM and PB group, respectively. The mean myeloid and platelet engraftment time was statistically significantly earlier in PB group ($p<0.001$). Acute GVHD was statistically significantly higher in PB group ($p<0.001$). The relapse rate was statistically significantly higher in the PB group (p:0.02). The mean follow-up period was 49.2±41.6 months. The 5-year overall survival rate was 83.4% in the BM group and 68.5% in the PB group (p:0.003). **Conclusion:** In our study, in accordance with the literature, it was observed that myeloid and platelet engraftment was earlier if the source is PB in HSCT in pediatric patients, but acute GVHD was more frequent. In the survival analysis, the 5-year survival of the bone marrow transplant group was found to be higher. Peripheral blood could be an alternative stem cell source in patients but it would be more appropriate to decide the stem cell source according to the primary diagnosis of the patients.

https://doi.org/10.1016/j.htct.2021.10.999

CONSULTATION HEMATOLOGY

OP 33

A RARE CAUSE OF SIDEROBLASTIC ANEMIA: TRNT1 MUTATION

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Case report: tRNA nucleotidyltransferase 1(TRNT1) gene encodes a polymerase involved in the maturation of cytosolic and

mitochondrial transfer RNAs. Autosomal recessive loss of function mutations of TRNT1 leads sideroblastic anemia, immunodeficiency, fevers and developmental delay at varying degrees. Here we present a 10-year-old girl with periodic fever, retinitis pigmentosa, B cell deficiency, seizures and transfusion free sideroblastic anemia due to compound heterozygote TRNT1 mutation.

https://doi.org/10.1016/j.htct.2021.10.1000

PEDIATRIC ONCOLOGY ABSTRACT CATEGORIES

LYMPHOMAS

OP 34

BURKITT LYMPHOMA PRESENTING WITH EYE AND KIDNEY INVOLVEMENT: CASE REPORT

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Case report: Burkitt lymphoma (BL) is an aggressive form of B-cell non-Hodgkin lymphoma. It may present with a variety of symptoms leading to possible misdiagnosis and delay in treatment. BL is fatal if left untreated, and early diagnosis and treatment can improve prognosis. In this case report, a 3.5-year-old male patient with no known disease had left eyelid swelling and hematuria, and orbital magnetic resonance imaging performed after his admission showed contrast enhancement in the bulbus oculi, and increased uptake in both kidneys (suvmax:9.5) in positron emission tomography. The patient's bone marrow aspiration was normal. There was no involvement in the evaluation of the central nervous system. As a result of kidney biopsy, he was diagnosed with high-grade B-cell lymphoproliferative disease (Ki-67 95-100%, diffuse positivity with CD79a and EBV). Burkitt lymphoma. The treatment of the patient was started in the NHL-BFM 2012 R4 arm. At the end of the treatment, the ocular findings regressed. Burkitt lymphoma may present with different clinical presentations. If appropriate and rapid imaging techniques are used, positive results on survival can be obtained. Our patient is being followed up alive and well.

https://doi.org/10.1016/j.htct.2021.10.1001

BRAIN TUMOURS

OP 35

NECESSITY FOR A CUSTOMIZED NGS PANEL FOR ACCURATE DIAGNOSIS AND TARGETED THERAPIES IN PEDIATRIC GLIAL TUMORS

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Objective: Pediatric glial tumors comprise wide range pathologies which may mimic histomorphological features of each other's but generally have very diverse disease course. WHO Classification of Tumors of Central Nervous System (2016 and 2021) points to the necessity of investigating several molecular alterations for integrated pathological diagnosis of childhood CNS tumors. This makes customized next-generation sequencing (NGS) a powerful tool for the diagnosis of childhood CNS tumors. **Methodology:** Acıbadem Molecular Pathology Brain Tumor NGS Panel was designed according to targeted deep RNA and DNA sequencing. RNA and DNA were isolated from paraffin blocks containing more than 50% tumor in 45 cases with childhood CNS tumors. Miniseq Sequencıng System, Illumına and Archer Analysıs Ver 6.0.3.2 platforms were used. Fusions (translocations), mutations, and DNA copy number changes in 81 genes were screened for the most common molecular alterations in CNS tumors. **Results:** Fourty-five childhood CNS tumors were evaluated with NGS results. Among these there were 19 pilocytic astrocytomas, 1 case of high grade astrocytoma with piloid features, 4 diffuse leptomeningeal glioneuronal tumors, 1 pleomorphic xanthoastrocytoma, 4 pediatric diffuse glial tumors, 1 infantile hemispheric astrocytoma, 1 astroblastoma, 12 diffuse midline glioma. Sixteen of these tumors were able to be diagnosed based on these molecular findings. Thirty-four cases received targeted therapies. **Conclusion:** The customized NGS panel, as a single molecular workflow is very helpful and supportive in diagnosis for CNS childhood tumors. Since the number of driver mutations are few in childhood tumors, detection of the driver molecular alteration is guiding the medical treatment startegy in terms of targeted regimens.

https://doi.org/10.1016/j.htct.2021.10.1002

OP 36

CONSTITUTIONAL MISSMATCH DEFECT REPAIR DISORDER (CMMRD) IN PEDIATRIC HIGH GRADE GLIOMA

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