EARLY COMPLICATIONS IN ALLOGENEIC HEMATOPOIETIC STEM CELL TRANSPLANTATION FROM SIBLING DONORS – EXPERIENCE OF FUNDENI CLINICAL INSTITUTE

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Allogeneic hematopoietic stem cell transplantation is an effective and curative treatment for a number of hematological malignancies and immune system or genetic disorders. In principal exists three categories of early complications in allogeneic stem cell transplantation: the first is related to toxicity of conditioning regimen, especially with endothelial origin (such as veno-occlusive disease, capillary-leak syndrome, thrombotic microangiopathy, engraftment syndrome or diffuse alveolar haemorrhage), the second are infectious complications (other than CMV) and the third one is graft versus host disease (GvHD).

In our center, between 2003 and January 2012, fifty five patients were transplanted from HLA sibling donors: 44 were adult patients and 11 children. Thirty nine patients had myeloablative conditioning regimen: 14/39 TBI-based, 19/39 classical Bu/Cy and 6 were ATG/CFA. Sixteen patients had non-myeloablative conditioning, all were Fludarabine-based regimens. Regarding the diagnosis: 22/55 were AML, 12/55 ALL; 2/55 biphenotypic acute leukemias, 3/55 CML; 6/55 SAA; 4/55 NHL/HL relapsed after autologous stem cell transplant; 2/55 cases of MMM, one CMML, one CLL; oneMDS and one case of diskeratosis congenita. There were 54 peripheral blood colections and 1 from the bone marrow. All patients engrafted: 14,5 days after the myeloablative conditioning regimen and 18,5 days after the nonmyeloablative one, as an average.

The complications of endothelial pathology experienced in our center were: 5 cases of VOD, 4 cases of thrombotic microangiopathy and 10 cases of capillary-leak syndrome. Infectious complications were microbiologically documented in 20/55 cases (13 cases in myeloablative conditioning) with E Coli in 6/20 cases, staphylococci in 3/20 cases, klebsiella in 2/20 cases, 3/20 Enterococcus, 2/20 Cl.Difficile; 1 acinetobacter, 1 mucormycosis, 1 hepatitic B virus, 1 BK virus infection. Regarding the early onset of acute GvHD: we had 17 cases of acute GvHD in myeloablative conditioning (43,6%) and 5 cases in nonmyeloablative setting (31,2%). The majority 15/22 cases were grade I and II of GvHD.

There were registered 14/55 deaths in the first 100 days after the transplantation (25,45% of all cases). One patient deceased after a cerebral hemorrhage and the others after the cited complications. It was recorded 61 incidents. In 18 cases were observed associations, the most frequent being acute GvHD + sepsis. In one case the death supervened after the triple association – VOD + capillary-leak syndrome + sepsis "combined". Forty one cases covered the first 100 days posttransplantation, 23 being alive at the present evaluation.