High Dose Chemotherapy Team (Theotepa, Etopiside, Aracytine, Melphalan) Followed by Autologous Peripheral Bood Stem cell Transplantation in Lymphoma Preliminary Results of a Prospective Study

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Background: High-dose chemotherapy (HDCT) followed by autologous peripheral stem cell transplantation (APBSCT) improves survival and reduces the risk of relapse in patients (pts) with lymphoma (L) in relapse after first line treatment. BEAM is the most frequently HDCT used in L. BCNU is no longer available and replaced by Thiotepa which is approved by French national agency for the security of drugs for use as part of HDCT followed by APBSCT. We present preliminary results of a prospective study started on May 2017 including 29 adult's patients (pts) undergoing first HDCT TEAM followed by APBSCT for Lymphoma.

Methods: Patients eligible were ≥18 years old and HIV, hepatitis B and C negative. Primary end point is PFS at one year. Secondary end points are OS at 1 year(y), non relapse mortality (NRM) at 1y and incidence of infection and side effects of grades ≥ 3 according to WHO grading scale TEAM included Thiotepa given as a dose of 4mg/kg/day, d-7, d-6, Etoposide:100mg/m^2/12h,d-5 to d-2; Aracytine:200mg/m^2/12h,d-5 to d-2; Melphalan 140mg/ m^2, d-1 of APBSCT which was performed on d0. The minimal number of CD34+ cells infused was ≥2 .10^6/kg. Management of febrile neutropenia was performed according to ECIL6 guidelines.

Results: Median age was 35 y o (18-65). There were 10 females and 19 males. Two pts had Karnofsky score < 90. The diagnosis was Hodgkin's Lymphoma (HL) in 19 pts, Diffuse large B cell lymphoma DLBCL in 5 pts, mantle cell lymphoma(MCL) in 2 pts, follicular lymphoma (FL) in 2 pts and anaplastic T cell lymphoma in 1 patient (pt). The median number of previous treatment lines was 3 (1-5). 26 pts were transplanted in complete remission (CR) and 3 pts in partial remission (PR). The median number of CD34+ cells transfused was 4.1.10^6/kg (2-18). The median times for neutrophil and platelet recovery were 11 d (8-23) and 12 d (7-26), respectively. Vomiting, diarrhea and stomatitis of grade ≥ 3 occurred in 1pt, 6 pts and 1 pt, respectively. All the pts developed febrile neutropenia. Two pts developed pneumonia, one bacteremia due to E.Coli ESBL+. Two pts developed colitis due to clostridium difficile. Two pts developed sub cutaneous cellulitis. The median hospitalization duration was 28 days (21- 44). The three pts in PR before HDCT obtained CR after APBSCT. Two pts relapsed at 6 and 7 months after APBSCT and underwent allogeneic hematopoietic stem cell transplantation. With a median follow up of 11 months (1.5 - 17), all the pts is alive. PFS at 1y was 92%.

Conclusions: HDCT TEAM in L induced low toxicities and high efficacy with a short follow up. TEAM is a valuable alternative to BEAM but must be investigated in larger prospective clinical trials.

Keywords: Lymphoma, Autologous peripheral stem cell, TEAM regimen