

INDUCTION CHEMOTHERAPY WITH CYTARABIN AND MITOXANTRONE FOR ACUTE MYELOID LEUKEMIA IN FRIABLE PATIENTS

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Objective: to evaluate the efficacy and response rate of AML cases to induction regimen with Mitoxantrone and Cytarabine in friable patients.

Introduction: Induction regimen with Cytarabine and Daunorubicine or Idarubicine is the standard regimen for AML, but with Idarubicine we experience a prolonged course of neutropenia for about 22 to 28 days, that would increase the risk and mortality due to life threatening infections as well as difficulties such as depression and inability to adjust with the isolation and prolong duration of hospital admission. We substituted Idarubicine or Daunorubicine with Mitoxantrone 12 mg/m² in combination with Cytarabine 100 mg/m² as 7/3 induction for friable patients with cardiac problems, mood disorders to evaluate the role of this change in response rate as well as the duration of neutropenia, the risk of life threatening infections and the duration of hospital admission.

Materials and method: From August 2007 till August 2009 10 cases with AML diagnosis that was proved by flowcytometry were received induction with Mitoxantrone 12 mg/m² for 3 days and Cytarabine 100 mg/m² continuous infusion for 7 days and G-CSF began after completion of 7 day. The median age of the patients were 45 years ranging from 16 to 74 years and all the cases had De novo Leukemia not the secondary form. 4 patients were female and 6 were male.

Results: Median duration of neutropenia after completion of induction therapy was 10 days ranging from 8 to 16 days. None of the cases died from septicemia and fever was controlled with Imipenem together with Vancomycine in all the cases. The response rate was 80% and the 2 cases that did not respond to Cytarabine and Mitoxantrone did not respond to Cytarabine and Daunorubicin as re induction either.

The cases were then candidated for Stem Cell Transplant program and 4 cases received SCT subsequently which was Autologous in 1 case and Allogeneic in 3 others. One case relapsed after 10 months that was not responsive to salvage therapy and died due to leukostasis.

Conclusion: Although the number of our cases were quite small and the cases were selected according to some considerations not on a randomized basis, substitution of Mitoxantrone with other anthracyclines seems reasonable with no negative effect on response rate but with significant change in duration of neutropenia and decreasing the hospital admission period and might be a combination for patients with medical considerations, low compliance for prolong hospital admissions or even elderly patients.