

Multiple Myeloma – The Indian Perspectives: Current situation

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Abstract

Prognosis of multiple myeloma (MM) has improved during the past two decades. In India, incidence of MM varies from 1.2 to 1.8 per 100,000. Approximately, 50,000 new MM cases are diagnosed each year. Key differences in presentation include- younger median age at diagnosis – 55 years with 12% of patients being less than 40 years of age, asymptomatic (1%), higher proportion of patients with anemia (Hb \leq 10G/dl-62%), serum creatinine (\geq 2 mg/dl, 31%) and ISS III stage (40%) and extra-medullary disease in about 20% of patients. Limited data is available on cytogenetics but suggest that proportion of patients with high risk cytogenetics is similar to those reported from West. Availability of generic preparations of novel agents (e.g. thalidomide, lenalidomide and bortezomib) has made these drugs accessible to large number of patients. A randomized study conducted at our centre (CTRI2010 001187) revealed that for newly diagnosed MM patients treatment with 4 cycles of thalidomide plus Low dose dexamethasone (n=98) as induction was non inferior to lenalidomide plus Low dose dexamethasone (n=102) (Clin Lymphoma, Myeloma and Leukemia 2015;15: e146). Overall response rate (p=0.34), time to achieve \geq partial response (p=0.14) was not different in two arms. At a median follow up of 70 months, median overall survival (OS) has not reached for patients in

Len-dexa arm vs. 63 months for thal-dexa , $p=0.50$. Currently we are conducting a randomized study comparing three drug regimen (bortezomib +lenalidomide and dexamethasone) with Len-dexa, 102 patients have been recruited so far.

Eligible MM patients should receive autologous stem cell transplantation (ASCT) following 4 to 6 cycles of induction. Presently, in India facilities for ASCT are available at 50 centres, more than 1000 patients have received ASCT till 2015. Till December,2013, 225 patients underwent ASCT at our centre (median age was 53 years, (range, 27 to 67), 69.3% were males). Post-ASCT 54.7% achieved complete response (CR) (post maintenance CR 58.7%). At a median follow up of 90 months (range, 18 to 266 months), median progression-free survival (PFS) and overall survival (OS) is 32 and 85.5 months, respectively. Estimated PFS and OS at 10 years is 29.7% and 43.6%, respectively. On multivariate analysis – presence of extra-medullary disease (HR 3.05, $p<0.001$), and ISS III (HR 0.503, $p<0.02$) predicted inferior OS. For PFS: extra-medullary disease at diagnosis (HR 1.585, $p<0.03$), and more than one line of induction therapy (HR 0.534, $p<0.02$) predicted adverse outcome. Achievement of CR post- transplant was predictor of superior OS and PFS ($p<0.001$). Estimation of minimal residual disease (MRD) (n=60) using five color flow (CD38, CD138, CD45, CD19, CD56) revealed MRD negative status in 46.4% of patients. **Conclusions:** Further research is needed to improve outcome for patients who fail to achieve CR and those with ISS stage III and extra-medullary disease.