

HEMATOLOGY

Synergistic effects of bortezomib and melphalan therapy in patients with multiple myeloma

Recent evidence suggests that patients with newly diagnosed multiple myeloma treated with high-dose melphalan therapy prior to undergoing autologous stem cell transplantation (ASCT) are more likely to achieve complete response when co-treated with bortezomib. Murielle Roussel and colleagues, from multiple French institutions, analyzed the synergistic effects of bortezomib (a reversible proteasome inhibitor) with melphalan on response to ASCT as part of a single-arm, open-label, Intergroupe Francophone du Myelome (IFM) phase II study. “To date, no conditioning regimen has proven to be more effective than high-dose melphalan, which is well tolerated, but ultimately not curative,” explains Roussel, the study’s lead investigator.

The researchers enrolled 54 patients with newly diagnosed multiple myeloma scheduled to undergo ASCT and evaluated their clinical response at 3 months of follow-up. Roussel’s team

found that 32% of individuals treated with a combination of bortezomib and high-dose melphalan (Bor-HDM) achieved complete response, while 70% had a very good partial response.

“...a higher percentage of matched patients achieved complete response in the Bor-HDM study...”

To evaluate the effect of bortezomib on response to ASCT with that of a control cohort, the researchers matched 46 suitable participants from the Bor-HDM study with 115 eligible patients from the IFM 2005–01 trial who were treated with high-dose melphalan alone—initial evaluations and response criteria were identical in both trials. Overall, the investigators noted that a higher percentage of matched patients achieved

complete response in the Bor-HDM study compared with those participating in the IFM 2005–01 trial (35% versus 11%, respectively).

Furthermore, the researchers stress that bortezomib therapy was well tolerated and no treatment-related mortality or increased toxicity was recorded. “These data give support for developing this Bor-HDM combination followed by ASCT,” concludes Roussel, who goes on to say “prospective randomized trials are needed to assess whether this combination regimen is effectively better than high-dose melphalan alone in the setting of induction therapies containing new drugs, and if it can enhance the depth of the response.”

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Original article Roussel, M. *et al.* Bortezomib and high-dose melphalan as conditioning regimen before autologous stem cell transplantation in patients with *de novo* multiple myeloma: a phase 2 study of the Intergroupe Francophone du Myelome (IFM). *Blood* 115, 32–37 (2009)