Bone Marrow Transplantation (2008) 41, 413–414

www.nature.com/bmt

EDITORIAL

The role of allografting in adults with acute leukaemia

Bone Marrow Transplantation (2008) **41,** 413–414; doi:10.1038/bmt.2008.21

Allografting for adults with AML and ALL is undergoing major changes and it was in recognition of these changes that this journal decided to devote a special edition to this issue. Accordingly I was delighted to be asked to edit this special issue but also apprehensive. As is the concern with textbooks (which can be out of date by the time they are published) I wanted the edition to be 'state of the art'. So I composed a 'wish list' of eminent acute leukaemia transplant physicians, all of whom I know to be impossibly busy, and the journal approached them with our proposal. My wish list came true; these well-known haematologists progressively signed up and we set them to work on some quite challenging topics.

So what did we want to highlight? Have there been real changes? The answer to the second question is undoubtedly yes. To be of any real use to our readers we first had to ask whether these patients should be transplanted in the first place. To address this issue a 'transplanter' needs to have a deep understanding of the biology of the disease he/she is attempting to cure and the ability to compare it with existing therapies.[1] The prognostic and biologic factors that determine the outcome of AML have been progressively elucidated over the last 15 years but there have also been recent strides in ALL with a better understanding of cytogenetics[2] and other risk factors that affect outcome. In a similar vein Dr Fielding writes about Philadelphia positive ALL, which is a special very high-risk subset of ALL that requires different treatment from the outset. Medium term data about the use of imatinib before transplant are becoming available and studies of other tyrosine kinase inhibitors are being reported in imatinib-refractory patients.

Although alternative donor transplantation is hardly new there are relatively few publications in the areas of AML and ALL.[3,4] Drs Sierra and Weisdorf have enormous clinical experience of unrelated donor SCT at centres of excellence; their reviews show where we are now but also indicate significant room for improvement. Better elucidation of the effects of typing of unrelated donors were necessary for the special edition to describe accurately the current role of cord blood transplant and haploidentical donors (Drs Laughlin, Weisdorf and Aversa). Haploidentical transplants are now an accepted strategy in paediatric leukaemia and have been compared with cord blood transplants but the data in adults is still small scale and confined to a few centres. The comparison with cord blood has been made more complex with the widespread use of two units (or other strategies), which appears to have overcome the issue of poor engraftment.

Finally, this edition sought to explore the GVL effect in these two diseases. The considerable evidence for a GVL effect in each disease is described by all authors (with each stem cell source); this hopefully will help the reader decide how high-risk patients might be transplanted. Donor lymphocyte infusions are relatively ineffective in both diseases in the setting of overt relapse; the kinetics are too rapid. The role of donor lymphocyte infusion is described in detail by Drs Porter and Loren. A fairer test of the GVL effect is the role of reduced intensity conditioning transplants. In AML there are growing data (as Dr Craddock explains)—initially in older patients—but the results are promising enough to be extended to younger patients. In ALL there are only a few preliminary studies of reduced intensity conditioning allografts but Dr Forman talks about his centre's experience and points to the way ahead. Transplant-related mortality is far too high in older patients being transplanted for ALL;[5] this refinement of transplant technique is to be explored in the next UK–US intergroup ALL study. Relapse remains the major problem of most transplants. Drs Shaw and Russell describe some recent data and provide some hope that there may be some progress in this area soon.

The final check on quality rests with the reviewers. I cannot name them here but their insights added balance in many cases and the response of the authors to the suggested revisions indicates they were spot on.

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