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Recommendation Report SCT-1 IN REVIEW

Stem Cell Transplantation in Multiple Myeloma

C.T. Kouroukis and R.B. Rumble

Report Date: March 29, 2012

An assessment conducted in March 2018 placed Recommendation Report SCT-1 IN REVIEW. This means that it is undergoing a review for currency and relevance. It is still appropriate for this document to be available while this updating process unfolds. The PEBC has a formal and standardized process to ensure the currency of each document (PEBC Assessment & Review Protocol)

Recommendation Report SCT-1 is comprised of 2 sections. You can access the summary and full report here:
https://www.cancercareontario.ca/en/guidelines-advice/types-of-cancer/986

Section 1: Recommendations
Section 2: Summary of Methods and Evidence

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Recommendation Report SCT-1: Section 1

Stem Cell Transplantation in Multiple Myeloma: Recommendations

C.T. Kouroukis and R.B. Rumble

Report Date: March 29, 2012

CLINICAL QUESTION

What is the role of stem cell transplantation (SCT) in the treatment of multiple myeloma (MM)?

TARGET POPULATION

All adult MM patients considered for treatment that includes blood or marrow transplantation.

RECOMMENDATIONS AND SUPPORTING EVIDENCE

Autologous SCT is the recommended treatment option for patients with newly diagnosed MM, as part of the initial treatment plan.

Supporting evidence

Evidence included in four Clinical Practice Guidelines (CPGs) (1-4) suggests that a single transplant with autologous SCT should be offered to all MM patients who are free from severe co-morbidities and who are younger than 65 years of age, following the initial treatment with high-dose chemotherapy.

The SCT Steering Committee acknowledged that, while the evidence upon which the CPGs were based almost uniformly excluded patients older than age 65, there was no reason not to offer SCT to patients 65 or older who have good performance status and no co-morbidities that would be a contraindication to transplantation.

The SCT Steering Committee also acknowledges that ongoing trials are investigating the value of upfront treatment with combinations of novel agents and the deferring of transplantation to a later date.

Tandem (double) autologous SCT is an option for patients with MM who respond to the first autologous transplant with less than a very good partial response, but not progressive disease.

Supporting evidence

Evidence included in two CPGs (1,2) suggests that double autologous SCT should be offered to patients who did not achieve a complete remission after their initial autologous SCT.

While the CPGs recommended a second transplant be offered to patients who did not achieve

complete remission following their first transplant, the SCT Steering Committee acknowledged that offering a second transplant to patients who achieve less than a very good partial response is reasonable as long as there is no progressive disease.
Allogeneic transplantation is an option for patients with high-risk MM preferably within the context of an investigative study.
Supporting evidence Evidence from three of the CPGs did not support the use of allogeneic SCT from HLA-matched related donors as a primary treatment, but the conclusion is that it may be offered to patients <50 years of age who are not expected to benefit from autologous SCT (e.g., chromosome 13 deletion) within the investigative setting only (1,2,4).
Repeat autologous transplantation is an option for patients with MM who relapse after a long remission (> 2 years) to a single autologous transplant.
Supporting evidence Despite a lack of good quality evidence, the SCT Steering Committee's consensus opinion is that patients who relapse after a long remission following a single transplant should be offered a second transplant.

QUALIFYING STATEMENT

The patient selection process and the ultimate decision to perform an SCT should take into account not only disease-related characteristics, but also co-morbidities and patient preferences. Evidence on the role of SCT in the management of MM is emerging rapidly. This topic is also the subject of Program in Evidence-based Care (PEBC) Evidence-based Series (EBS) 6-6, which will be updated to incorporate new data. EBS 6-6 differs from this report in that it includes only evidence comparing high-dose chemotherapy and SCT in patients with MM, whereas this report includes comparisons of all interventions including SCT such as radiotherapy and other treatment modalities.

FUTURE RESEARCH

Future research in this setting should continue to explore novel chemotherapy and supportive therapy options along with SCT. Better management of co-morbidities may allow clinicians to offer SCT to patients currently not eligible for treatment.

IMPLICATIONS FOR POLICY

Transplantation for myeloma remains the most frequent indication in Ontario for autologous transplantation. As of this report, and in the foreseeable future, it is highly unlikely that the indication for transplant in such patients will change. With the use of more effective induction regimens, it is possible that more patients will be eligible for transplant with myeloma.

RELATED PROGRAM IN EVIDENCE-BASED CARE REPORTS

- Imrie K, Rumble RB, Crump M; Advisory Panel on Bone Marrow and Stem Cell Transplantation; Hematology Disease Site Group of Cancer Care Ontario's Program in Evidence-based Care. Stem cell transplantation in adults. Report Date: January 30, 2009 (5). Available from: http://www.cancercare.on.ca/common/pages/UserFile.aspx?fileId=35448

RELATED PROGRAM IN EVIDENCE-BASED CARE GUIDELINES

- Imrie K, Esmail R, Meyer RM; Members of the Hematology Disease Site Group of the Cancer Care Ontario Practice Guidelines Initiative. The role of high-dose

chemotherapy and stem-cell transplantation in patients with multiple myeloma: a practice guideline of the Cancer Care Ontario Practice Guidelines Initiative. Ann Intern Med. 2002;136:619-29. Available at: http://www.cancercare.on.ca/common/pages/UserFile.aspx?fileId=34315

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