Newer Approaches to the Therapy of Multiple Myeloma

In the management of multiple myeloma, bone marrow transplantation is potentially applicable for more patients because the age limit is higher and a matched donor is unnecessary. However, two major problems exist. First, the complete eradication of multiple myeloma from the patient may not occur, even with large doses of chemotherapy and radiation. The second major problem is that of reinfusing autologous marrow contaminated by myeloma cells or their precursors. This is a potential source of relapsing disease.
Among 41 remaining patients, there was only one early death and 27% achieved complete remission. Their projected 4-year survival rate was 82%. Seven of the 41 patients had not responded to initial chemotherapy, but unexpectedly 29% of them achieved a CR and a median survival of over 4 years. Fourteen of the 41 patients were previously untreated and obtained a remission after 4 to 6 cycles of VAD and had a survival greater than 33 months. It must be recognized that these 14 patients may have done well with conventional chemotherapy without the risk and expense of autologous bone marrow transplantation.

The capacity of granulocyte-macrophage colony-stimulating factor (GM-CSF) and G-CSF to shorten the duration of granulocytopenia has been explored in patients receiving high-dose chemotherapy. The administration of these growth factors produces increased granulocyte levels and a potential reduction in bacterial infections. Barlogie et al demonstrated that GM-CSF administered to patients with refractory multiple myeloma who were less than 50 years old and who had received chemotherapy for less than 1 year had significantly reduced periods of granulocytopenia (21 vs 35 days) when compared with patients who had not received GM-CSF. The CSFs may play a significant role in reducing infection in aggressively treated patients.

Interleukin-6 (IL-6) is a potent growth factor for plasma cells and is elevated in overt myeloma and plasma cell leukemia. Preliminary studies using anti-IL-6 antibodies show activity in patients with plasma cell leukemia (Bataille, personal communication, June 1990).

There is a great deal of interest in multiple myeloma, and we all hope that generation of new data on the biology of the plasma cell will lead to improved therapeutic approaches.

ROBERT A. KYLE
Mayo Clinic and Mayo Foundation
Rochester, MN

REFERENCES

Newer approaches to the therapy of multiple myeloma [editorial]

RA Kyle