Plerixafor with and without chemotherapy in poor mobilizers: results from the German compassionate use program.

Abstract:
The CXCR4-inhibitor plerixafor mobilizes hematopoietic stem cells amplifying the effects of granulocyte-CSF (G-CSF). Before approval plerixafor was used in a compassionate use program (CUP) for patients who failed a previous mobilization. In the German CUP 60 patients from 23 centers (median age 56.5 years (2-75)) were given 240 ?g/kg plerixafor SC 9-11 h before apheresis. A total of 78.3% (47/60) received G-CSF for 4 days before plerixafor administration; 76.6% of those (36/47) yielded at least 2.0 × 10^6 CD34(+) cells/L. The median cell yield was 3.35 × 10^6 CD34+ cells/kg (0-29.53). Nine patients received plerixafor alone or with G-CSF for less than 4 days mobilizing a median of 3.30 × 10^6 CD34+ cells/kg (1.6-5.6). There was no significant difference between G-CSF application for 4 days and for a shorter period of time (P=0.157). A total of 47 patients received plerixafor plus G-CSF combined with chemotherapy yielding a median of 3.28 × 10^6 CD34+ cells/kg (0-24.79). In all, 40 of 60 patients (66.7%) proceeded to transplantation, and achieved a timely and stable engraftment. Side effects
were rare and manageable. In conclusion, mobilization with plerixafor in poor mobilizers is safe and results in a sufficient stem cell harvest in the majority of patients.