Abstract:

Purpose High-dose chemotherapy with autologous stem-cell rescue (SCR) is a key component of high-risk neuroblastoma (HRNB) therapy. Carboplatin, etoposide, and melphalan (CEM) or busulfan and melphalan (Bu/Mel) are the most evaluated, effective high-dose chemotherapy for HRNB on the basis of results from major cooperative group studies. Toxicity profiles vary between these regimens, and practice variation exists regarding the preferred high-dose therapy (HDT). We sought to evaluate the safety of HDT and autologous SCR for HRNB in a resource-limited country (Egypt) compared with the resource-rich United States. Patients and Methods We performed a retrospective comparative review of single CEM-based HDT/SCR outcomes through day 100 for HRNB at the Fred Hutchinson Cancer Research Center (FH) in the United States (2005 to 2015) versus Bu/Mel-based HDT at El-Sheikh Zayed Specialized Hospital (SZ) in Egypt (2009 to 2015). Results Forty-four patients at FH and 77 patients at SZ were reviewed. Pretransplant hepatic comorbidities were significantly higher at SZ (29 of 77 v nine of 44; P = .05), with 19 of 77 patients at SZ having hepatitis infection. Engraftment was delayed after SZ-Bu/Mel therapy compared with FH-CEM therapy for neutrophils (median 12 days v 10 days, respectively; P

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