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Outcomes of hematopoietic cell transplantation (SCT) and combined immunosuppression (IST) patients with severe aplastic anemia (SAA) admitted with life-threatening infections

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Abstract

Introduction: Infections remain a dominant cause of treatment failure in children with AA. Often severe infections present at admission are considered as contraindications to curative therapy.

Patients: Among 164 pts admitted with AA between 1998–2005, 35 (21%) had serious infections. There were 23 males and 12 females (med age 10.6 y) with SAA (2 pts) or very SAA (33 pts). Twelve pts were affected by bacterial sepsis, 9 by invasive mycoses (invasive aspergillosis (IA) 7, candidiasis 2), 4 by mixed fungal and bacterial infections, 2 had pneumonia, 6 severe stomatitis, 3 sepsis of unknown origin and 1 had cellulitis. One pt died of Gram (-) septic shock—aged 24 hours—after admission, while in the other 34 pts either SCT (5 pts) or combined IST with ATG+Cyclosporine A (29 pts) were carried out. Med interval from admission was 28 d for SCT and 10 d for IST. Intensive appropriate antimicrobial therapy was given to all patients immediately after admission.

Results: In all 5 SCT recipients complete resolution of infections (all IA) was achieved after bone marrow recovery. One pt died on day 176 from GVHD, CMV, and graft failure; the other 4 pts are alive. Of the 29 recipients of IST 14 (48%) are alive in complete (12 pts) or partial (2 pts) remission, whereas 15 died. Death occurred during the first, second, and third mo in 1, 2 and 1 pts respectively. In 8 nonresponders to IST the main cause of death was primary infection, whereas in 7 it resolved completely and they died from secondary infections or hemorrhages. As of 09/2008, 18 (51%) of the original 35 pts are alive: the OS rate is 51%±8% and failure-free survival is 31%±7%.

Conclusion: Intensive antimicrobial therapy allows the safe performing of SCT or IST in severely infected pts with SAA. Most of them survive the early post-treatment period, while half are long term survivors.

Keywords: severe aplastic anemia, infections, hematopoietic cell transplantation, combined immunosuppression