

Hematopoietic Stem Cell Transplantation in Pakistan: Current Landscape and Future Prospects

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In Pakistan, the hematopoietic stem cell transplant (HSCT) program commenced in 1995.¹ Currently, there are around 10 operational centers offering this facility.² The cost of a stem cell transplant in Pakistan varies depending on the facility, type of transplant, conditioning program and post-transplant challenges. Allogeneic transplants are typically costlier due to the donor matching process. Approximately 1900 HSCT procedures have been performed over the last two decades.³ The majority received allogeneic (allo-), while others received autologous (auto-) HSCT.

The primary indications for allo-HSCT were beta thalassemia, aplastic anemia, and acute leukemia. The autologous transplants were mostly used to treat lymphomas and multiple myeloma. Peripheral blood stem cells (PBSC) were employed as a source of stem cells in 48% of patients, followed by bone marrow in 36% of instances, with the remainder receiving both PBSC and marrow infusions.⁴ Due to socioeconomic discrepancies, lack of financing and registries, a significant number of patients are unable to afford and/or show at a facility on time. As a result, the estimates presented above are predicted to be lower than the actual disease burden and HSCT demand.^{2,4} Globally, the field of HSCT has grown significantly with the introduction of cord blood stem cell preservation and the formation of matched unrelated donor (MUD) registries. Pakistan, being a resource-constrained country with very less national health expenditure⁵, lacks the infrastructure for MUD registry and cord blood banks. The lack of a registry for transplant and bone marrow donors, the scarcity of cord blood banks, and a lack of financial assistance all pose challenges to the future development of this newly emerging facility in our country. Only a few transplant centers also prolong the waiting list. These major restrictions must be addressed by specialists from both private and public sectors, which may result in improved disease outcomes as well as a reduction in the demand-supply gap.

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