

0043 - ENDOCRINE DYSFUNCTION AFTER TBI-BASED ALLOGENEIC HEMATOPOIETIC STEM CELL TRANSPLANTATION IN PEDIATRIC ALL

Mode: Research paper

Thematic Unit: Thyroid

Thematic Unit 2: Puberty

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Background/Objectives: Chemotherapy for acute lymphoblastic leukemia (ALL), combined with total body irradiation (TBI)-based conditioning for allogeneic hematopoietic stem cell transplantation (alloHSCT), may result in short- and long-term endocrine sequelae. Our aim was to evaluate endocrine sequelae in pediatric ALL survivors treated with alloHSCT and followed at a single tertiary centre

Methods: A retrospective, descriptive study including patients

Results: In the entire cohort (n=85), five-year overall survival was 65.8% (95% CI:55.5–76.1). Among the 57 survivors, the median age at ALL diagnosis was 7.5 years (range 2–16.4), and at alloHSCT of 10.1 years (3.1–17.7). Male-to-female ratio was 2.6:1. All patients received chemotherapy with moderate gonadotoxic risk; 59.6% additionally underwent radiotherapy and 17.6% received BCR-ABL inhibitors. The conditioning regimen consisted of 12 Gy TBI and Etoposide, with added thymoglobulin in 38.6%. Acute and chronic Graft-versus-host disease (GVH) was present in 82.5 %. Endocrine sequelae were observed in 77.2% after a median post-transplant follow-up of 4.7 years (1.5–13.7). Longer follow-up was associated with more sequelae (p

Conclusion: Endocrine sequelae were frequently and early found in our cohort, especially HH, TD and multifactorial short stature. Pubertal status at alloHSCT and a history of GVH increased the risk of HH. Long-term monitoring, timely referral, and early endocrine intervention are essential to improve health outcomes and quality of life in survivors.

