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abstract

I-131 MIBG therapy Combined with Autologous Stem Cell Transplantation for High Risk and Relapsed/ Refractory Pediatric Neuroblastoma in MAHAK Hospital

Ali Naderi, Saeed Farzanehfar, Mithra Ghalibafian, Hasan Nikfarjam, Hadi Mousakhani, Mohsen Rouzrokh, Saeed hayeri Pour, Mahyar Nourian

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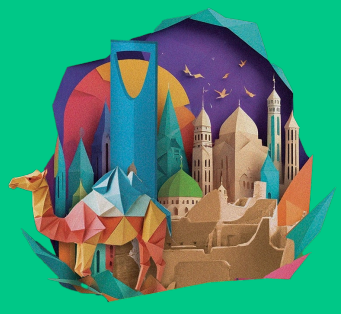

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abstract

I-131 MIBG therapy Combined with Autologous Stem Cell Transplantation for High Risk and Relapsed/ Refractory Pediatric Neuroblastoma in MAHAK Hospital

Authors: Ali Naderi, Saeed Farzanehfar, Mithra Ghalibafian, Hasan Nikfarjam, Hadi Mousakhani, Mohsen Rouzrokh, Saeed hayeri Pour, Mahyar Nourian

Affiliation: Mahak Hematology Oncology Research Center (Mahak-HORC) Mahak Hospital, Shahid Beheshti University of Medical Sciences, Tehran, Iran

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Introduction: There are many different proto - cols for treatment of high risk and Relapse/ Refractory (R/R) Neuroblastoma. According to previous researches (safety, feasibility, phase I and phase II) I-131 MIBG therapy combined with high dose chemotherapy (HDC) and autologous hematopoietic stem cell transplantation (AHSCT) is an effective and promising (but not standard of care) method of treatment in these challenging patients.

Methodology: In 2 years, 15 pediatric patients (median age at diagnosis 46.5 months) after induction chemotherapy and surgical resection (at least good partially response patients) received I-131 MIBG therapy (18 mCi/kg) combined with (2-4 weeks later) HDC (busulfan/melphalan) and AHSCT. Two months later, six patients took local radiotherapy after AHSCT.

Results: After 1 year follow-up 11 patients are alive (73.3 %) with complete response. We have two deaths due to relapse. One patient relapsed and is alive after AHSCT. There are no major complications except severe prolonged thrombocytopenia in 5 patients and one death due to Veno-occlusive disease (VOD).

Conclusion: This limited clinical trial shows that I-131 MIBG therapy combined with HDC and AHSCT is safe and effective. In future, the results of ongoing randomized controlled trials determine the efficacy and exact role of this method of treatment.