

INPLASY PROTOCOL

To cite: Lew et al. Pediatric Extracranial Germ Cell Tumor: Clinical Perspective of Autologous Hematopoietic Cell Transplantation. Inplasy protocol 202310081. doi: 10.37766/inplasy2023.1.0081

Received: 27 January 2023

Published: 27 January 2023

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Support: The authors received no financial support for the research.

Review Stage at time of this submission: The review has not yet started.

Conflicts of interest:
None declared.

INTRODUCTION

Review question / Objective: This review examines clinical perspective of high dose chemotherapy combined with autologous hematopoietic stem cell transplantation in children with relapse or refractory extracranial germ cell tumors currently, and also assess the feasibility of the application

Pediatric Extracranial Germ Cell Tumor: Clinical Perspective of Autologous Hematopoietic Cell Transplantation

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Review question / Objective: This review examines clinical perspective of high dose chemotherapy combined with autologous hematopoietic stem cell transplantation in children with relapse or refractory extracranial germ cell tumors currently, and also assess the feasibility of the application of autologous hematopoietic in high-risk patients with germ cell tumors.

Condition being studied: This review focus on the children with relapse or refractory extracranial germ cell tumors treated with high dose chemotherapy combined with autologous hematopoietic stem cell transplantation and also assess the feasibility of the application of autologous hematopoietic in high-risk pediatric patients with germ cell tumors.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 27 January 2023 and was last updated on 27 January 2023 (registration number INPLASY202310081).

of autologous hematopoietic in high-risk patients with germ cell tumors.

Rationale: Since conventional standard dose of chemotherapy has its limitations in the treatment of patients with poor risk GCTs, high-dose chemotherapy (HDCT) combined with salvage autologous bone marrow transplantation (ABMT) has

become the treatment option of adult patients with poor risk or refractory GCTs. High dose carboplatin and etoposide(HD-CE) had comprised the backbone of this treatment due to their comparable effectiveness and predominantly hematological toxicity which could be rescue with autologous bone marrow transplant. The effectiveness of HDCT and ABMT treatment for refractory or relapsed GCTs has also been demonstrated in the recent reports.

Condition being studied: This review focus on the children with relapse or refractory extracranial germ cell tumors treated with high dose chemotherapy combined with autologous hematopoietic stem cell transplantation and also assess the feasibility of the application of autologous hematopoietic in high-risk pediatric patients with germ cell tumors.

METHODS

Search strategy: We started systematic search from databases: Pubmed, Embase and Cochrane library from available papers in literature from inception to Dec. 2022 for potentially eligible studies.

Participant or population: Pediatric patients with relapse or refractory, high risk extracranial germ cell tumor.

Intervention: (high dose chemotherapy AND autologous hematopoietic stem cell transplant[Title/Abstract])OR (stem cell rescue[Title/Abstract]).

Comparator: Not applicable

Study designs to be included: Review of literature.

Eligibility criteria: Patients with malignant germ cell tumor aged less than 18 years of age undewent high dose chemotherapy

Information sources: Electronic database.

Main outcome(s): High dose chemotherapy combined with autologous stem cell

transplantation is a treatment option for patients with high-risk germ cell tumor.

Additional outcome(s): High dose chemotherapy combined with autologous stem cell transplantation associated adverse events.

Data management: We use Endnote for bibliography management of the literature and duplications would be deleted.

Quality assessment / Risk of bias analysis: Quality assessment will focus on the following elements: methods of deriving the effectiveness data; measurement of resource data; evaluation of resource data.

Strategy of data synthesis: Use keywords to search for all relevant libraries from the electronic database, and then classify all literatures into disease etiology, pathophysiology, risk classification, treatment, prognosis, HDCT combines with ABMT, etc., and then gather all the data for detailed analysis and discussion.

Subgroup analysis: Not applicable.

Sensitivity analysis: Not applicable.

Language restriction: English literature.

Country(ies) involved: Taiwan/Department of Pediatrics, MacKay Children's Hospital.

Keywords: Extracranial Germ Cell Tumor; Autologous Stem Cell Transplantation; Children.

Contributions of each author:

Author 1 - Chong Zhi Lew - Author 1 drafted the manuscript and conducted the literature search using the methods described in the PRISMA statements, collected the data and wrote the paper.

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Author 2 - Ting Chi Yeh - The author conceived and designed the analysis, contributed data or analysis tools and performed the analysis and wrote the paper.

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