EFFICACY OF AUTOLOGOUS STEM CELL TRANSPLANTATION FOR HODGKIN'S LYMPHOMA INVOLVING HIGH-DOSE CHEMOTHERAPY: A SYSTEMATIC REVIEW AND META-ANALYSIS

AUTHORS

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Introduction

- High-dose chemotherapy effectiveness is limited by myelosuppressive effects leading to dose-limiting bone marrow suppression
- **Autologous stem cell transplantation (ASCT)** serves as adjunctive therapy with promising overall survival and progression-free survival outcomes
- ASCT is the **standard of care for patients experiencing relapse** and is curative in 50% of cases
- This meta-analysis aims to highlight the efficacy of ASCT with high-dose chemotherapy (HDC) therapy in Hodgkin's lymphoma

Aim

To evaluate the pooled proportion of overall survival (OS) and progression-free survival (PFS) following ASCT with HDC in Hodgkin's lymphoma patients for a minimum follow-up of 2 years to assess therapeutic efficacy.

Objectives

- Systematic search of PubMed, Google Scholar, and Scopus databases
- Include studies reporting OS and PFS outcomes following ASCT/HDC
- Assess pooled survival proportions using random-effects meta-analysis
- Evaluate study heterogeneity using I^2 statistics
- Minimum 2-year follow-up for outcome assessment

Methods

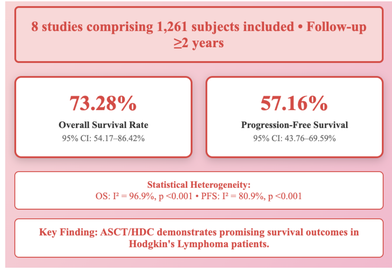
Statistical Analysis:

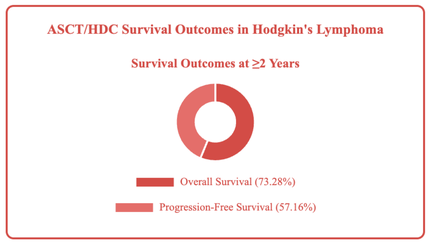
- R-Studio with Meta, Metadata, and Metafor packages
- Random intercept logistic regression model
- I^2 test for heterogeneity assessment
- Pooled proportion analysis for OS and PFS outcomes

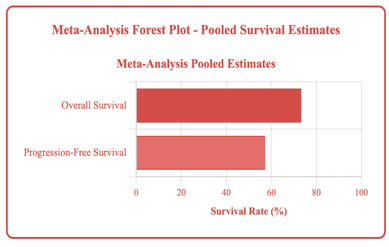
Key Inclusion Criteria

- Studies involving ASCT with HDC
- Reported OS and PFS data
- Minimum 2-year follow-up
- Hodgkin's lymphoma patients

Results







Discussion

Primary Findings: Autologous Stem Cell Therapy is associated with a promising overall survival rate of 73.28% in patients with Hodgkin's Lymphoma following high-dose chemotherapy.

Clinical Significance: The therapy shows more than half the patients (57.16%) experiencing progression-free survival at ≥2 years follow-up, demonstrating substantial clinical benefit.

Therapeutic Value: In patients experiencing relapsing or refractory Hodgkin's Lymphoma, Autologous Stem Cell Therapy proves to be a promising novel therapeutic option with optimistic outcomes.

Clinical Recommendation: ASCT/HDC represents a viable treatment strategy for Hodgkin's Lymphoma patients, particularly those with relapsed or refractory disease, offering significant survival advantages.

Future Directions: Further research should focus on optimizing patient selection criteria and refining treatment protocols to maximize therapeutic benefits while minimizing adverse effects.