



## **Pembrolizumab in Relapsed / Refractory Pediatric Hodgkin Lymphoma: Insights from Sohag Cancer Center Experience**

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## Introduction

Pembrolizumab, an immune checkpoint inhibitor targeting PD-1, has demonstrated efficacy in relapsed/refractory (R/R) Hodgkin's lymphoma. While most data derive from international centers, evidence from resource-limited settings remains scarce. This study evaluates the efficacy and safety of pembrolizumab in pediatric R/R Hodgkin's lymphoma patients treated at Sohag Cancer Center.

## Methods

A retrospective analysis was conducted on 20 pediatric patients with R/R Hodgkin's lymphoma who had failed  $\geq 2$  prior lines of chemotherapy. Pembrolizumab was administered primarily as a bridging therapy before autologous bone marrow transplant (ABMT). Demographics, disease characteristics, treatment responses, and adverse events were collected. Primary endpoints were complete remission (CR) and overall response rate (ORR). Secondary endpoints included bridge-to-ABMT rate, survival outcomes, and toxicity profile. Pembrolizumab applied dose is 2 mg per kg every 3 weeks PETCT inside our center used for risk assessment as well as response monitoring based on Deauville score.

## Results

Sixteen patients (80%) achieved CR following pembrolizumab. Ten patients (50%) successfully proceeded to ABMT. Among the four non-CR patients, partial responses and stable disease were observed, with salvage strategies including chemotherapy and transplant. Toxicities were manageable, with fatigue, rash, and gastrointestinal symptoms being the most common. At a median follow-up of 36 months, the majority of patients remained alive with no evidence of disease, with limited treatment-related mortality.

## Conclusion

Pembrolizumab demonstrated high efficacy in inducing CR in pediatric R/R Hodgkin's lymphoma within a resource-limited setting. Its role as a bridging therapy to ABMT was feasible in half of the cohort, with manageable toxicity. These findings support pembrolizumab as a valuable option in pediatric R/R Hodgkin's lymphoma.



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