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Commentary

# Hodgkin's Lymphoma in Young Adolescents

**Pragathi Anand Raj***

*Department of Medicine, Guru Gobind Singh Indraprastha University, Delhi, India*

## ABOUT THE STUDY

Hodgkin's lymphoma in children is a treatable cancer with a 90% survival rate. The cure rate of most patients has increased; late toxicities have been recorded among survivors. After MOPP, MOPP-like regimens, and irradiation, the long-term frequency of cardiac, gonadal, and neoplastic treatment consequences has been disturbing. Furthermore, subtotal nodal irradiation increases the risk of secondary cancers (solid tumour and leukemia). The late impacts' relative risk is estimated to be between 2 and 6.

With the identification of additional clinical and biologic risk factors, modern current therapy uses risk-adapted and risk-responded chemotherapy with restricted doses of alkylating agents, anthracyclines, and bleomycin, as well as low-dose, involved-field (node-field) radiotherapy, in an attempt to avoid treatment-associated toxicity while maintaining high cure outcomes. Patients with favorable illness are great candidates for therapy reduction, according to recent research findings.

Hodgkin's lymphoma has one of the highest cure rates of any cancer in children and adolescents. As a result, ongoing research focuses on minimising treatment-related toxicity, which includes secondary cancers such acute myeloid leukemia, non-lymphoma, Hodgkin's and solid tumours. Risk-adapted therapy models may be warranted by the outstanding cure rates of patients with HL when using the present combination regimen, and should assist minimise overtreatment and reduce life-threatening toxicity in patients.

We utilized the VBVP (Vinblastine, Bleomycin, Etoposide, and Prednisone) and ABVD (Adriamycin, Bleomycin, Vinblastine, and Decarbonize) chemotherapy schedules for induction chemotherapy, followed by consolidating radiotherapy. Megavoltage equipment-either a telecobalt or a linear accelerator-was used to deliver external beam radiation. Patients who had a full response or a decrease of 75% or more in all illness manifestations received 25 Gy. RT began two weeks after the end of chemotherapy and was administered five times per week in 1,8 Gy increments. Patients who did not meet these criteria received 36 Gy in 20 portions over the course of four weeks.

The well-known risk-adapted treatment for HL was developed by the German-Austrian Hodgkin's disease research (DAL-HD). The study's goal was to gradually lower treatment loads in the low and intermediate risk groups. High-dose and extended-field irradiation were limited to 20-25 Gy for involved-field irradiation (DAL-HD 90). They left out procarbazine, which is a cytotoxic drug that causes testicular injury in boys. The fields were confined to the involved sites in all patients (Involved-Field Irradiation-IFI), as determined by the initial clinical and radiologic assessment. The surrounding lands were not irradiated.

Induction chemotherapy (OPPA/OEPA and COPP regimens) was followed by radiotherapy in the DAL-HD study's combined modality therapy plan. The approach of stratification randomization was utilized. The variables were chosen based on the disease stage and systemic "B" symptoms. Following stratification, treatment groups TG1 (early stages), TG2 (mid stages), and TG3 (late stages) were assigned at random to similar strata (advanced stages). Patients in stages IA, IB, and IIA (TG1) received two cycles, children in stages IIB and IIIA (TG2) four cycles, and patients in stages IIIB and IV (TG3) six cycles. The earliest affected areas were treated with radiotherapy. In TG1 and TG2, the total dose was 25 Gy, while in TG3 it was 20 Gy. Sites with persisting lymphoma received a boost of up to 35 Gy total dosages.

Overall, it's possible to infer that the DAL-HD study's therapeutic regimen was a risk-adapted, high-efficacy treatment. However, there were two drawbacks to the protocol. On the one hand, alkylating drugs and anthracyclines that cause late adverse reactions were included in the DAL-HD study's chemotherapy regimen. Patients in the DAL-HD study, on the other hand, were chosen based on only two criteria: illness stage and "B" symptoms.

**Correspondence to:** Pragathi Anand Raj, Department of Medicine, Guru Gobind Singh Indraprastha University, Delhi, India, E-mail: Anandraj.pragathi1419@gmail.com

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