

Brentuximab Vedotin and Rituximab with Reduced Toxicity Chemotherapy in Children, Adolescents and Young Adults with Newly Diagnosed Hodgkin Lymphoma

J. Hochberg¹, J. Basso¹, L. Klejmont¹, A. Flower¹, K. Bortfeld¹, L. Harrison¹, Q. Shi², H. Islam³, P. Gerard⁴, S. Voss⁵, M. Cairo¹

¹ New York Medical College, Pediatrics, Valhalla, New York, United States of America

² New York Medical College, Statistics, Valhalla, New York, United States of America

³ New York Medical College, Pathology, Valhalla, New York, United States of America

⁴ New York Medical College, Radiology, Valhalla, New York, United States of America

⁵ Boston Children's Hospital, Radiology, Boston, Massachusetts, United States of America

Introduction

Treatment regimens for Hodgkin Lymphoma remain limited by toxicity of chemotherapy and radiation.¹ Immunotherapy has potential to reduce the burden of traditional treatment. Brentuximab Vedotin and Rituximab have both shown efficacy in Hodgkin Lymphoma.^{2,3} We hypothesized that the addition of Brentuximab vedotin (Bv) and Rituximab (R) combined with risk-adapted chemotherapy will be well tolerated and effective in children, adolescents and young adults with all stages of newly diagnosed Hodgkin lymphoma.

Methods

Our objective was to evaluate the safety, tolerability and overall response rate of Brentuximab vedotin and Rituximab in combination with risk adapted chemotherapy in newly diagnosed Hodgkin Lymphoma. Patients 1-30 yrs with all stages newly diagnosed Hodgkin Lymphoma. Low risk given 3 cycles of Brentuximab with Doxorubicin, Vincristine, Prednisone and Dacarbazine. Intermediate and High Risk patients received 4 or 6 cycles of Brentuximab, Doxorubicin, Vinblastine, Dacarbazine and Rituximab. Early response measured by PET/CT scan. Slow responders received an additional 2 cycles of therapy. Radiation therapy given ONLY to patients with bulky disease at presentation and slow early response or those not in CR.

Results

Total enrolled = 34. Median age = 15yr (range 4-23yr). Total 13 males, 21 females. Risk Assignment = 4 low, 18 intermediate, 12 high. Toxicity = 1 episode of GrIII mucositis, 1 episode of GrIII infusion reaction to Brentuximab, 2 episode GrIII peripheral neuropathy, 1 episode GrIII infection. All 34 patients achieved a complete response (100% CR). Twenty one patients (62%) achieved a rapid early response. Five patients (only 14%) have required radiation therapy to date. Immune profiles at 18 month follow up show mean±SEM IgG level, CD19 and CD3 levels = 1097±63, 325±105, and 1273±290, respectively. No patient developed agammaglobulinemia. The EFS and OS is 100% with a median follow up time of 50 months (5-92 months).

Conclusion

The addition of Brentuximab vedotin and Rituximab to combination risk adapted chemotherapy for newly

diagnosed Hodgkin Lymphoma appears to be safe in children, adolescents and young adults. Our results show significant promise with a CR rate of 100%, 61% rapid early response and significant reduction in the use of radiation. The EFS/OS to date is 100% with a median follow up time of just over 4 years.

Acknowledgment

The authors of the above mentioned abstract have no **Conflict of Interest**

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References

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