

R-MIADD for Secondary CNS Involvement in Diffuse Large B-Cell Lymphoma: A Single-Center Experience

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INTRODUCTION

Secondary central nervous system lymphoma (SCNSL) is a rare but devastating complication of diffuse large B-cell lymphoma (DLBCL), with poor outcomes and no universally accepted CNS-directed induction regimen. Standard R-CHOP is inadequate for established CNS disease, while intensive CNS-directed strategies and autologous stem cell transplantation (ASCT) may be limited by eligibility, toxicity, and access.

AIM

To describe the real-world experience of a tertiary referral center in the Philippines using R-MIADD as a CNS-penetrant induction regimen for patients with DLBCL and secondary CNS involvement.

METHOD

Retrospective single-center case series of 4 adults with histologically confirmed DLBCL and SCNSL. Three developed CNS disease after relapse following R-CHOP-based therapy; one had CNS involvement at diagnosis. CNS sites included brainstem/cerebellum, spinal canal, and pons. R-MIADD was administered every 21 days: rituximab 375 mg/m² day 0; high-dose methotrexate 3 g/m² day 1 with leucovorin; ifosfamide 1.2 g/m² day 2; cytarabine 1 g/m² day 3; liposomal doxorubicin 30 mg/m² day 4; dexamethasone 10 mg days 1–3.

CONCLUSIONS

R-MIADD was feasible and produced clinically meaningful CNS and systemic responses with manageable toxicity. Three of four patients achieved complete CNS response; the fourth had partial response with marked neurologic improvement. The regimen may be a pragmatic CNS-directed induction option in resource-constrained settings, particularly when immediate ASCT is not feasible. Larger prospective studies are needed.

RESULTS

COHORT

Four adults with DLBCL and SCNSL were treated. Three developed CNS involvement at relapse after R-CHOP-based therapy and one presented with CNS disease at diagnosis. Disease sites included brain parenchyma/brainstem, cerebellum, spinal canal, and pons.

KEY CLINICAL OUTCOMES

All 4 patients achieved clinically meaningful CNS responses.

- 3 patients achieved complete CNS response.
- 1 patient partial CNS response with marked neurologic recoverachievedy.
- All evaluable patients achieved complete systemic response.
- Three patients were alive and in remission at last follow-up.

Table 1. Clinical Characteristics and Outcomes of Patients Treated With R-MIADD

Patient	Age/Sex	Stage	Prior Therapy	CNS Site	R-MIADD Cycles	Best Response	Key Toxicity	Outcome
1	46/M	IV	R-CHOP	Brain	6	CR	None	Alive in remission
2	52/F	IV	R-CHOP	Brain + spinal cord	3	PR	Ifosfamide neurotoxicity	Proceeded to ASCT
3	41/M	III	R-CHOP	Brain	6	CR	Cytopenias	Alive with neurologic recovery
4	55/F	IV	None	Brain	4	CR	Neutropenia	Lost to follow-up

Abbreviations: CR = complete response; PR = partial response; ASCT = autologous stem cell transplantation.

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