

# Procarbazine

Procarbazine, lomustine, and vincristine (PCV) chemotherapy.

Procarbazine (Matulane (US), Natulan (Canada), Indicarb (India) is an antineoplastic chemotherapy drug for the treatment of Hodgkin's lymphoma and certain brain cancers (such as glioblastoma multiforme).

It is a member of a group of medicines called alkylating agents. The drug is metabolized and activated in the liver. It also inhibits MAO thus increasing the effects of sympathomimetics, TCAs, and tyramine.

It gained FDA Approved in July 1969. It is on the World Health Organization's List of Essential Medicines, a list of the most important medication needed in a basic health system.

## Case series

Kim et al reviewed eight immunocompetent patients (five males/three females, mean age: 56 years) who received salvage PCV chemotherapy (procarbazine 60 mg/m<sup>2</sup>, days 8 through 21: CCNU 110 mg/m<sup>2</sup>, day 1: vincristine 2 mg, days 8 and 28) for recurrent PCNSL and two patients switched to PCV chemotherapy due to severe adverse effects of HD-MTX chemotherapy. Radiologic responses, survival, and adverse effects were analyzed.

Of the eight recurrent PCNSLs, three patients (37.5%) showed radiologic complete response, one patient (12.5%) showed partial response, and four patients (50%) showed progressive disease after PCV chemotherapy. Median progression free survival (PFS) from the first administration of PCV to relapse or last follow-up was 7 months (range 5-32 months) and median overall survival was 8 months (range 2-41 months). The two patients who switched to PCV chemotherapy showed PFS of 9 and 5 months from the beginning of PCV to relapse. The common side effects were thrombocytopenia, neutropenia, and peripheral neuropathy. There were 4 grade III or IV myelo-suppression, but no fatal complications, including severe hemorrhage or infection, were observed. CONCLUSION: Salvage PCV chemotherapy has a moderate anti-lymphoma activity for recurrent PCNSLs after the HD-MTX-based chemotherapy with tolerable toxicity <sup>1)</sup>

<sup>1)</sup>

Kim YJ, Choe JH, Park JH, Hong YK. Efficacy of Procarbazine, Lomustine, and Vincristine Chemotherapy for Recurrent Primary Central Nervous System Lymphomas. Brain Tumor Res Treat. 2015 Oct;3(2):75-80. doi: 10.14791/btrt.2015.3.2.75. Epub 2015 Oct 30. PubMed PMID: 26605261; PubMed Central PMCID: PMC4656899.

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