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137. Nitrogen Mustard, Vincristine, Procarbazine, and Prednisone (MOPP) in Treatment of Recurrent Brain Tumors of Childhood

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A twelve-year experience with the use of nitrogen mustard, vincristine, procarbazine, and prednisone (MOPP) in 60 children with recurrent brain tumors is presented. Patients ranged in age from 9 months to 15 years. Nineteen had medulloblastomas, 16 had brainstem gliomas, 13 had astrocytic tumors (including 4 glioblastomas and 4 anaplastic gliomas) and 12 had a variety of other neoplasms (including 4 ependymomas). MOPP was administered for 2 years or until failure, as described previously (Cangir A, van Eys J, et al: *Med Ped Oncol* 4:253-261, 1978). Toxicity was tolerable, consisting mostly of bone marrow suppression and infection. Response criteria followed the stringent neuroradiologic criteria recommended by the American Cancer Society (Zelter PM, Friedman HS, et al: *Cancer* 56:1824-1826, 1985). Treatment results are depicted below:

Progression of recurrent disease was halted in over 70% of children with medulloblastomas; 3 of 6 patients followed for over 10 years since therapy are alive in clinical remission. Survival in patients with astrocytomas correlated with tumor grade. MOPP did not change the course of brainstem gliomas. We conclude that MOPP may be a useful, tolerable "salvage" regimen in children with selected recurrent brain tumors.

Tumor (no. of patients)	Complete Response	Partial Response	Stable Disease	All Response (%)	Progressive Disease
Medulloblastoma (19)	1	3	10	14 (73)	5
Brainstem glioma (16)	0	3	2	5 (31)	11
Astrocytoma (13)	2	2	7	11 (84)	2
Miscellaneous (12)	0	2	5	7 (58)	5
All (60)	3 (5%)	10 (17%)	24 (40%)	37 (62%)	23 (38%)