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

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**Clinical investigation**

# Salvage treatment for childhood ependymoma after surgery only: Pitfalls of omitting “at once” adjuvant treatment

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**Purpose:** To discuss the results obtained by giving adjuvant treatment for childhood ependymoma (EPD) at relapse after complete surgery only.

**Methods and Materials:** Between 1993 and 2002, 63 children older than 3 years old entered the first Italian Association for Pediatric Hematology and Oncology protocol for EPD (group A), and another 14 patients were referred after relapsing after more tumor excisions only (group B). Prognostic factors were homogeneously matched in the two groups. We report on the outcome of group B.

**Results:** Mean time to first local progression in group B had been 14 months. Tumors originated in the posterior fossa (PF) in 10 children and were supratentorial (ST) in 4; 11 had first been completely excised (NED) and 3 had residual disease (ED). Diagnoses were classic EPD in 9 patients, anaplastic in 5. Eight children were referred NED and 6 ED after two or more operations, 5 had cranial nerve palsy, 1 had recurrent meningitis, and 2 had persistent hydrocephalus. All received radiotherapy (RT) to tumor bed and 5 also had pre-RT chemotherapy. Six of 14 patients (6/10 with PF tumors) had a further relapse a mean 6 months after the last surgery; 4 of 6 died: progression-free survival and overall survival at 4 years after referral were 54.4% and 77%, respectively. Considering only PF tumors and setting time 0 as at the last surgery for group B, progression-free survival and overall survival were 32% and 50% for group B and 52% ( $p < 0.20$ )/70% ( $p < 0.29$ ) for the 46 patients in group A with PF tumors. Local control was 32% in group B and 70.5% in group A ( $p = 0.02$ ).

**Conclusions:** Relapsers after surgery only, especially if with PF-EPD, do worse than those treated after first diagnosis; subsequent surgery for tumor relapse has severe neurologic sequelae.

**Keywords:** Ependymoma; Adjuvant treatment; Second-look surgery

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