

# Pediatric intracranial ependymoma

Almost 50% of children with [intracranial ependymoma](#) experience disease relapse, and their outcomes are extremely poor. The aim of a study was to investigate optimal salvage treatment for pediatric intracranial ependymoma after the first relapse and to identify prognostic factors affecting survival.

Liu et al. conducted a retrospective analysis of 159 children who underwent initial treatment for intracranial ependymoma at Beijing Tiantan Hospital from 2013 to 2017.

Relapse was observed in 73 patients (73/159; 45.9%), with a median age of  $7.2 \pm 3.5$  years old. Molecular subgrouping analysis identified H3K27me3-negative PF-EPNs in 74% of patients, ST-RELA EPNs in 21% of patients, and H3K27me3-positive PF-EPNs in 5% of patients. The 5-year event-free survival (EFS) and overall survival (OS) rates after first relapse were 21.1% (95% CI 16.0-26.2) and 30.5% (95% CI 19.8-30.8), respectively. Patients with GTR at first relapse had higher 5-year EFS and 5-year OS than those with STR ( $P = 0.031$  and  $P = 0.003$ ) or no surgery ( $P = 0.007$  and  $P = 0.001$ ). Radiotherapy or re-radiotherapy at first relapse significantly prolonged 5-year EFS and OS (both  $P < 0.001$ ). Patients with H3K27me3-negative PF-EPN had worse 5-year EFS and OS than those with ST-RELA EPN ( $P = 0.001$  and  $P = 0.002$ ). Multivariate analysis showed that both tumor resection and radiotherapy at first relapse had independent prognostic significance for survival (all  $P < 0.05$ ).

Children with recurrent intracranial EPN have poor outcomes, and surgery and radiotherapy at first relapse should be encouraged to improve their prognosis <sup>1)</sup>.

<sup>1)</sup>

Liu ZM, Han Z, Wang JM, Sun T, Liu W, Li B, Gong J, Li CD, Zhao F, Tian YJ. Treatment and outcome of pediatric intracranial ependymoma after first relapse. J Neurooncol. 2022 Feb 28. doi: 10.1007/s11060-022-03975-z. Epub ahead of print. PMID: 35226241.

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