Intracranial ganglioglioma treatment

Complete resection produced the best outcomes and incomplete resection followed by adjuvant or salvage treatments showed favorable outcomes. In patients who are not eligible for complete resection because of tumor location or potential neurologic deficits following surgery, GK radiosurgery should be considered for the treatment of residual or recurrent tumors [1].

Is the largest retrospective study of adult low-grade GGs up to date. Younger age, female gender, temporal lobe location, and GTR indicated better survival. Adjuvant RT and/or chemotherapy should not be considered after whatever surgery in adult patients with low-grade GGs, unless the malignant transformation has been confirmed [2]

In the surgical treatment of temporal lobe epilepsy with mesial temporal lobe tumor, whether to remove the hippocampus aiming for a better seizure outcome in addition to removing the tumor is a dilemma. Two pediatric cases treated successfully with tumor removal alone are presented.

The first case was an 11-year-old girl with a ganglioglioma in the left uncus, and the second case was a 9-year-old girl with a pleomorphic xanthoastrocytoma in the left parahippocampal gyrus. In both cases, the hippocampus was not invaded, merely compressed by the tumor. Tumor removal was performed under intraoperative electrocorticography (ECoG) monitoring. After tumor removal, abnormal discharges remained at the hippocampus and adjacent temporal cortices, but further surgical interventions were not performed. The seizures disappeared completely in both cases.

When we must decide whether to remove the hippocampus, the side of the lesion, the severity and chronicity of the seizures, and the presence of invasion to the hippocampus are the factors that should be considered. Abnormal discharges on ECoG at the hippocampus or adjacent cortices are one of the factors related to epileptogenicity, but it is simply a result of interictal irritation, and it is not an absolute indication for additional surgical intervention [3].

Stereotactic radiosurgery for ganglioglioma

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1)
Song JY, Kim JH, Cho YH, Kim CJ, Lee EJ. Treatment and outcomes for gangliogliomas: a single-center review of 16 patients. Brain Tumor Res Treat. 2014 Oct;2(2):49-55. doi: 10.14791/btrt.2014.2.2.49. Epub 2014 Oct 31. PMID: 25408925; PMCID: PMC4231627.
2)
Lin X, Huang R, Zhang P, Sun J, Dong G, Huang Y, Tian X. Low-grade gangliogliomas in adults: A population-based study. Cancer Med. 2020 Oct 27. doi: 10.1002/cam4.3577. Epub ahead of print. PMID: 33107220.
3)
Uda T, Kunihiro N, Nakajo K, Kuki I, Fukuoka M, Ohata K. Seizure freedom from temporal lobe epilepsy with mesial temporal lobe tumor by tumor removal alone without hippocampectomy despite remaining abnormal discharges on intraoperative electrocorticography: Report of two pediatric cases and reconsideration of the surgical strategy. Surg Neurol Int. 2018 Sep 10;9:181. doi: 10.4103/sni.sni_61_18. eCollection 2018. PubMed PMID: 30283714; PubMed Central PMCID: PMC6157038.