The optic pathway is a very rare location for gangliogliomas, with less than 23 cases reported in the literature. Bilateral involvement of the entire optic pathway was reported in only 4 cases before. Because of similar radiological appearance of other pathological entities such as gliomas and craniopharyngiomas, histopathological diagnosis is essential.

Case reports

2017

A 26-year-old man presented with visual field defects and headache, and magnetic resonance imaging demonstrated a suprasellar mass involving the optic chiasm. A biopsy and partial tumor resection were performed via an interhemispheric approach.

They diagnosed the tumor as ganglioglioma (WHO grade I) involving the optic chiasm. Although this lesion was histologically benign, 11C-MeAIB PET, 2-deoxy-2-[18F] fluoro-D-glucose (18F-FDG) PET and proton magnetic resonance spectroscopy indicated malignant features.

The discrepancy between radiological and histological findings implies that this new amino acid tracer PET may have a limitation in the diagnosis of gangliogliomas. Although further study is necessary, gangliogliomas should be included in the differential diagnosis of suprasellar tumors, even if PET findings show malignant features [1)]

2015

A 12-year-old patient suffering from visual deterioration for 6 months was evaluated. After a visual field test and radiological examinations, a microsurgical biopsy procedure was performed. Pathological examination revealed dysplastic/neoplastic ganglion cells and neoplastic glial cells, and the diagnosis was a World Health Organization (WHO) grade 1 ganglioglioma. The patient is scheduled for adjuvant radiotherapy with the hope of prevention of progression [2)].

1)
Sugita Y, Sawada M, Munemitsu T, Higashi T, Hojo M. Discrepancy between radiological and histological findings in ganglioglioma of the optic chasm: Case report. Surg Neurol Int. 2017 Jul 11;8:146. doi: 10.4103/sni.sni_289_16. eCollection 2017. PubMed PMID: 28781923; PubMed Central PMCID: PMC5523510.
2)
Karaaslan B, Uçar M, Kulduk G, Börcek AÖ, Baykaner MK. Bilateral Optic Pathway Ganglioglioma: The Fifth Case in the Literature. Pediatr Neurosurg. 2015 Oct 22. [Epub ahead of print] PubMed PMID: 26488468.