

4.06 VEP monitoring of treatment for glioma of the optic pathways in young children: clinical case reports

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Purpose: Optic pathway glioma is a rare childhood brain tumor, associated with neurofibromatosis in 50% of cases. It is histologically a benign tumor but often has severe visual complications. The current treatment is chemotherapy. Chemotherapy indications are either related to the volume of the tumor or to the ophthalmological signs. Follow-up, consisting of MRI and ophthalmological examination, is difficult because of the young age of the children.

Methods: All children examined had ophthalmic clinical examination, VEP, ocular coherence tomography (OCT) if possible, and MRI. VEPs were recorded every 4 or 6 months. Their interpretation was compared to MRI results and discussed with oncologists and neurosurgeons to adapt treatment to tumor progression.

Results: From clinical cases, we demonstrate the role of VEP monitoring in the follow-up of these tumors, particularly when MRI does not serve as a sufficient guide to therapeutic planning.

Conclusions: VEPs have a key role in the monitoring of optical pathway glioma treatment in young children.