Central nervous system tumor

- Optimizing GBM organoid construction with hydrogel-based models: GelMA-HAMA scaffold supports GBM organoids with clonal growth for drug screening
- Optimizing outcomes in intracranial ependymoma: a contemporary review
- Design and Discovery of Novel Selective RET Inhibitors with High Central Nervous System Penetration, Enhanced Pharmacokinetics, and Pharmacodynamics
- Hospital Use, Morbidity, and Cancer Risk by Age Group in Neurofibromatosis Type 1: A Nationwide Retrospective Cohort Study
- Unilateral Hearing Loss as the Sole Presentation of Extensive Intracranial Epidermoid Cyst: A Case Report
- Population-Based Real-World Outcomes of Post-Operative Adjuvant Brain Cavity Radiotherapy Versus Observation
- Sample Preparation and Sequencing Efficiency of microRNA Libraries from Pituitary Adenoma Tissue and Blood Plasma of Patients with Acromegaly for the Illumina Platform
- Ultrasound-Mediated Drug Diffusion, Uptake, and Cytotoxicity in a Glioblastoma 3D Tumour Sphere Model

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Classification

Central nervous system tumor classification

Epidemiology

Central nervous system tumor epidemiology.

Diagnosis

see Central nervous system tumor diagnosis.

Differential diagnosis

Many diseases can present as tumefactive lesions and mimic neoplastic lesions.

Torres et al., aimed to determine the frequency of pseudotumoral CNS lesions referred to an Oncology center and the frequency of the tumor mimickers

In a retrospective study at the National Institute of Cancer, Rio de Janeiro, Brazil. Medical charts of patients admitted to the Neurosurgery and Pediatrics services from 2007 to 2011 were reviewed. Clinical and radiological features of cases initially diagnosed with primary CNS tumors but received a

final diagnosis of pseudotumoral disease were recorded.

Among 891 patients referred as primary brain tumors, 38 cases had pseudotumoral lesions (4.3%). Most were adults (63%), with mean age of 29.4 years, and women (60.5%). Most frequent symptoms were headache (28.9%), motor signs (23.7%) and seizures (15.8%). Mean time from initial symptoms to diagnosis was 12.2 months. Lesions were single in 84.2% of patients, had contrast enhancement in 45.6% and surrounding edema in 17.4%. Twenty patients (52,6%) underwent biopsy. Systemic autoimmune diseases were the most frequent etiologies (28.9%), followed by idiopathic inflammatory demyelinating diseases, infections and vascular abnormalities (15.8% each). Good outcome with no major deficits was observed in 60.5% cases.

The frequency of pseudotumoral lesions in an oncology reference center was low. Young women were most affected, and lesions were associated more frequently to systemic autoimmune diseases. Prompt recognition is important to avoid unnecessary treatment since most patients had a good outcome [1)].

Guidelines

Central nervous system tumor guidelines

Treatment

Standard treatment options for primary CNS tumors include the following:

Surgery.

Radiation therapy.

Chemotherapy.

Active surveillance.

Supportive therapy.

Outcome

Central nervous system tumor outcome

1)
Torres YC, Alves-Leon SV, Lima MA. Frequency of pseudotumoral CNS lesions in an oncology center. World Neurosurg. 2019 Jun 19. pii: S1878-8750(19)31635-3. doi: 10.1016/j.wneu.2019.06.083. [Epub ahead of print] PubMed PMID: 31228702.