2025/06/26 15:34 1/2 angiocentric glioma

Angiocentric glioma is one of the brain tumours introduced in the 2007 WHO brain tumour classification, and it is a WHO grade I. It has been considered to be one of the rare neuroepithelial tumours. It is a cortical based tumour and is mostly epileptogenic.

On imaging they usually present as well-delineated cortically based lesions that expand affected gyri, which are generally hypointense on T1 and hyperintense on T2 and have no contrast enhancement.

For a general discussion of clinical presentation, epidemiology, treatment please refer to the article on low grade astrocytomas.

Epidemiology

It is a very rare tumour with only 28 cases reported according to one paper. It usually affects children and young adults.

Clinical presentation

Seizures are often classical presentation: >95% of patients present with intractable seizures.

Pathology

The exact aetiology is unclear. Elongated cells with a strikingly perivascular orientation were identified. There is variable reaction for glial fibrillary acidic protein (GFAP) and epithelial membrane antigen. It is designated as WHO grade I.

Location

The frontal lobe is the commonest location then parietal and temporal lobes.

Associations

Cortical dysplasia may be associated .

Radiographic features

CT

May be seen as an expansile non enhancing cortical tumour.

MRI

T1: hyper intense signal rim may be seen T2 / FLAIR: hyperintense signal with extension toward the ventricles. It may have cystic appearing areas T1 C+ (Gd): no enhancement is the rule History and etymology

Angiocentric glioma was initially identified in 2005 in two separate case reports 2,5 and then introduced in the WHO brain tumour classification in 2007.

Differential diagnosis

Imaging differential considerations include:

DNET "Bubbly" cortical and subcortical lesion temporal lobe is the commonest location there is no or minimal punctate enhancement rim of high signal on FLAIR minimal surrounding oedema

neuroepithelial cysts total nulling on the FLAIR sequence ganglioglioma often enhance oligodendroglioma older age group often calcify typically originate at the grey-white matter junction

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