

# Granular cell astrocytoma

Granular cell [astrocytoma](#) (GCA) is a rare and aggressive subtype of astrocytoma histopathologically well-defined in the literature. It is formed by polygonal cells with granular cytoplasm mixed with neoplastic astrocytes and usually a perivascular infiltrate of lymphocytes. Despite its unusual histological appearance, relevant radiological features have not yet been described.

Afonso et al. report two middle-aged patients with neurologic symptoms secondary to a newly diagnosed brain tumor. The absence of central tumor necrosis, as well as the presence of an atypical pattern of enhancement and areas of intense diffusion restriction on MRI sequences in both cases, led to the diagnosis of primary central nervous system lymphomas (PCNSL). Histopathological findings in both tumors showed an aggressive astrocytoma with a prominent granular cell population and perivascular lymphocytic cuffing in tissue, corresponding to a granular cell astrocytoma (GCA). Despite the favorable prognostic factors including WHO grades II and III astrocytomas and IDH mutations, the outcome was poor.

Granular cell astrocytomas can show unusual aggressive radiological features that do not correspond with their histopathological grade of malignancy. The presence of perivascular lymphocytic infiltrate may alter the typical radiological appearance of common astrocytomas <sup>1)</sup>.

<sup>1)</sup>

Afonso AM, Darriba Alles JV, Gutiérrez AM, González Quarante LH, Leal RG, Guzmán de Villoria Lebiedziejewski JA, Vendrell PES. Imaging and radiological-pathological correlation in granular cell astrocytomas. Report of two cases. World Neurosurg. 2019 Nov 4. pii: S1878-8750(19)32807-4. doi: 10.1016/j.wneu.2019.10.169. [Epub ahead of print] PubMed PMID: 31698124.

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