Neurocirugia. 2017;28(Espec Congr):294

Neurocirugía

https://www.revistaneurocirugia.com

C0420 - GRANULAR CELL ASTROCYTOMA, REPORT OF TWO CASES WITH RADIOLOGIC-PATHOLOGIC CORRELATION

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Resumen

Objectives: Granular cell astrocytoma (GCA) is a rare, aggressive, histophatological subtype of infiltrative astrocytoma characterized by cells contained eosinophilic, PAS-positive granules and showed cytoplasmic inmunoreactivity to glial fibrillary acid protein (GFAP). These and other specific pathologic features are well described in the literature; however, radiological findings are few reported in spite of the importance of differentiate it from other brain lesions to allow a correct management and treatment.

Methods: We report two cases of brain GCA mimicking primary brain lymphoma.

A 42-year-old man was brought to the emergency department with a 24h history of behavorial alterations and mutism. Cranial CT showed multiple low densitiy areas with gadolinium surround enhancement in both parasagittal frontal lobes and left temporal lobe. A 54-year-old man was admitted to emergency service because of right focal motor seizure, secondarily generalized. A cranial CT was made, which disclosed a parasagittal left frontal lesion with heterogeneuous enhancement.

Results: RMI revealed, in both cases, hypointense T1 and hyperintese T2 weighted lesions with surrounding edema and heterogeneous enhancement. Diffusion weighted image showed areas of high diffusion restriction usually observed in cerebral lymphomas. Cerebral blood volume (CBV) was increased in these areas. A stereotactic biopsy was performed in both patients revealing granular cell astrocytomas. Prominent perivascular lymphocytic cuffing observed in both tissues may explain the abnormally low ADC value found in these tumors. Finally, one of cases underwent left frontal craniotomy and a complete resection was possible. Patients were treated with radiotheraphy and chemotherapy. One is still alive after 12 months of diagnosis with a recurrence.

Conclusions: We described two cases of granular cell astrocytoma, a rare variant of infiltrative astrocytoma, radiologically misdiagnosed as primary cerebral lymphoma. High diffusion restriction areas on DWI caused by lymphocytic perivascular infiltrates may confuse diagnosis. Increase CBV in these areas can help to establish correct diagnosis and management.