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CLINICAL CASE

Astrocytoma and epilepsy. Clinical case☆

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KEYWORDS
Pilocytic astrocytoma;
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Abstract
Background: Pilocytic astrocytoma is a rare tumour, usually occurring in paediatric ages, and mainly located in the posterior fossa. It can cause hydrocephalus and intracranial hypertension and, less frequently, seizures, or a focal neurological deficit. The main imaging study by magnetic resonance imaging, which shows a tumour with solid and cystic components without peri-lesional swelling. The election treatment is surgical, and the patient is considered cured if a total resection is accomplished.
Clinical case: The case is presented of 22-year-old female patient with a supratentorial pilocytic astrocytoma and epilepsy. Histopathology reported a low grade glial proliferation, with an extensive fibrillar matrix, small cells without atypia, extensive calcifications and piloid areas consisting of bipolar fusiform cells, and some Rosenthal fibres. There were also spongiotic areas consisting of multipolar cells and associated microcysts. The final report was a pilocytic astrocytoma.
Conclusions: Pilocytic astrocytoma is more frequent in paediatric patients and in the posterior fossa. The case presented is of a young female adult with supratentorial location, making it a special case. The surgery achieved a total resection. The long-term prognosis is good, but it is necessary to perform a follow-up, particularly in adult patients because of a higher risk of recurrence.

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PALABRAS CLAVE
Astrocitoma pilocítico;
Tumor supratentorial;
Adulto joven

Astrocitoma y epilepsia. Caso clínico

Resumen
Antecedentes: El astrocitoma pilocítico es un tumor poco frecuente, con predilección por los pacientes pediátricos, localizado principalmente en la fosa posterior. Suele presentarse con síntomas de hidrocefalia y aumento de la presión intracraneana y menos frecuentemente con epilepsia o déficit neurológico focal. El estudio de elección es la resonancia magnética, en la cual se observa una lesión con componentes sólidos y quísticos, sin edema perilesional. El tratamiento de elección es la resección total y si se logra, se puede considerar curado al paciente.
Caso clínico: Se presenta el caso de una paciente femenina de 22 años de edad con un astrocitoma pilocítico supratentorial, quien comenzó con epilepsia. *Patología:* Se reportó proliferación glial de bajo grado, con matriz fibrilar extensa y células pequeñas sin atipia, con extensas calcificaciones, con áreas piloides conformadas por células fusiformes bipolares, con algunas fibras de Rosenthal. También se observaron áreas espongióticas conformadas por células multipolares asociadas a microquistes. El resultado fue un astrocitoma pilocítico.
Conclusiones: El astrocitoma pilocítico es más frecuente en pacientes pediátricos y en la fosa posterior. El caso presentado es de una adulta joven y con una localización supratentorial, lo cual lo hace un caso especial. La cirugía logró una resección completa. El pronóstico es muy bueno a largo plazo, aunque es necesario hacer un seguimiento especialmente en los pacientes adultos, ya que se han reportado casos con recurrencia.

Background

Pilocytic astrocytoma is classified by the World Health Organisation as a grade I astrocytarian tumour, within the group of those derived from neuroepithelial tissue. It is a well-circumscribed, slow growing tumour. In general, a patient is considered cured when a complete tumour resection has been performed.[1]

The most common site is the posterior fossa in paediatric patients.

Objective

We present the case of a young adult patient with a supratentorial pilocytic astrocytoma and epilepsy.

Clinical case

This is the case of a 22 year-old female who presented with her current condition one week before her arrival to hospital, with generalised onset of a tonic-clonic seizure which caused mild head trauma. She subsequently had two further seizures. The patient denied having had any other symptoms. Neurological examination revealed that the patient's mental functions, cranial nerve functions, motor system, senses and cerebellum were all within normal limits.

An EEG showed abnormal activity and treatment was initiated with 1 g of levetiracetam every 12 h. Simple and contrasted magnetic resonance of the skull was performed, where a lesion in the first gyrus of the right temporal lobe was observed. This was observed as a hypertense ring on simple T1 imaging, as a ring on contrast enhanced T1, with a hypointense centre and no perilesional oedema on T2 and FLAIR signals (Fig. 1). Computed tomography revealed calcification on the periphery, mainly towards the medial surface of the lesion. Preoperative studies were carried out in which thrombocytopenia was identified in 21,000 counts. It was evaluated by the haematology unit which diagnosed idiopathic thrombocytopenic purpura. The patient received treatment with platelet apheresis, corticosteroids and immunoglobulin. During her hospital stay and prior to surgery of the central nervous system, she presented with intense pain in the right hypochondrium and was therefore assessed by general surgery. She was diagnosed through questioning, physical examination and abdominal scan with an aseptic cholecystitis. She suffered from painful hepatomegaly and presented with a drop in haemoglobin. These symptoms were resolved by conservative treatment.

Once surgery had been authorised it was performed with a Falconer type right incision, a temporal craniotomy and complete resection of the lesion by microsurgery with the use of a neuronavegator with ultrasound and ultrasonic aspirator (Fig. 2). There were no events or complications during the procedures. The patient was discharged neurologically intact. She evolved satisfactorily, with no seizures, and is still taking 1 g of oral levetiracetam every 12 h. She has been followed up now for a little over 5 years.

Pathology. Histopathology reported a low grade glial proliferation (Fig. 3), with an extensive fibrillar matrix, small cells without atypia, extensive calcifications and pyloid areas consisting of bipolar fusiform cells, and some Rosenthal fibres and calcifications (Fig. 4). There were also spongiotic areas consisting of multipolar cells and asso-