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BRIEF REPORT

A case of multifocal medulloblastoma in an adult patient

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KEYWORDS
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Abstract Only five cases of multifocal medulloblastoma in the adult have been reported to date.

We present a case in a male patient in his 50th decade of life who presented with three extra-axial lesions associated with a parenchymatous lesion of the right middle cerebellar peduncle.

Sputum sample examination revealed larvae compatible with strongyloides stercoralis, which was our main differential diagnosis. Histological and immunohistochemical studies revealed the existence of a desmoplastic medulloblastoma.

PALABRAS CLAVE
Neuropatología;
Meduloblastoma;
Tumor cerebral;
Histopatología

Un caso de meduloblastoma multifocal en un paciente adulto

Resumen En la literatura se han publicado únicamente cinco 5 casos de meduloblastoma multifocal en el adulto.

Presentamos el caso de un paciente de sexo masculino en su quinta década de vida con un meduloblastoma multifocal. El paciente presentaba tres 3 lesiones extra-axiales y una lesión parenquimatosa del pedúnculo cerebeloso medio derecho.

El estudio de esputo reveló larvas compatibles con Strongyloides stercoralis, siendo esta la primera sospecha diagnóstica. El estudio histológico e inmuhistoquímico reveló la existencia de un meduloblastoma desmoplásico.

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Introduction

Medulloblastoma is a common malignant tumour of the posterior fossa in paediatric patients, with an annual incidence of 0.5 per 100,000 children. Although it also occurs in young adults, this tumour is extremely rare in adults over 50 years of age; indeed, only five cases of adult multifocal medulloblastoma have been reported to date.[1–4]

We present a case of a multifocal medulloblastoma in a male patient in his 50th decade of life.

Case report

An adult male from Brazil presented with dizziness, episodes of vomiting, unsteadiness, malaise and a weight loss of 10 kg over the previous 3 months. His past medical history was unremarkable. Neurological examination revealed normal mental function, Romberg positive on the right and minimal gait disorders.

MR imaging confirmed the existence of three extra-axial lesions; one in the left middle fossa in the anterior temporal lobe; one in the left posterior fossa affecting the inferior cerebellar hemisphere and with mass effect on the fourth ventricle, which was compressed, and one surrounding the right lateral face of the pons. These lesions were associated with a parenchymatous lesion of the right middle cerebellar peduncle that extended to the ipsilateral cerebellar hemisphere and showed marked enhancement after the administration of contrast medium (Fig. 1).

Sputum sample examination revealed larvae compatible with *Strongyloides stercoralis*. All other laboratory investigations were normal.

Thoracic MR imaging revealed multiple centrilobular nodules distributed diffusely throughout both lungs which converged into consolidations in the posterior segments of both upper and lower lobes, findings that were consistent with infectious disease.

The principal clinical diagnosis was *S. stercoralis* affectation of the central nervous system and an excisional biopsy of the posterior fossa lesion was performed. Histopathology revealed a pale grey, firm mass with a homogenous cut surface. Microscopically, the tumour was densely cellular with foci of diffuse growth alternating with nodular areas. The cells were uniform with occasional slight vacuolization and a low nuclei/cytoplasm ratio. The surrounding cellularity was characterized by intensely packed cells with hyperchromatic nuclei, intense pleomorphism and numerous mitoses (Fig. 2). Reticulin stain showed pale nodular areas with absence of staining. Immunohistochemistry showed intense and diffuse positivity for synaptophysin and chromogranin in the neoplastic cells. A few reactive astrocytes with GFAP were trapped within the tumour (Fig. 3). A diagnosis of desmoplastic medulloblastoma was made.

Discussion

Medulloblastoma accounts for 20% of primary CNS tumours in childhood but only 1.9% of all CNS tumours in adults.[6] It is a malignant invasive embryonal tumour of the cerebellum of predominantly neuronal differentiation according to the WHO which classifies it as grade IV. In childhood, medulloblastomas frequently arise in the vermis, whilst in adults they are usually located in the cerebellar hemisphere

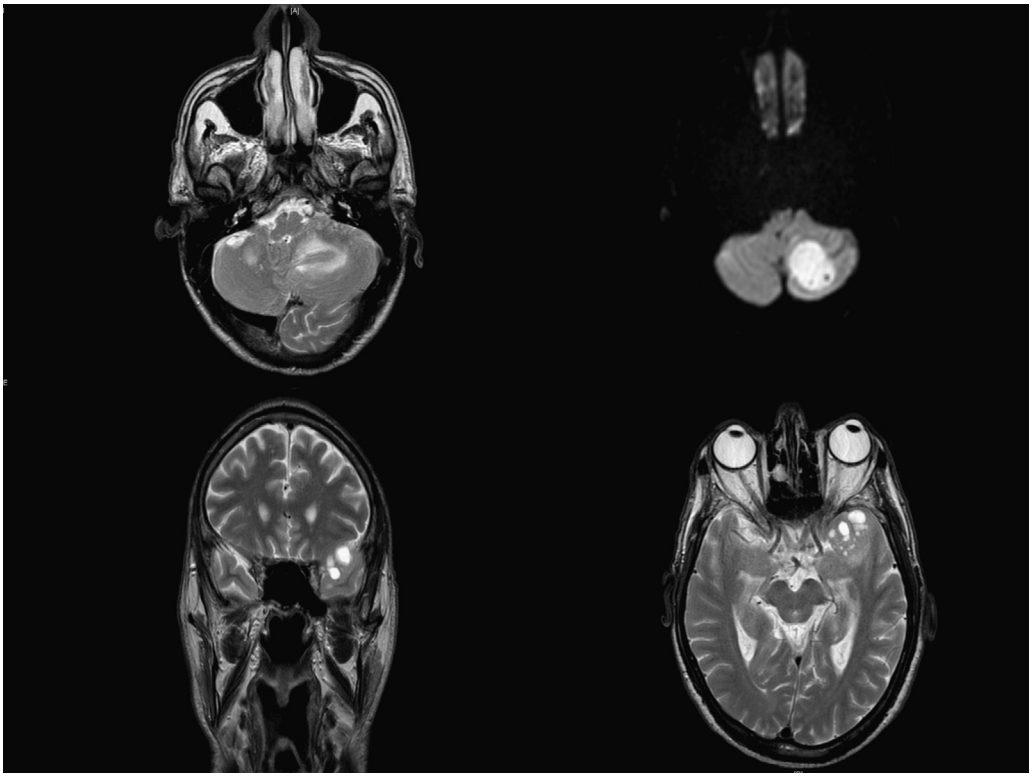

Figure 1 MRI: marked enhancement of the extra-axial lesions (temporal lobe and cerebellar hemisphere) after the administration of contrast medium.

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