

IMAGEM EM NEUROLOGIA/IMAGE IN NEUROLOGY

Is it Guillain-Barré Syndrome with Extense Leptomenigeal Enhancement?

Será uma Síndrome Guillain-Barré com Realce Leptomenígeo Extenso?

Teressa Botelho^{1,*}, Marta Oliveira Martins¹, Joana Pinto², Filipe Palavra^{1,3,4}

1-Center for Child Development - Neuropediatrics Unit, Hospital Pediátrico, Centro Hospitalar e Universitário de Coimbra, Coimbra, Portugal

2-Medical Imaging Department - Neuroradiology Unit, Centro Hospitalar e Universitário de Coimbra, Coimbra, Portugal

3-Laboratory of Pharmacology and Experimental Therapeutics, Coimbra Institute for Clinical and Biomedical Research (iCBR), Faculty of Medicine, University of Coimbra, Coimbra, Portugal

4-Clinical Academic Center of Coimbra, Coimbra, Portugal

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*Autor Correspondente / Corresponding Author:

Teressa Botelho
R. Dr. Afonso Romão,
3000-602 Coimbra, Portugal
teresaabotelho@gmail.com

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Guillain-Barré syndrome (GBS), an acute immune-mediated polyneuropathy characterized by progressive ascending weakness and areflexia,¹ occurs in both adult and pediatric populations, but is uncommon in children less than two years of age.¹ Cerebrospinal fluid with albuminocytological dissociation is a typical feature in GBS, and also a root enhancement may be seen on spinal cord images, obtained by magnetic resonance imaging (MRI).²

We report a case of a 5-months-old healthy infant, admitted to the Emergency Department in 2018, with decreased spontaneous movements of lower limbs, particularly in the left one, with less than 24 hours of evolution. Four days before, she had had a fever, associated with cough and rhinorrhea, without any causal agent having been identified (syncytial respiratory virus, influenza and adenovirus were tested), in a previous observation carried out in another hospital. Clinical examination showed a left lower limb paralysis, without pain on mobilization or inflammatory signs, and myotatic hyporeflexia in both lower limbs, being even more marked on the left. Based on the hypothesis of post-infectious radiculitis, a 1.5 Tesla MRI was performed under sedation (using a low dose of intravenous propofol and dexmedetomidine, maintaining spontaneous breathing), which showed diffuse leptomenigeal enhancement involving the entire height of the cord, surpassing the posterior fossa superiorly, until the cauda equina roots,

which were thickened and enhancing after gadolinium administration (Figs. 1 and 2). Lumbar

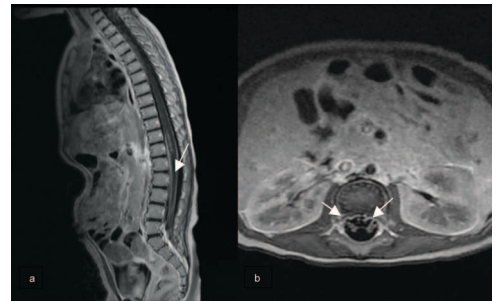


Figure 1 (a,b). Axial and sagittal contrast-enhanced T1-weighted show marked enhancement of the cauda equina nerve roots (arrows).

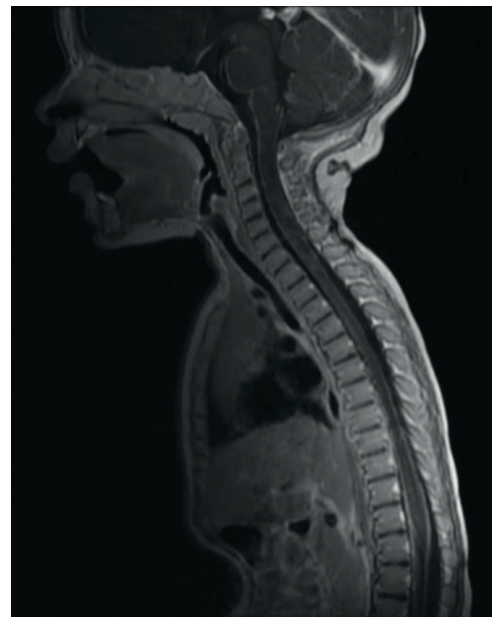


Figure 2. Sagittal contrast-enhanced T1-weighted shows intense leptomenigeal enhancement involving the spine and the posterior fossa structures

puncture was performed, identifying albuminocytological dissociation (proteins: 81.9 mg/dL [12.0-60.0]; rare cells) and anti-ganglioside antibodies were not detected in a blood sample. No microorganisms were detected in blood and cerebrospinal fluid cultures, and no agent was identified using molecular techniques. Treatment with intravenous immunoglobulin was prescribed over 4 days (0.4 mg/kg/day), with marked functional improvement. At discharge, spontaneous movements of the lower limbs were seen, but still asymmetrical (being more limited on the left), and normal deep tendon reflexes were elicited. She started a rehabilitation program and, 4 months later, was completely recovered without any neurological focal deficits. In this period, considering the clinical improvement observed and the fact that she was a 5-month-old infant, it was decided not to perform a neurophysiological study by electroneuromyography.

This case is suspicious to correspond to a diagnosis of GBS at an unusual age and with an atypical presentation, with asymmetrical involvement of the lower limbs. Cauda equina root enhancement has been described on spinal MRI,³ but a diffuse leptomeningeal involvement is extremely rare. There is no consistent relationship between this finding and the age of the child, but this association in an infant is interesting (it is not known whether it could be the result of immune immaturity or not). ■

Contributorship Statement / Declaração de Contribuição

TB: Conception, writing and final approval.
 MOM: Conception and final approval.
 JP: Images preparation and final approval.
 FP: Conception, critical review with intellectual contribution and final approval.

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