

Vitamin B12 deficiency mimicking neuroimaging features of motor neuron disease

Deficiência de vitamina B12 mimetizando aspectos de neuroimagem da doença do neurônio motor

Wladimir Bocca Vieira de Rezende Pinto¹, Paulo Victor Sgobbi de Souza¹, Ricardo Mendes Rogério², José Luiz Pedroso¹, Orlando Graziani Povoas Barsottini¹

A 45-year-old man presented with 2-month-history of progressive gait disturbances and behavioral changes. Examination showed vibration sense compromise and pyramidal signs of release. Blood test revealed low serum vitamin B12 (120 pg/mL; normal range >200 pg/mL). Brain MRI disclosed hyperintense signal in corticospinal tracts, a similar pattern observed in motor neuron disease (MND) (Figure).

Replacement therapy was started and there were motor and cognitive improvements.

Vitamin B12 deficiency may present with different neurological syndromes¹. Encephalopathy related to B12 deficiency presents with nonspecific white matter changes². Although MTC brain MRI sequence was normal, our patient presented neuroimaging features observed in MND³.

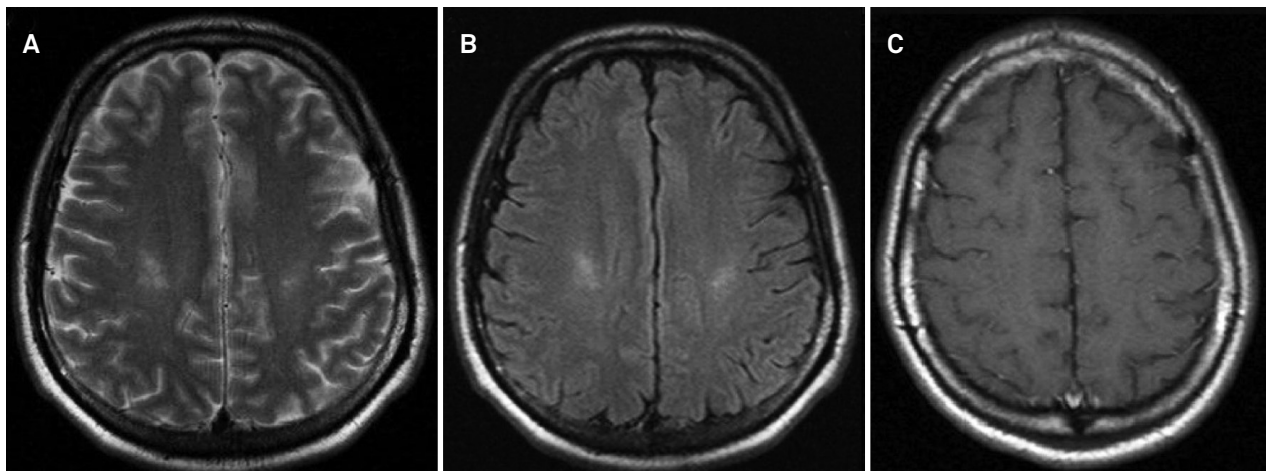


Figure. (A) Axial T2-weighted and (B) axial FLAIR-weighted brain MRI disclosing multiple frontal hyperintense signal changes in corticospinal tracts projections, a similar pattern observed in motor neuron disease. (C) Axial MTC sequence is normal, and no contrast enhancement was observed.

References

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¹Departamento de Neurologia, Universidade Federal de São Paulo, São Paulo SP, Brazil;

²Departamento de Neurorradiologia, Hospital Beneficência Portuguesa, São Paulo SP, Brazil.

Correspondence: Wladimir Bocca Vieira de Rezende Pinto; Rua Botucatu 740; 04023-900 São Paulo SP - Brasil; E-mail: wladimirbvrpinto@gmail.com

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