

LETTER TO EDITOR

Year : 2015 | Volume : 63 | Issue : 5 | Page : 776--778

An unusual case of neurobrucellosis presenting with stroke-like episodes

Ester Reggio¹, Luisa Vinciguerra¹, Giorgia Sciacca¹, Giuseppa Fiumanò², Carmelo Iacobello³, Mario Zappia¹,

¹ Department of G. F. Ingrassia, Section of Neurosciences, University of Catania, Catania, Italy

² Department of Radiology, Vittorio Emanuele Hospital, Catania, Italy

³ Department of Infectious Diseases, Vittorio Emanuele Hospital, Catania, Italy

Correspondence Address:

Mario Zappia

Department of G. F. Ingrassia, Section of Neurosciences, University of Catania, Catania
Italy

How to cite this article:

Reggio E, Vinciguerra L, Sciacca G, Fiumanò G, Iacobello C, Zappia M. An unusual case of neurobrucellosis presenting with stroke-like episodes. *Neurol India* 2015;63:776-778

How to cite this URL:

Reggio E, Vinciguerra L, Sciacca G, Fiumanò G, Iacobello C, Zappia M. An unusual case of neurobrucellosis presenting with stroke-like episodes. *Neurol India* [serial online] 2015 [cited 2020 Apr 3];63:776-778

Available from: <http://www.neurologyindia.com/text.asp?2015/63/5/776/166548>

Full Text

Sir,

Neurobrucellosis is a rare complication of brucellosis occurring in 3–5% of the patients.[1],[2] The clinical presentation may either be acute or chronic, with a wide spectrum of manifestations, including encephalitis, meningitis, myelitis, cranial and peripheral neuropathies, radiculopathies, and behavioural changes. Meningitis has been previously reported as the most common presentation of neurobrucellosis.[3],[4],[5],[6],[7],[8],[9] The diagnosis of neurobrucellosis may not be immediate, as the disease may present with nonspecific clinical features. Indeed, fever is absent in 38–49% of patients,[2],[3],[4] especially in patients with a chronic presentation. Exceptionally, the onset of neurobrucellosis may simulate the presence of a cerebrovascular disease.[10] Here, we present the case of a patient suffering from neurobrucellosis who presented with stroke-like episodes.

A 57-year-old man had a history of recurrent transient ischemic attacks (TIAs) along with the history of diplopia for one week. During the previous year, he had reported three similar episodes that were interpreted as TIAs. The episodes were characterised by numbness and weakness of the right hemiface and upper limb along with dysarthria, each episode lasting for approximately 1-h. Five months after the first attack, the patient noticed progressive worsening of gait and balance, gradual hearing loss, tremors of both hands, right hemifacial spasm, and memory disturbances. The patient had a past medical history of hypertension that was well-controlled with medication. His daily medical therapy included acetylsalicylic acid as the neurological symptoms had been ascribed to a cerebrovascular event; and, also on the basis of previous neuroimaging studies that had shown white matter abnormalities interpreted as vascular lesions. His neurological examination at admission disclosed an ataxic and wide-based gait, positive Romberg's sign, right sixth nerve palsy, and postural and kinetic tremors in both hands. The

neuropsychological assessment revealed a Mini-Mental State Examination score of 23/30. The routine blood tests were normal. Fluid attenuated inversion recovery sequences of brain magnetic resonance imaging (MRI) detected diffuse bilateral hyperintensity areas in the periventricular and subcortical white matter. These lesions did not enhance after contrast administration but showed an increase in size when compared to the previous MRI scan performed 4 months ago [Figure 1]a and b. Specific laboratory assessment included antinuclear and anticardiolipin antibodies and a genetic test for Fabry's disease in order to exclude unusual causes of cerebrovascular diseases. All these tests did not yield a positive result. A more detailed evaluation of the patient's history revealed a recent exposure to brucella contamination. The patient stated that he had recently eaten farm cheese derived from unpasteurized milk. Therefore, laboratory tests specific for infective diseases were performed. They revealed an incomplete anti-brucella antibody titer of 1:640 in the serum. On the basis of this result, cerebrospinal fluid (CSF) analysis was considered mandatory. It revealed lymphocytosis, hyperproteinorrachia, hypoglycorrachia and an incomplete anti-brucella antibody titer of 1:512. The patient was initially treated with intravenous administration of chloramphenicol and rifampicin for 1-month. Nevertheless, a brain MRI at a follow up of two months detected in the right frontal region, the appearance of a subdural nodular lesion, surrounded by peripheral ring enhancement and a thickened and enhanced dura mater [Figure 1]c. Therefore, the therapy was switched to rifampicin (600 mg once-daily) and sulfamethoxazole-trimethoprim (160/800 mg twice-daily) orally. At a 5-month follow-up visit, the patient showed complete recovery of the sixth cranial nerve palsy and of the tremor, reduction of the postural instability and showed an improvement in his gait. No further stroke-like episodes were reported. A repeat CSF analysis detected only mild abnormalities although both CSF and blood anti-brucella antibodies were still positive. Neuroradiological follow-up documented the reduction of the subdural granuloma [Figure 1]d, but unchanged white matter lesions. {Figure 1}

The initial clinical and radiological picture of our patient was suggestive of a cerebrovascular disease. TIAs and ischemic stroke in neurobrucellosis have been described, but pathogenesis still remains uncertain and is possibly related to infectious vasculitis, cerebral vasospasm or cardioembolism.[10] In the present case, the rapidly worsening condition, despite an appropriate stroke-prevention therapy and careful neuroradiological monitoring, suggested an alternative etiology and neurobrucellosis was detected. The antibiotic treatment was effective in improving the neurological symptoms and in preventing relapses. Although rare, neurobrucellosis should be considered in the differential diagnosis of many neurological disorders including cerebrovascular diseases. Establishing an early treatment often results in a lasting cure.

Financial support and sponsorship

No support has been received in conjunction with the preparation of this paper.

Conflicts of interest

There are no conflicts of interest.

References

- 1 Kesav P, Modi M, Singla V, Khurana D, Prabhakar S. Kaleidoscopic presentation of neurobrucellosis. *J Neurol Sci* 2013;331:165-7.
- 2 Haji-Abdolbagi M, Rasooli-Nejad M, Jafari S, Hasibi M, Soudbakhsh A. Clinical and laboratory findings in neurobrucellosis: Review of 31 cases. *Arch Iran Med* 2008;11:21-5.
- 3 Al-Sous MW, Bohlega S, Al-Kawi MZ, Alwatban J, McLean DR. Neurobrucellosis: Clinical and neuroimaging correlation. *AJNR Am J Neuroradiol* 2004;25:395-401.
- 4 Guven T, Ugurlu K, Ergonul O, Celikbas AK, Gok SE, Comoglu S, *et al.* Neurobrucellosis: Clinical and diagnostic features. *Clin Infect Dis* 2013;56:1407-12.
- 5 Buzgan T, Karahocagil MK, Irmak H, Baran AI, Karsen H, Evirgen O, *et al.* Clinical manifestations and complications in 1028 cases of brucellosis: A retrospective evaluation and review of the literature. *Int J Infect Dis* 2010;14:e469-78.
- 6 Yetkin MA, Bulut C, Erdinc FS, Oral B, Tulek N. Evaluation of the clinical presentations in neurobrucellosis. *Int J Infect Dis* 2006;10:446-52.
- 7 Karsen H, Tekin Koruk S, Duygu F, Yapici K, Kati M. Review of 17 cases of neurobrucellosis: Clinical

- 3/4/2020 An unusual case of neurobrucellosis presenting with stroke-like episodes :Ester Reggio¹, Luisa Vinciguerra¹... manifestations, diagnosis, and management. Arch Iran Med 2012;15:491-4.
- 8 Kizilkilic O, Calli C. Neurobrucellosis. Neuroimaging Clin N Am 2011;21:927-37, ix.
- 9 Eren S, Bayam G, Ergönül O, Celikbas A, Pazvantoglu O, Baykam N, *et al*. Cognitive and emotional changes in neurobrucellosis. J Infect 2006;53:184-9.
- 10 Bingöl A, Togay-Isikay C. Neurobrucellosis as an exceptional cause of transient ischemic attacks. Eur J Neurol 2006;13:544-8.

Friday, April 3, 2020

[Site Map](#) | [Home](#) | [Contact Us](#) | [Feedback](#) | [Copyright and Disclaimer](#)