

Demyelinating brain disease presenting as isolated large plaque – a case report

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Introduction - A 67 old man in November 2014 experienced fever, muscular pain, shakes. He took ciprofloxacin with regression of fever in 7 days, but asthenia, lower limbs hyposthenia, depressed mood and shakes persisted. Electromyography was normal, and brain Magnetic Resonance Imaging (MRI) showed a 10x12 mm focal area hyperintense on T2-weighted images, localized in the right posterior peritrigonal white matter, described as an abscessus. A follow-up gadolinium MRI of both brain and spinal cord was performed on 29th January showing no spinal cord lesions and an increase of the brain lesion volume that was characterized by “open ring” enhancement and ring restriction of diffusion. Spectroscopy showed an inversion of Cho/NAA ratio (1.6) and lactate peak. The patient was admitted to our Hospital on 9th February 2015.

Methods – We performed neurological examination, where only a postural tremor in upper limbs was observed. His blood routine, thyroid screening and serum proteins profile were normal. Autoimmunity screening was negative. No acute viral infections were detected. Whole-body Computerized Tomography (WBCT) was negative except for the brain lesion which showed incomplete ring enhancement. He also underwent an electroencephalography that was normal and cerebrospinal fluid analysis where 30 cells per ul were found, 100% of them were lymphocytes (normal range was 0-5), glucose was normal, proteins were 53.7 mg/dl (15-45), blood brain barrier was altered, albumin and IgG were increased. No oligoclonal bands, no bacteria or virus were detected. Two MRI follow-up were performed on March and April 2015, the first showing a very mild increase of size and a reduction of contrast enhancement and restriction of diffusion since previous examination, the second showing no variations of size and further reduction of enhancement and diffusion restriction.

Results - We interpreted the MRI findings as an isolated inflammatory demyelinating lesion presenting as a “giant plaque”. We started preventive treatment with Azathioprine 150 mg daily. No worsening were seen at MRI follow-up. The patient experienced clinical stability.

Conclusions - We want to emphasize the importance of MRI application to distinguish between inflammatory, infectious and neoplastic brain lesions. Literature reports a great number of misdiagnosis cases that could be avoided with a correct use and interpretation of imaging and lab results.

References

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