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Letter to the Editor - Late-onset neuromyelitis optica associated with cryptogenic organizing pneumonia

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Dear Editor,

We read with great interest the article by Shahmohammadi S. et al. (Shahmohammadi et al., 2019), reviewing the association between neuromyelitis optica and autoimmune diseases, which can affect the treatment strategy of this disorder.

Neuromyelitis optica (NMO) is a severe relapsing autoimmune inflammatory demyelinating disease that preferentially affects the optic nerves and spinal cord (Freitas E et al., 2015). The median onset age for idiopathic NMO is 39 years (Mealy et al., 2012). Its distinguished feature is the presence of a serum autoantibody specific for the astrocytic water channel, aquaporin-4 (AQP4). Neuromyelitis optica is now part of NMO spectrum diseases (NMOSD) (Pittock SJ et al., 2008). Although most commonly an idiopathic autoimmune condition, NMO may also occur as a paraneoplastic syndrome and/or associated with other autoimmune diseases (Figueroa et al., 2014; Sellner et al., 2010). One review from 2015 (Freitas E et al., 2015). showed association between NMOSD and several autoimmune diseases as Sjögren's syndrome, sarcoidosis, antiphospholipid syndrome and systemic lupus erythematosus.

Cryptogenic organizing pneumonia (COP) is a form of idiopathic diffuse interstitial lung disease of unkwown origin (Baha et al., 2018). The diagnosis of COP is pathological.

To the best of our knowledge there are no known reports of its association with cryptogenic organizing pneumonia.

We present the case of a 73-year-old female that was admitted in a Neurology Unit Clinic for a 1-week history of right hemiparesis. Past medical history included lung carcinoma submitted to atypical resection and chemotherapy, arterial hypertension, glaucoma, and depression. Cervical MRI revealed extensive transverse myelitis (Fig. 1) and brain MRI showed T2 hyperintensity on the pre-chiasmatic segment of the right optic nerve. Lumbar puncture showed mild pleocytosis (14 cells, mainly mononuclear), high protein level (60 mg/dL) and absent oligoclonal bands. Blood work was remarkable for the presence of AQP4 autoantibody, anti-nuclear antibodies (titer of 1:320) and elevated angiotensin-converting enzyme. With the suspicion of a granulomatous disease or occult neoplasm, we performed a PET-Scan, that showed bilateral ground-glass lung changes, with a high metabolism. Thorax-CT showed multifocal patchy air-space consolidations and ground-glass opacities (Fig. 2). It was performed a trans-thoracic biopsy that was consistent with the histologic diagnosis of cryptogenic organizing pneumonia. The patient was treated with corticoids and started on azathioprine with improvement of neurologic deficits.

NMOSD starting after the age of 50 years can be defined as late-onset NMOSD (LO−NMOSD), which is an entity with some distinct features. First, there´s evidence that LO−NMOSD may be particularly aggressive (Seok et al., 2017); Second the possibility of a paraneoplastic syndrome seems particularly relevant in this age group (Fragoso et al., 2019); Third the therapeutic options for NMOSD can be complicated in elderly patients due to long-term effects of corticosteroids and other drugs. In the other hand, the cooccurrence of NMOSD and other autoimmune disease can be challenge, especially in the treatment strategy. We presented a case of late-onset NMO with no evidence of neoplasm, and with the finding of COP. The patient was treated with corticoids and a corticosteroid-sparing agent, with clinical improvement.

Consent

Written informed consent was obtained from the patient for publication of this case report and any accompanying images

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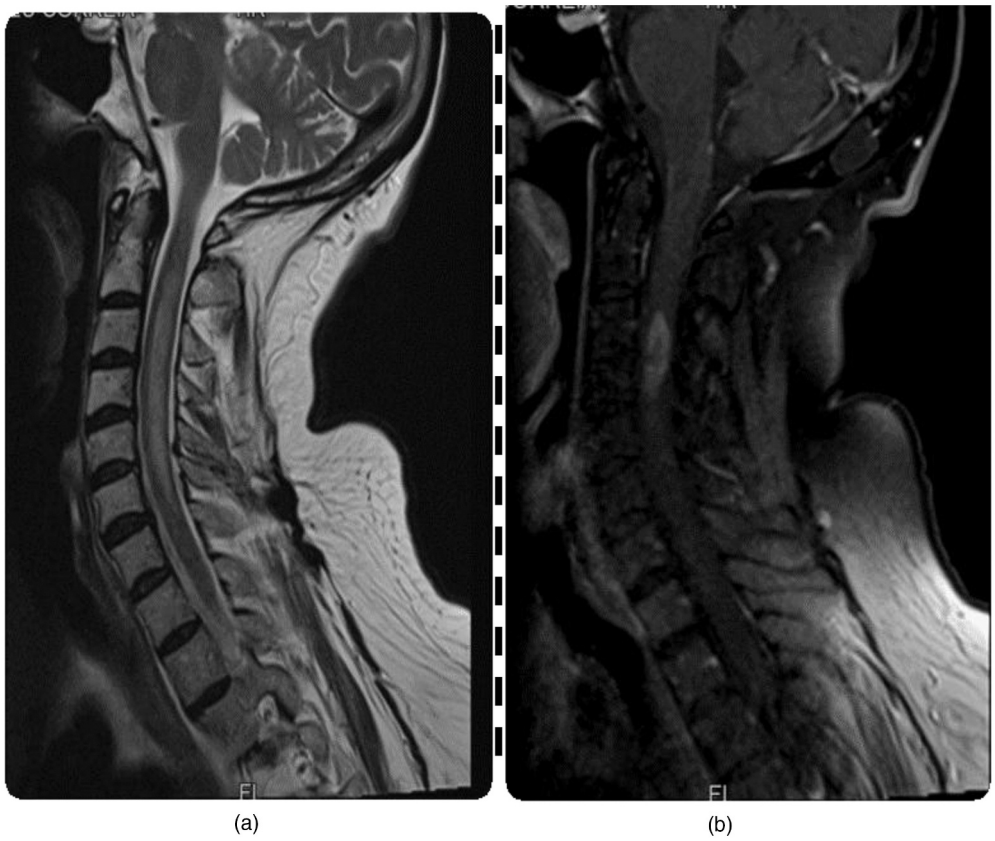

Fig. 1. MRI-FLAIR showing C1 to C7 medullary lesion involving almost entirely medullary cross-sectional on an axial plane (−1a). The lesion is asymmetrical being more extensive on the right. Gadolinium enhancement (−1b) on the right medulla (C3 and C4).

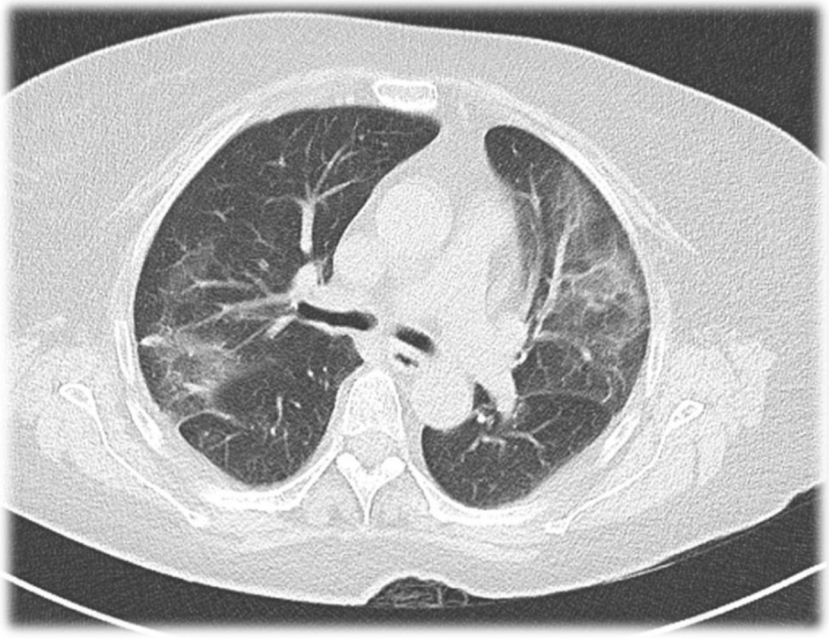

Fig. 2. Thorax CT showing multifocal patchy air-space consolidations, ground-glass opacities.

Declaration of Competing Interest

On behalf of all authors, the corresponding author states that there is no conflict of interest.

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