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Transverse Myelitis in Rheumatoid Arthritis: A case report

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Case Presentation:

A 51-year-old male was referred to our center due to lower limb weakness since 4 months before. His symptoms began as numbness and paresthesia in upper and lower limbs and weakness of bilateral lower limbs which developed over one week. No other neurological complaint was mentioned including back pain, visual disturbance or urinary incontinence.

Previous medical history was unremarkable. He had not been taking any medication. General physical and neurological examination was unremarkable except for hyperactive deep tendon reflexes in all limbs, spastic tone and bilateral Babinski sign. Cervical Magnetic Resonance Imaging (MRI) revealed a hyperintense T2 lesion at C3-C4 segment, with enhancement after contrast injection, confirming the diagnosis of transverse myelitis (TM).

Investigative work ups for the etiology of TM was performed. CSF analysis for cell count, protein and glucose content, oligoclonal band (OCB) and IgG index, serology tests for vasculitis disorders as well as other etiologies including ANA, Anti dsDNA, Anti-Ro, Anti-La, P-ANCA, C-ANCA, Antiphospholipid antibody, Anticardiolipin antibody, Rheumatoid Factor (RF), Anti-CCP, HIV Ab, HTLV1,2, Anti-NMO, Vit B12 and folic acid level, ACE (in serum and CSF), ESR, CRP, CH50, C3, C4 were all within normal limits except for elevated levels of RF (110.8)(normal range <20) and Anti-CCP (>200)(normal range <20) Elevated values were confirmed with repeated measurements. Visual Evoked Potential (VEP) study was also within normal limits.

The patient received 1 g Methyl Prednisolone for 5 consecutive days which led to improvement of his symptoms evident in 1 month follow up. The cervical lesion was resolved in repeated MRI after 3 months.

Although tested positive for RF and anti-CCP, our patient did not report any complaint of arthritis, dry mouth, dry eye, skin lesion, photosensitivity or any other symptoms related to connective tissue disorders and the diagnosis of RA was not confirmed as he did not fulfill the RA criteria.

Discussion:

Here we reported a case of TM with footprints of autoimmune disorders as the underlying cause. Central Nervous System (CNS) involvement is a well described presentation of some autoimmune disorders such as Systemic Lupus Erythematosus (SLE) [1], Sjogren's syndrome[2], Behcet's disease [3]and some vasculitides but it is an scarce presentation of Rheumatoid Arthritis (RA) based on available literature [4].

Hypothetically, the vasculitis associated with RA can describe the damage to CNS [4] Although there are several reports of different autoimmune conditions associated with demyelinating situations and TM, Sjogren's disease [5] [6], SLE [7] [8]and mixed connective tissue disease [9] [10] include the majority of cases and there are only a few reports of TM in patients with RA.

Fujimoto et al reported a 60 year old woman with history of RA since age of 52, that presented with transverse myelitis. She had sicca symptoms and was diagnosed with Sjogren's syndrome after sialography. Anti_nuclear antibody (ANA) was positive in this patient[11].

Nakane et al reported a 34 year old woman with malignant RA since 9 years ago, who presented with transverse myelopathy and multiple lacunar infarction. ANA and was positive.P-ANCAin this patient and there was evidence of vasculitis in histologic examination of skin ulcer biopsy at 17 years[4].

As mentioned, there are only a few reports of TM in patients with RA, most of which were also suffering from Sicca and secondary Sjogren's syndrome [11]or accompanied by presence of some other autoimmune antibodies such as P-ANCA and ANA [4], none of which was evident in our case.

Our patient did not report arthritis or any other clinical features of RA but it wise to follow him for any progression to definite diagnosis of RA.

This probability of coexisting RA may also influence the medication regiment of choice. If our patient is finally diagnosed with a specific demyelinating disorder and is candidate for a disease modifying therapy, Assuming that he could be a subclinical case of RA, it is logical to choose a medication regiment that is also appropriate as a disease modifying antirheumatic drug (DMARD) such as Rituximab.

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