

Acute transverse myelitis after SARS-CoV-2 infection: a rare complicated case of rapid onset paraplegia

Summary: A 63-year-old Caucasian male, known case of controlled type 2 diabetes, chronic renal failure, and ischemic heart disease, was presented with weakness and loss of movement in lower limbs, an absent sensation from the chest below, constipation, and urinary retention. About 4 days before these symptoms, he experienced a flu-like syndrome.

Methods-Results: Suspicious for COVID-19, his nasopharyngeal specimen's reverse transcription-polymerase chain reaction (RT-PCR) resulted positive. Chest X-ray and HRCT demonstrated severe pulmonary involvement. Immediately, he was admitted to the emergency ward, and the treatment was started according to the national COVID-19 treatment protocol. Subsequently, diagnostic measures were taken to investigate the patient's non-heterogeneous peripheral (spinal) neuromuscular manifestations. Brain CT scan and MRI were normal, but spinal MRI with gadolinium contrast showed extensive increased T2 signal involving central gray matter and dorsal columns, extended from C7 to T12 with linear enhancement in the sagittal plane, posteriorly within the mid and lower thoracic cord. The CSF specimen demonstrated pleocytosis, positive RT-PCR for SARS-CoV-2, and elevated IgG index. Clinical presentation, MRI, CSF, and laboratory findings prioritized the acute transverse myelitis (ATM) as a probable complication of COVID-19 infection over other differential diagnoses.

Conclusions: Intravenous methylprednisolone and, subsequently, IV human immunoglobulin were added to the treatment regimen. In the end, the complete resolution of dysesthesia, urinary retention, and constipation were achieved. After continuous and extended respiratory and motor rehabilitation programs, he was discharged asymptomatic.