Listeriosis Complicating Infliximab Treatment in Crohn’s Disease

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Abstract

Listeria monocytogenes, a gram-positive rod, infects the central nervous system in neonates, pregnant woman and those immunosuppressed by naturally occurring illnesses and by therapeutic agents, including agents as infliximab. We report here the first published case of Listeriosis complicating Infliximab therapy in Crohn’s disease in Australia.

Keywords

Listeria, Brain abscess, Infliximab, Crohn’s disease

Case Report

A 45-year-old Caucasian woman presented to the emergency department with a two-day history of increasing right lower limb weakness. Her sandals would slip off her right foot due to toe weakness and at times her foot would drag. There were no associated pain, sensory changes or sphincter-related symptoms. Two days earlier she had experienced chills, rigors, myalgia and mild headache, but no respiratory or gastrointestinal symptoms.

She had a 6-year history of small bowel Crohn’s disease, which had been poorly controlled despite treatment with Methotrexate (20 mg per week with folic acid supplementation), Prednisone (50 mg daily, then weaned to 10 mg daily) and Mesalazine (2 g twice daily). Azathioprine had not been tolerated. However, she had excellent clinical response to Infliximab (5 mg/kg) infused on two occasions, most recently a month prior to the current presentation.

On examination, she was comfortable and afebrile. The only consistent abnormality was marked weakness of flexion and extension of all the toes on her right foot. Power at the right hip, knee and ankle varied from near normal (with encouragement) to moderately weak in the absence of pain. Sensation was unimpaired. The plantar responses were flexor and the tendon jerks were present and symmetrical in all four limbs. Examination of the right arm, left limbs and cranial nerves was unremarkable. At no stage was there headache, meningism or altered sensorium.

Initial blood work showed normal total white cell count (4.32 × 10^9/L) but a lymphopenia (0.6 × 10^9/L). Electrolytes and liver

Figure 1: MRI brain at similar level on day 2 (left) and 9 (right) post admission. Early abscess/cerebritis of the left medial frontal lobe is apparent.
function tests were normal. The admission Computed Tomography (CT) brain (without contrast) was reported to be normal. She was admitted for investigation, including Magnetic Resonance Imaging (MRI) to exclude Infliximab-induced myelopathy and neurophysiologic studies to exclude focal neuropathy but her condition deteriorated significantly overnight. Power in all right lower limb muscles from hip to toes was reduced to Medical Research Council (MRC) grade 3 (easily overcome). Tendon jerks remained symmetrical initially but there was unsustained (initially) clonus at the right ankle, on which side the plantar response was extensor. Sensation remained normal.

MRI of the entire spine (to exclude infliximab-induced demyelination) was normal. Repeat CT brain with contrast excluded sinus thrombosis but showed subtle low attenuation in the white matter at the vertex of the left frontoparietal region, as evident within 3 infusions [6], as was the case in our patient. Cerebritis and abscess formation occur in about 1% of meningitis or meningo-encephalitis, which was not the case in our patient. Cerebritis and abscess formation occur in about 1% of meningitis or meningo-encephalitis, which was not the case in our patient. Sensation remained normal.

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