

Tocilizumab/unspecified corticosteroids

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Spinal epidural abscess: 2 case report

In a study of 3 patients conducted in Northern Italy, from 21 February 2020 to 15 July 2020, a 56-year-old and a 48-year-old men were described, who developed spinal epidural abscess following treatment with unspecified corticosteroids or off label treatment with tocilizumab for COVID-19 [route, dosage duration of treatment to reaction onset not stated].

Case 1: A 56-year-old man developed spinal epidural abscess following off label treatment with tocilizumab for COVID-19. The man, who had a history of dyslipidaemia, hypertension and trigeminal neuralgia, developed cough and fever. Subsequently, he developed respiratory failure that required noninvasive ventilation and then noninvasive ventilation. His subsequent investigations confirmed diagnosis of COVID-19 infection and his chest x-ray revealed atypical pneumonia bilaterally. He received off label treatment with tocilizumab, hydroxychloroquine and azithromycin. He also received prophylactic therapy with low-molecular weight heparin and discharged after 16 days. Six-day after the discharge, he developed cervicalgia, upper limb weakness and right upper limb dysesthesia. The pain did not show response to his analgesics therapy and he was admitted to the emergency department. He underwent an MRI imaging that showed C4–C6 spinal epidural abscess. He also developed fever and blood test showed methicillin susceptible *Staphylococcus aureus*. Hence, hemilaminectomy was performed and intraoperative microbiological testing showed methicillin susceptible *Staphylococcus aureus*. He had greater motor loss in his upper limbs as compare to the lower limbs, which was suggestive of central cord syndrome. Therefore, clean intermittent catheterization was started. Polyethylene glycol and sennosides were started for bowel management. Eventually, he started walking using a frame. After 60 days of rehabilitation, the spinal cord independence measure was 73.

Case 2: A 48-year-old man developed spinal epidural abscess following treatment with unspecified corticosteroids and off label treatment with tocilizumab for COVID-19. The man, who had a history of hypertension and obesity, developed cough and fever. Subsequently, he developed respiratory failure that required mechanical ventilation. His investigation confirmed the diagnosis of COVID-19. Therefore, he received off label treatment with tocilizumab, hydroxychloroquine, lopinavir/ritonavir and aciclovir [acyclovir]. He also received prophylactic therapy with low-molecular weight heparin. On day 16, he developed backache associated with weakness of lower limb muscle. Four days later, he underwent MRI of the spine that showed a T1–T7 spinal epidural abscess. Therefore, laminectomy was carried out. His intraoperative microbiological testing showed methicillin susceptible *Staphylococcus aureus* infection. On the post operative day 5, he developed fever, which was treated with antibiotic therapy. Blood cultures showed positive results for *Enterococcus faecalis*. After the surgery, he was shifted to

unipolar spinal unit and neurologic examination showed T2 ASIA Impairment Scale A paraplegia. Eventually, his spinal cord independence measure improved to 47. Thereafter, tracheostomy was removed and clean intermittent catheterization was initiated. Polyethylene glycol and sennosides were started for bowel management and he was not independent at a wheelchair level.