

Ketorolac-induced Meningitis

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CASE

A 49-year-old male with no significant past medical history initially presented to the emergency department with several days of low back pain and body aches. He was found to have an influenza A infection and was discharged with a five-day supply of oral ketorolac 10 mg every 6 hours as needed for pain. He returned to the hospital after completing his ketorolac prescription due to several days of neck stiffness with associated headache and photophobia. He was febrile to 103°F, and labs were notable for a leukocytosis of 13,000 per μL . On initial exam, he was lying still in a dark room with significant neck rigidity. He was started on intravenous vancomycin, ceftriaxone, and dexamethasone for empiric treatment of bacterial meningitis. A lumbar puncture was completed within several hours of initial presentation. Cerebrospinal fluid (CSF) studies revealed glucose 73 mg/dL, protein 36 mg/dL, WBC 10 per μL (monocytic predominance), RBC 0 per μL , and a negative multiplex PCR meningitis/encephalitis panel. Given his negative meningitis/encephalitis panel, empiric antibiotics for meningitis were discontinued. His CSF cultures remained negative, and he was treated with supportive care. However, a chest Xray on admission revealed a new right lower lobe consolidation, and his nasal MRSA PCR was negative. He was treated with ceftriaxone, azithromycin, and oseltamivir for an influenza A infection complicated by a secondary bacterial pneumonia. His symptoms and leukocytosis continued to improve throughout his hospitalization, and he was discharged home.

DISCUSSION

Although bacterial infections are a common cause of meningitis, there are other etiologies that are not infectious in nature, including autoimmune, drug-induced, and neoplastic. Common medications that cause drug-induced aseptic meningitis (DIAM) include nonsteroidal anti-inflammatory drugs (NSAIDs), trimethoprim-sulfamethoxazole, and intravenous immunoglobulin (IVIG). The mechanism of DIAM is believed to be a hypersensitivity reaction and the onset of symptoms usually occurs within a week of starting the offending agent. Since DIAM is a diagnosis of exclusion, lumbar puncture should be obtained to rule out infectious causes. Management of DIAM includes discontinuing the offending agent and supportive care. The diagnosis of DIAM can be supported by the timeline of medication initiation, symptom onset, and improvement of symptoms with medication discontinuation. This case aims to highlight the importance of maintaining a high index of suspicion for alternative causes of meningitis once infectious etiologies are ruled out.

REFERENCES

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