Diagnosis and treatment of Fusobacterium nucleatum discitis and vertebral osteomyelitis - Case report and review of the literature.

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Abstract

Study Design: Case ReportObjective: We present a case of vertebral osteomyelitis and discitis caused by Fusobacterium nucleatum in a 42-year old woman.Summary of Background Data: Infection of the vertebral bodies or disc space with this organism is rare. A review of the English literature netted 13 cases of vertebral osteomyelitis caused by Fusobacterium spp. Due to this condition's negative impact on the affected patients' activities of daily living, it is important to understand the clinical portrait and effective management of the disease to improve quality of life. Fusobacterium is an anaerobic and gram-negative microbe that is part of the normal flora of the mouth, gastrointestinal tract and female genital tract. It is the main cause of Lemierre's Syndrome and has also been seen in septicemia.Methods: The patient presented to our institution with a 3-month history of severe lower back pain. Her back pain was diagnosed as vertebral osteomyelitis. Magnetic resonance imaging of the lumbar spine revealed decreased T2 signal in the L3 and L4 vertebral bodies. Computed tomography demonstrated asymmetrical disk height loss between vertebral bodies L3 and L4 as well as associated periosteal reaction.Results: CT-guided biopsy of vertebral bodies L3 and L4 revealed microorganism Fusobacterium nucleatum with the following in vitro susceptibilities Clindamycin $\leq 0.5$ S, Metronidazole $\leq 0.5$ S, Penicillin $\leq 0.5$ S, Ertapenem $\leq 4$ S. Parenteral ertapenem, at a dose of 1 gram q 24 hours for 8 weeks in combination with oral amoxicillin and clavulanate as oral suppression was used as medical management. At 1-month follow-up after medical treatment, the patient's inflammatory markers returned to normal values and the infection resolved with L3-L4 autofusion.Conclusion: We report a rare case of Fusobacterium vertebral osteomyelitis. This condition is associated with several co-morbid and concomitant conditions including gastrointestinal complications. Effective treatment includes thoracolumbar orthosis bracing and IV antibiotic therapy.

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