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Conus Medullaris Tumor Superimposed Co-Existing Degenerative Chronic Lumbar Spondyloarthropathy: A Case Report

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Introduction

Chronic low back pain (LBP) is a condition affecting lumbar portion of the spine for more than 12 weeks or 3 months.

Etiologies can be lumbar or spinal fractures, interspinous ligament injury, fusion hardware tissue irritation from repeated spinal procedures, age or tumor.

Conus medullaris tumor often misconstrued for mechanical lower back pain diagnosis. Conus Medullaris Syndrome (CMS) is compression of the cord by a tumor or traumatic bone fragments, burst fracture, infection, ischemic, or inflammation.

CMS incidence is 1 in 30,000 to 100,000 individuals per year with a total annual prevalence of 1.5 to 3.4 per million people.

Our patient suffered from a schwannoma conus medullaris tumor secondary to conus medullaris syndrome with progressively worsening co-existing chronic mechanical lower back pain misdiagnosed as vascular malformation.

Case Presentation

A 48-year-old Caucasian female with PMHx of sarcoidosis and autoimmune disease, chronic mechanical lower back pain, symptoms since February 2021, including cord compression, loss of function, numbness, hip pain, difficulty walking, and tingling from knees to toes. Pain described as sharp and stabbing on the right side of the leg.

Associated headaches, eye pain, anomia, triggered by stress and weather changes, accompanied by nausea and vomiting and urinary incontinence.

Evaluation and Intervention

Physical Exam: tenderness in the thoracolumbar region, inability to move legs, spastic paraparesis in the right leg, clonus, muted responses in toes.

MRI: lumbar lordosis, early modic changes at L4-5 without compression, facet arthropathies at L1-2, spastic paraparesis at T11-12 level, and dextroconvex scoliosis. Enhancement of ventral to the cord was observed at the T11 level (right side and extending into the neural foramen)

Radiologists suspected an intradural perimedullary vascular lesion such as a spinal perimedullary arteriovenous fistula (type 4).

Comprehensive evaluation identified a mass at the T11-12 level measuring approximately 1.9 x 0.8 x 0.5 in dimensions.

Pt underwent therapeutic lumbar puncture with minimal success. 2nd LP was offered, patient refused due to limited period of symptom relief.

Discussion

Intradural tumors could compress the conus medullaris leading to radiculopathy, venous hypertension, or arterial ischemia causing spinal cord edema and neuronal deficit
Patients may experience a slow onset of numbness or tingling in lower extremities that can advance over time

The most common sensory symptom is saddle anesthesia^[1] Diagnosis of these neurological symptoms as a conus medullaris syndrome may be delayed due to the symptom’s slow onset nature

lesion was to appear larger in size or manifest neurological symptoms then surgical resection is recommended

pain and CMS typically occur from larger tumors that impinge on the spinal cord diagnosed with MRI

The best surgical prognosis results are obtained if the surgery is done within the initial 48 hours of symptom presentation

Urinary retention, post-operationally defecation disorder, sexual dysfunction, saddle and sciatica can persist despite surgical intervention

differentiating features of conus medullaris and cauda equina tumors from lumbar radiculopathy and myelopathy, such as pain upon laying recumbent, pain’s progressive nature, neurological deficit, involvement of several nerve root levels, and unresponsive to conservative therapy.

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