

CONUS/CAUDA EQUINA SYNDROMES IN PATIENTS WITH CANCER

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Although most conus and cauda equina syndromes in patients with cancer are caused by epidural tumor, intramedullary spinal cord and leptomeningeal spread of cancer must be considered in the differential diagnosis.

Leptomeningeal metastases develop in 1-5% of patients with solid tumors (leptomeningeal carcinoma) and 5-15% of patients with leukemia and lymphoma. The typical presentation is that of progressive, usually asymmetric, painful radiculopathies and cranial neuropathies. The cauda equina is most commonly involved, presumably due to settling of tumor cells within the CSF into the the cul sac. The incidence is increasing, likely due to improved systemic therapy of cancer with longer life expectancy and the inability of many chemotherapy agents to cross the blood-brain barrier. The diagnosis typically requires cytologic examination of the CSF and may require leptomeningeal biopsy if repeated lumbar punctures are cytologically negative. In patients with lymphoma and leukemia, malignant cells can be eradicated from the CSF with systemic chemotherapy, although in patients with leptomeningeal carcinoma, therapy is typically palliative and most patients die a neurologic death. In patients with carcinoma, radiation to symptomatic areas is the preferred therapy. Intrathecal chemotherapy is largely ineffective in this population.

Intramedullary spinal cord metastases (ISCM) are rare (diagnosed in <1% of patients with cancer). Prior to the development of MRI, the diagnosis was frequently missed or only made at the time of autopsy (present in 2% of autopsies of patients with systemic cancer). Most occur in patients with lung cancer and usually in the setting of advanced systemic disease. Concomitant brain and/or leptomeningeal metastases are common. The clinical presentation may be similar to ESCC with pain, weakness, sensory loss, and sphincter dysfunction. A Brown-Sequard or central cord syndrome is common. Unlike patients with ESCC, patients with ISCM have rapidly progressive neurologic deficit occurring concomitantly with the onset of pain. Therapy of ISCM is palliative with radiation. Usually it is difficult to make a case for surgical resection of the lesion.

References:

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