



Carcinomatous Meningeal Enhancement of the Cauda Equina

David A Paul*, G Edward Vates and Yan Michael Li

Department of Neurosurgery, University of Rochester Medical Center, USA

Clinical Image

A 70 year-old man with a two-year history of B-cell lymphoma, previously treated with RCHOP and prophylactic intrathecal methotrexate therapy, presented to the emergency department complaining of midline lumbar spine tenderness and leg pain for four days, and acute-onset leg weakness of a few hours duration, without bowel or bladder incontinence. A lumbar spine MRI demonstrated diffuse thickening and marked enhancement of the cauda equina, consistent with extensive leptomeningeal disease (Panels A-C). Additionally, there were several T1-hypointense punctate foci throughout the vertebral bodies, demonstrating osseous metastatic spread to the marrow (Panel C- arrow). Hyperintense areas within the vertebral bodies were consistent with fatty change from chemotherapy (Panel C- asterisk). Cerebrospinal fluid cytology confirmed the presence of malignant cells. The patient was started on steroids, referred for palliative radiation, and discharged home on hospital-day 7 with significant improvement in pain and ambulation. He subsequently restarted intrathecal chemotherapy.

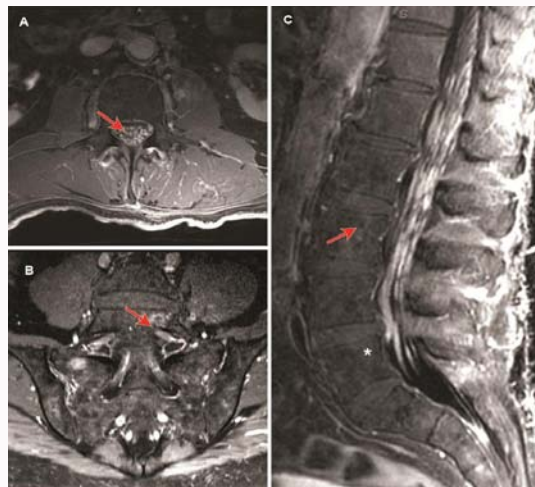


Figure 1: T1 contrast-weighted MRI images with and without contrast of the lumbar spine in a patient with DLBCL and carcinomatous meningeal enhancement of the cauda equina. **(A)** Axial image at the level of L3 demonstrating diffuse thickening and marked enhancement of the nerve roots (red arrow) within the thecal sac. **(B)** Coronal image highlighting the leptomeningeal spread extending into the exiting nerve roots. The red arrow highlights the exiting left S1 nerve root below the L5 pedicle. **(C)** There are several tiny, T1-hypointense, punctate foci throughout the vertebral bodies demonstrating osseous metastatic spread to the marrow (red arrow). Hyperintense areas within the vertebral bodies are also visualized and consistent with fatty change from chemo and radiation therapy (asterisk).

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*Correspondence:

David A Paul, Department of Neurosurgery, University of Rochester Medical Center, 601 Elmwood Ave., Box 670, Rochester, NY 14642, USA, E-mail: David_paul@urmc.rochester.edu

Received Date: 26 Dec 2019

Accepted Date: 21 Jan 2020

Published Date: 27 Jan 2020

Citation:

Paul DA, Edward Vates G, Michael Li Y. Carcinomatous Meningeal Enhancement of the Cauda Equina. *Clin Surg.* 2020; 5: 2720.

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