Imaging-Symptom Discordance in Postoperative Radicular Pain: A Case Report

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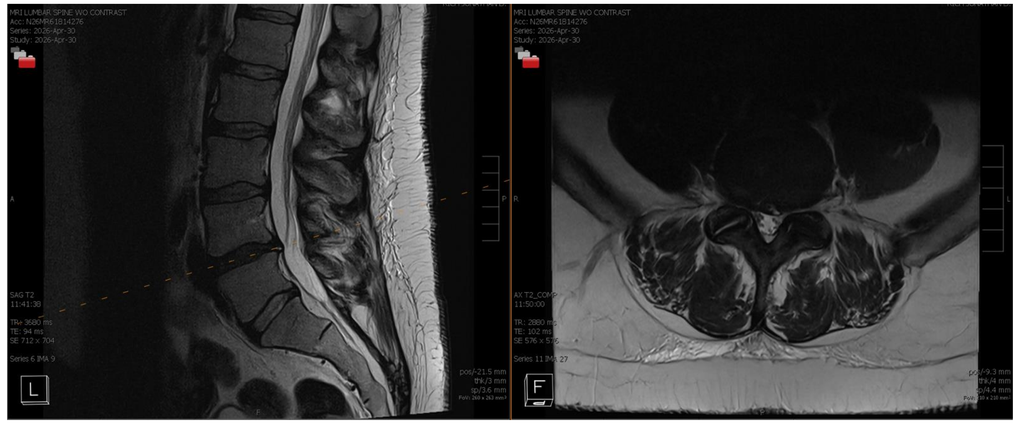
Background

- Symptomatic lumbar radiculopathy is commonly associated with spondylotic or degenerative changes present on imaging.[1]
- Imaging findings are not a fully reliable diagnostic tool, especially in the setting of traumatic or transient compression injuries, and heightened clinical suspicion is needed for accurate diagnosis.[2]
- Neurologic complications can occur in heart transplant recipients.[3]
- Here we present an unusual case of severe, active denervating lumbar radiculopathy following heart transplantation with minimal MRI findings diagnosed via:
  - electromyography (EMG)
  - nerve conduction studies (NCS)
  - Neurography

Case Description

- A 52-year-old male underwent a heart transplant in February 2026.
- Although he tolerated the procedure the procedure well, during hospitalization he developed left lower extremity (LLE) weakness with dermatomal paresthesia.
- He underwent a lumbar spine MRI, which lacked convincing signs of acute radiculopathy, including significant disc herniation, foraminal or canal stenosis. (Image A, B)
- He was referred for electrodiagnostics and specialized imaging once he was evaluated in the clinic:
  - MR Neurography of Lumbar Plexus showed sciatic nerve hyperintensity, suggestive of neuropathy
  - NCS with EMG demonstrated severe left S1 denervation
- Patient subsequently underwent a left L5-S1 and S1 transforaminal epidural steroid injection (TFESI).
- Resulted in 60% pain improvement and improved function.

A



B

C



D

EMG Summary Table

			Spontaneous					MUAP			Recruitment
Muscle	**Nerve**	**Roots**	**IA**	**Fib**	**PSW**	**Fasc**	**H.F.**	**Amp**	**Dur.**	**PPP**	**Pattern**
L. Tibialis anterior	Deep Fibular	L4-L5	N	None	None	2+ (slow)	None	N	N	N	N
L. Gastrocnemius (Medial head)	TIBIAL	S1-S2	N	3+	3+	None	None	2-	N	3+	1 unit
L. Extensor hallucis longus	Deep Fibular	L5-S1	N	2+	1+	None	None	N	N	N	No Activity
L. Biceps femoris (short head)	Sciatic (peroneal division)	L5-S2	N	2+	2+	None	None	N	N	N	N
L. Vastus lateralis	Femoral	L2-L4	N	None	None	None	None	N	N	N	N
L. Gluteus medius	Superior gluteal	L4-S1	N	1+	1+	None	None	Giant	2+	N	N
L. L5 paraspinal	Spinal	L5-	N	None	None	None	None	N	N	N	N

A MRI T2-weighted sagittal view of the lumbar spine without significant disc herniation, foraminal or canal stenosis **B** MRI T2-weighted axial view at of the lumbar spine without significant sign of abnormality. **C** MRI Neurography of the Lumbar Plexus T2-weighted coronal view demonstrating sciatic nerve hyperintensity (arrow) **D** EMG summary table demonstrating left sided denervation

Discussion

- When the precipitating insult is transitory or non-degenerative, conventional MRI or imaging findings may be minimal or nonspecific and should not alone exclude nerve pathology.[4]
- Radicular symptoms can occur despite normal conventional MRI, which should be viewed as an anatomical snapshot.[4]
- Clinical-radiographic discordance warrants consideration of alternative diagnoses, and diagnostics for further evaluation.[4]
- Clinicians should pursue further diagnostic evaluation when symptoms are discordant with imaging, such as with EMG and neurography.[5]

Conclusion

- This case highlights the necessity for clinicians to recognize uncommon risk factors that may precipitate new-onset neuropathic symptoms such as lumbar radiculopathy or symptomatic paresthesia.

References

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