



Patient: Sample Study Radiculopathy **DOB:** 10/19/1947 **Physician:** Dr. MD
Sex: Female

Diagnosis: Lumbar radiculopathy M54.16

Complaint:

The patient complains of low back pain with paresthesia in the bilateral lower extremities, left greater than right. A brief clarifying exam is performed prior to testing and temperature is maintained above 31C in the bilateral lower extremities.

ELECTRONEUROMYOGRAPHIC SUMMARY

Nerve Conduction:

Sensory NCS: The left superficial peroneal and bilateral sural nerves are WNL.

Motor NCS: The left peroneal and bilateral tibial nerves are WNL.


Late Responses: The right tibial F-wave is delayed in comparison to the left. The left peroneal F-wave and bilateral tibial H-reflexes are WNL.

Electromyography:

Using a monopolar needle electrode, sampling consisted of the dorsal primary rami innervated muscles from the bilateral lumbar paraspinals as well as ventral primary rami innervated muscles of the L2-S2 myotomes in the lower extremities. Muscle membrane instability (fibrillation/positive sharp wave activity) was observed in the bilateral L5-S1 paraspinals and medial gastroc muscles. All other muscles tested showed normal activity at insertion, rest and during voluntary recruitment.

Impression: (Abnormal Study)

1. Evidence suggests an acute bilateral lumbar radiculopathy (S1) that affects the dorsal and ventral primary rami.
2. There is no evidence to suggest a polyneuropathy, plexopathy or focal entrapment.


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Nerve Conduction Studies**Anti Sensory Summary Table**

Site	NR	Peak (ms)	Norm Peak (ms)	O-P* Amp (µV)	Norm O-P Amp	Site1	Site2	Delta-P (ms)	Dist (cm)	Vel (m/s)	Norm Vel (m/s)
Left Sup Peron Anti Sensory (Ant Lat Mall)											
14 cm		3.9	<4.2	3.3	>2.0	14 cm	Ant Lat Mall	3.9	14.0	36	
Left Sural Anti Sensory (Lat Mall)											
Calf		3.3	<4.2	10.7	>5.0	Calf	Lat Mall	3.3	12.0	36	
Right Sural Anti Sensory (Lat Mall)											
Calf		3.4	<4.2	5.5	>5.0	Calf	Lat Mall	3.4	12.0	35	

Motor Summary Table

Site	NR	Onset (ms)	Norm Onset (ms)	O-P* Amp (mV)	Norm O-P Amp	Neg Dur (ms)	Site1	Site2	Delta-0 (ms)	Dist (cm)	Vel (m/s)	Norm Vel (m/s)
Left Peroneal Motor (Ext Dig Brev)												
Ankle 8cm		5.0	<6.2	3.4	>0.700	6.41	B Fib	Ankle 8cm	6.3	29.5	47	>38
B Fib		11.3		3.4		6.88	Poplt	B Fib	2.0	10.0	50	>39
Poplt		13.3		3.2		7.03						
Left Tibial Motor (Abd Hall Brev)												
Ankle 8cm		5.2	<6.1	15.3	>2.8	4.38	Knee	Ankle 8cm	7.9	36.0	46	>38
Knee		13.1		11.9		4.69						
Right Tibial Motor (Abd Hall Brev)												
Ankle 8cm		5.0	<6.1	8.8	>2.8	5.47	Knee	Ankle 8cm	7.5	36.0	48	>38
Knee		12.5		7.1		6.72						

F Wave Studies

NR	F-Lat (ms)	Lat Norm (ms)	L-R F-Lat (ms)	L-R Lat Norm
Left Peroneal (Mrkrs) (EDB)				
	47.62	<60		<1.5
Left Tibial (Mrkrs) (Abd Hallucis)				
	43.55	<61	2.11	<1.5
Right Tibial (Mrkrs) (Abd Hallucis)				
	45.66	<61	2.11	<1.5

H Reflex Studies

NR	H-Lat (ms)	Lat Norm (ms)	L-R H-Lat (ms)	L-R Lat Norm
Left Tibial (Gastroc)				
	29.96	<36	0.00	<2.0
Right Tibial (Gastroc)				
	29.96	<36	0.00	<2.0

EMG

Side	Muscle	Nerve	Root	Ins Act	Fibs	Psw	Other	Amp	Dur	Poly	Recrt	Int Pat	Comment
Left	MedGastroc	Tibial	S1-2	Incr	Nml	2+	Nml	Nml	Nml	0	Nml	Nml	
Left	AntTibialis	Dp Br Peron	L4-5	Nml	Nml	Nml	Nml	Nml	Nml	0	Nml	Nml	
Left	Peroneus Long	Sup Br Peron	L5-S1	Nml	Nml	Nml	Nml	Nml	Nml	0	Nml	Nml	
Left	VastusMed	Femoral	L2-4	Nml	Nml	Nml	Nml	Nml	Nml	0	Nml	Nml	
Left	GlutMed	SupGluteal	L4-S1	Nml	Nml	Nml	Nml	Nml	Nml	0	Nml	Nml	
Right	TensorFascLat	SupGluteal	L4-5, S1	Nml	Nml	Nml	Nml	Nml	Nml	0	Nml	Nml	
Right	MedGastroc	Tibial	S1-2	Incr	Nml	1+	Nml	Nml	Nml	0	Nml	Nml	
Right	AntTibialis	Dp Br Peron	L4-5	Nml	Nml	Nml	Nml	Nml	Nml	0	Nml	Nml	
Right	VastusMed	Femoral	L2-4	Nml	Nml	Nml	Nml	Nml	Nml	0	Nml	Nml	

Paraspinal EMG

Side	Muscle	Nerve	Root	Ins Act	Fibs	Psw	Other	Amp	Dur	Poly	Recrt	Int Pat	Comment
Right	L5-S1	DPR	L5-S1	Incr	Nml	1+	Nml	NT'd	NT'd	NT'd	NT'd	NT'd	
Right	L4-5	DPR	L4-5	Nml	Nml	Nml	Nml	NT'd	NT'd	NT'd	NT'd	NT'd	
Left	L3-4	DPR	L3-4	Nml	Nml	Nml	Nml	NT'd	NT'd	NT'd	NT'd	NT'd	
Left	L4-5	DPR	L4-5	Nml	Nml	Nml	Nml	NT'd	NT'd	NT'd	NT'd	NT'd	
Left	L5-S1	DPR	L5-S1	Incr	Nml	1+	Nml	NT'd	NT'd	NT'd	NT'd	NT'd	

Waveforms:

