

SAMPLE EMG REPORT

Test Date: 11/24/2014

Patient:		DOB:		Physician:	
ID#:	*****	Sex:	Female	Skin Temp:	33C
Height:	5' 4"	Weight:	120 lbs.	Technician:	

Patient Complaints:

Patient presented with a history of neck pain, low back pain and extremity pain with paresthesia.

Medical Necessity: This patient has been selected for electrodiagnostic evaluation including electromyography, high frequency ultrasound and nerve conduction studies. EDX testing is the examination of choice when the differential diagnosis includes entrapment neuropathy, polyneuropathy, radiculopathy, plexopathy, motor neuron disease, neuromuscular junction disorder, myopathic conditions or possible CNS involvement. Accurate and prompt electrodiagnostic testing may assist in reaching a correct diagnosis and may lead to appropriate treatment.

Procedure: Compound motor action potentials (CMAPs) were obtained by stimulation of the median and ulnar nerves bilaterally. For the median nerves, CMAPs were recorded at the abductor pollicis brevis after distal wrist stimulation and proximal elbow stimulation. For the ulnar nerve, CMAPs were recorded at the abductor digiti quinti after distal wrist stimulation and proximal stimulation below and above elbow. Sensory nerve action potentials (SNAPs) were obtained by stimulation of the median and ulnar nerves bilaterally. Compound motor action potentials (CMAPs) were obtained by stimulation of the peroneal and tibial nerves bilaterally. For the peroneal nerves, CMAPs were recorded at the extensor digitorum brevis after distal ankle stimulation and proximal fibular head stimulation. For the tibial nerve, CMAPs were recorded at the abductor hallucis after distal ankle stimulation and proximal popliteal fossa stimulation. H-reflex latencies and amplitudes were determined by antidromic stimulation recording at the gastrocnemius. Sensory nerve action potentials (SNAPs) were obtained by stimulation of the superficial Peroneal and sural nerves bilaterally. Needle electromyography was used to determine the presents of spontaneous activity and to obtain motor unit analysis. High frequency ultrasound was utilized to differentiate space occupying lesion, inflammatory process, nerve morphology, anatomical variants and tendonopathy.

EMG & NCV Findings:

Evaluation of the Left Median Motor and the Left Median Anti Sensory nerves showed reduced amplitude (L4.9, L14.3 μ V). All remaining nerves (as indicated in the following tables) were within normal limits.

All F Wave latencies were within normal limits.

Needle evaluation of the Right Deltoid muscle showed increased motor unit amplitude. The Left Deltoid muscle showed increased motor unit amplitude. The Left Triceps muscle showed increased motor unit amplitude. The Right Triceps muscle showed increased motor unit amplitude. All remaining muscles (as indicated in the following table) showed no evidence of electrical instability.

High Frequency Sonographic Findings Cervical and Upper Thoracic Region with Trapezius Muscle:

The smooth margins of the cervical and upper thoracic spinous process, transverse process and articulating surfaces were visualized as bony land marks. The left and right facet articulations were observed and appear to be hyper-echoic and well maintained. The Erector Spinae was visualized and is continuous, uniform, echogenic, free from space occupying lesion and inflammatory infiltration. The intrinsic Multifidus was imaged at multiple levels and are continuous, uniform, echogenic, free from space occupying lesion and inflammatory infiltration. The Superior, Middle and Inferior Trapezius muscle sections were visualized on the right and left. The muscle is free from macro tear, space occupying lesion and inflammatory infiltration.

High Frequency Sonographic Findings Lumbar and Lower Thoracic Region with S-I Joints:

The smooth margins of the lumbar and lower thoracic spinous process, transverse process and articulating surfaces were visualized as bony land marks. The left and right facet articulations were observed and appear to be hyper-echoic and well maintained. Dynamic lumbar movement displayed motion at the lumbar facet articulations with the exception of L5/S1 on the right and left. The Thoraco Lumbar Fascia, Iliocostalis and Semispinales were visualized and are uniform, echogenic, free from space occupying lesion and inflammatory infiltration. The intrinsic Multifidus was imaged at multiple levels and are continuous, uniform, echogenic, free from space occupying lesion and inflammatory infiltration. The Sacral Iliac joint space was visualized on the right and left. The cortical regions are hyper-echoic and uniform.

Impression:

- 1) Abnormal study.
- 2) Electrophysiological evidence of bilateral chronic phase C6 radiculopathy.

Nerve Conduction Studies

Anti Sensory Summary Table

Site	NR	Peak (ms)	Norm Peak (ms)	P-T Amp (μ V)	Norm P-T Amp	Site1	Site2	Delta-P (ms)	Dist (cm)	Vel (m/s)	Norm Vel (m/s)
Left Median Anti Sensory (2nd Digit)											
Wrist		2.5	<3.7	14.3	>26	Wrist	2nd Digit	2.5	0.0		
Right Median Anti Sensory (2nd Digit)											
Wrist		2.4	<3.7	66.7	>26	Wrist	2nd Digit	2.4	0.0		
Left Sup Peroneal Anti Sensory (Ant Lat Mall)											
14 cm		2.9	<4.8	13.0	>2.3	14 cm	Ant Lat Mall	2.9	0.0		
Right Sup Peroneal Anti Sensory (Ant Lat Mall)											
14 cm		4.4	<4.8	6.2	>2.3	14 cm	Ant Lat Mall	4.4	0.0		
Left Sural Anti Sensory (Lat Mall)											
Calf		3.1	<4.0	10.2	>10	Calf	Lat Mall	3.1	0.0		
Right Sural Anti Sensory (Lat Mall)											
Calf		1.5	<4.0	14.5	>10	Calf	Lat Mall	1.5	0.0		
Left Ulnar Anti Sensory (5th Digit)											
Wrist		2.4	<4.1	15.6	>15	Wrist	5th Digit	2.4	0.0		
Right Ulnar Anti Sensory (5th Digit)											
Wrist		2.3	<4.1	66.3	>15	Wrist	5th Digit	2.3	0.0		

Motor Summary Table

Site	NR	Onset (ms)	Norm Onset (ms)	O-P Amp (mV)	Norm O-P Amp	Site1	Site2	Delta-0 (ms)	Dist (cm)	Vel (m/s)	Norm Vel (m/s)
Left Median Motor (Abd Poll Brev)											
Wrist		3.1	<4.2	4.9	>5	Elbow	Wrist	5.0	28.0	56	>50
Elbow		8.1		1.3							
Right Median Motor (Abd Poll Brev)											
Wrist		3.3	<4.2	5.7	>5	Elbow	Wrist	4.6	28.0	61	>50
Elbow		7.9		2.0							
Left Peroneal Motor (Ext Dig Brev)											
Ankle		4.9	<6.1	2.2	>2	B Fib	Ankle	4.4	30.0	68	>39
B Fib		9.3		2.0		Poplt	B Fib	1.9	11.0	58	>40
Poplt		11.2		1.6							
Right Peroneal Motor (Ext Dig Brev)											
Ankle		5.2	<6.1	2.0	>2	B Fib	Ankle	6.1	30.0	49	>39
B Fib		11.3		2.0		Poplt	B Fib	1.4	11.0	79	>40
Poplt		12.7		1.6							
Left Tibial Motor (Abd Hall Brev)											
Ankle		5.5	<6.1	3.3	>3	Knee	Ankle	7.2	38.0	53	>38
Knee		12.7		10.4							
Right Tibial Motor (Abd Hall Brev)											
Ankle		4.9	<6.1	10.7	>3	Knee	Ankle	6.7	38.0	57	>38
Knee		11.6		4.4							
Left Ulnar Motor (Abd Dig Minimi)											
Wrist		2.1	<4.2	6.9	>2.3	B Elbow	Wrist	3.4	20.0	59	>50
B Elbow		5.5		4.0							
Right Ulnar Motor (Abd Dig Minimi)											
Wrist		0.9	<4.2	8.5	>2.3	B Elbow	Wrist	3.9	20.0	51	>50
B Elbow		4.8		8.1							

F Wave Studies

NR	F-Lat (ms)	Lat Norm (ms)	L-R F-Lat (ms)
Left Median (Mrkrs) (Abd Poll Brev)			
	26.73	<33	0.00

Right Median (Mrkrs) (Abd Poll Brev)	26.73	<33	0.00
Left Peroneal (Mrkrs) (EDB)	37.67	<60	0.66
Right Peroneal (Mrkrs) (EDB)	37.01	<60	0.66
Left Tibial (Mrkrs) (Abd Hallucis)	44.82	<61	4.82
Right Tibial (Mrkrs) (Abd Hallucis)	40.00	<61	4.82
Left Ulnar (Mrkrs) (Abd Dig Min)	21.66	<36	0.00
Right Ulnar (Mrkrs) (Abd Dig Min)	21.66	<36	0.00

H Reflex Studies

NR	H-Lat (ms)	L-R H-Lat (ms)	L-R Lat Norm
Left Tibial (Gastroc)	31.39	1.41	<2.0
Right Tibial (Gastroc)	32.80	1.41	<2.0

EMG

Side	Muscle	Nerve	Root	Ins Act	Fibs	Psw	Amp	Dur	Poly	Int Pat	Comment
Right	Deltoid	Axillary	C5-6	Nml	Nml	Nml	Incr	Nml	0	Nml	
Left	Deltoid	Axillary	C5-6	Nml	Nml	Nml	Incr	Nml	0	Nml	
Left	Biceps	Musculocut	C5-6	Nml	Nml	Nml	Nml	Nml	0	Nml	
Right	Biceps	Musculocut	C5-6	Nml	Nml	Nml	Nml	Nml	0	Nml	
Left	Triceps	Radial	C6-7-8	Nml	Nml	Nml	Incr	Nml	0	Nml	
Right	Triceps	Radial	C6-7-8	Nml	Nml	Nml	Incr	Nml	0	Nml	
Left	PronatorTeres	Median	C6-7	Nml	Nml	Nml	Nml	Nml	0	Nml	
Right	PronatorTeres	Median	C6-7	Nml	Nml	Nml	Nml	Nml	0	Nml	
Left	Abd Poll Brev	Median	C8-T1	Nml	Nml	Nml	Nml	Nml	0	Nml	
Right	Abd Poll Brev	Median	C8-T1	Nml	Nml	Nml	Nml	Nml	0	Nml	
Left	ABD Dig Min	Ulnar	C8-T1	Nml	Nml	Nml	Nml	Nml	0	Nml	
Right	ABD Dig Min	Ulnar	C8-T1	Nml	Nml	Nml	Nml	Nml	0	Nml	
Left	VastusMed	Femoral	L2-4	Nml	Nml	Nml	Nml	Nml	0	Nml	
Left	Peroneus Long	Sup Br Peron	L5-S1	Nml	Nml	Nml	Nml	Nml	0	Nml	
Right	Peroneus Long	Sup Br Peron	L5-S1	Nml	Nml	Nml	Nml	Nml	0	Nml	
Left	Gastroc	Tibial	L5-S2	Nml	Nml	Nml	Nml	Nml	0	Nml	
Right	Gastroc	Tibial	L5-S2	Nml	Nml	Nml	Nml	Nml	0	Nml	
Left	AntTibialis	Dp Br Peron	L4-5	Nml	Nml	Nml	Nml	Nml	0	Nml	
Right	AntTibialis	Dp Br Peron	L4-5	Nml	Nml	Nml	Nml	Nml	0	Nml	
Left	Ext Dig Brev	Dp Br Peron	L5, S1	Nml	Nml	Nml	Nml	Nml	0	Nml	
Right	Ext Dig Brev	Dp Br Peron	L5, S1	Nml	Nml	Nml	Nml	Nml	0	Nml	
Left	BicepsFemL	Sciatic	L5-S2	Nml	Nml	Nml	Nml	Nml	0	Nml	
Right	BicepsFemL	Sciatic	L5-S2	Nml	Nml	Nml	Nml	Nml	0	Nml	

Paraspinal EMG

Side	Muscle	Nerve	Root	Ins Act	Fibs	Psw
Left	Lumb Parasp Low	Rami	L5-S1	Nml	Nml	Nml
Right	Lumb Parasp Low	Rami	L5-S1	Nml	Nml	Nml
Left	Cerv Parasp Low	Rami	C6-T1	Nml	Nml	Nml
Right	Cerv Parasp Low	Rami	C6-T1	Nml	Nml	Nml

Waveforms:





