



Neurophysiology Report

Visit Date: 20/04/2023 14:22

Patient ID: 2597 84517
Name: Amanda BENNETTS
Height (cm): 177
Referrer: Dr Ryan Wellington
CC.: Dr Steve Truong, Dr Zara Ioannides

Gender: Female
DoB: 19/06/1986
Age: 36 Years

Notes: NXP2 antibody positive. CK normal.
History of multiple sclerosis, not currently on disease modifying therapy. Prior bilateral optic neuritis. NMO and other antibodies negative. Prior interferon, copaxone, aubagio and natalizumab.

Findings:

Nerve conduction studies were performed on the right upper and lower limbs, followed by needle EMG.

Routine nerve conduction studies were normal.

EMG was abnormal as indicated on the chart – there were a few scant positive waves in vastus lateralis, and motor unit morphology was larger than 'normal', but otherwise recruitment was normal. The most salient abnormalities were seen in deltoid, where relatively small motor units recruited quite rapidly to a full interference pattern with only relatively gentle muscle activation.

Conclusion:

Overall, this test is supportive of a mild myopathy, and despite the normal CK if a muscle biopsy is required the left deltoid would be an appropriate target unless MRI shows abnormalities elsewhere.

Warm Regards,

Antony Winkel
Neurophysiologist

Sensory NCS

Nerve / Sites	Rec. Site	Lat ms	Amp μ V	Dur. ms	Segments	Distance mm	Velocity m/s
R Ulnar - Ortho							
Dig V	Wrist	2.67	8.5	1.23	Dig V - Wrist	110	54
Mid palm	Wrist	1.94	16.3	1.10	Mid palm - Wrist	80	57
R Median - Ortho							
Dig II	Wrist	2.83	19.1	1.17	Dig II - Wrist	130	56
Mid palm	Wrist	1.85	62.9	0.98	Mid palm - Wrist	80	56
R Superficial peroneal							
Lat leg (14cm)	Ankle	4.21	10.7	1.94	Lat leg (14cm) - Ankle	140	43
Lat leg (10cm)	Ankle	3.27	14.8	1.54	Lat leg (10cm) - Ankle	100	43
R Sural							
Calf (14cm)	Ankle	4.42	7.0	2.00	Calf (14cm) - Ankle	140	41
Calf (10cm)	Ankle	3.58	18.2	1.94	Calf (10cm) - Ankle	100	38

Motor NCS

Nerve / Sites	Muscle	Lat. ms	Amp. mV	Amp. %	Dur. ms	Segments	Dist. mm	Lat Diff ms	CV m/s
R Median - APB									
Wrist	APB	3.4	12.8		7.0	Wrist - APB	70		
Elbow	APB	7.2	12.6	98.9	7.0	Elbow - Wrist	234	3.8	61
R Ulnar - ADM									
Wrist	ADM	2.2	12.1	100	7.6	Wrist - ADM	60		
R Peroneal - EDB									
Ankle	EDB	5.2	5.5	100	6.2	Ankle - EDB	70		
Fib head	EDB	13.9	5.4	98.3	6.8	Fib head - Ankle	387	8.7	44
R Tibial - AH									
Ankle	AH	4.2	17.0	100	7.0	Ankle - AH	80		

F Wave

Nerve	M Lat. ms		F Lat. ms		F-M Lat. ms		% F %	
	Left	Right	Left	Right	Left	Right	Left	Right
Median - APB		3.39		26.46		23.07		100
Ulnar - ADM		2.24		25.99		23.75		100
Peroneal - EDB		5.10		50.05		44.95		100
Tibial - AH		4.38		53.02		48.65		100

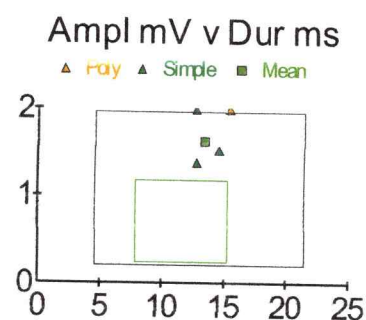
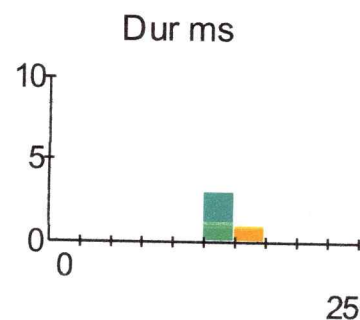
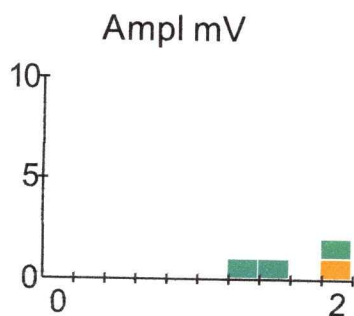
EMG Summary Table												
Muscle	Interpretation		Spontaneous				Voluntary					
	Grade	Type	IA	Fib	PSW	Fasc	Amp	Dur.	Poly.	IP	Recruit	Other activity
R. Vastus lateralis	See	Report	N	+	+	None	++	N	N	N	N	None
R. Vastus medialis	None	Normal	N	None	None	None	N	N	N	N	N	None
R. Biceps brachii	None	Normal	N	None	None	None	N	N	N	N	N	None
R. Deltoid	Mild	Myopathy	N	None	None	None	-	-	N	N	Early	None

Multi MUP

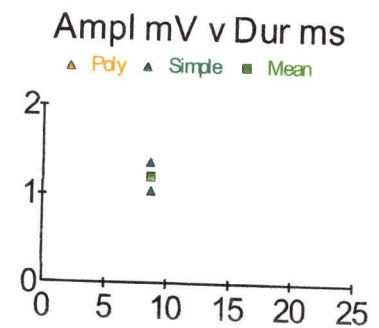
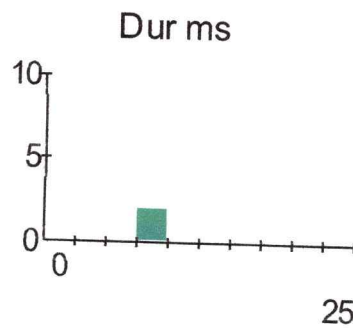
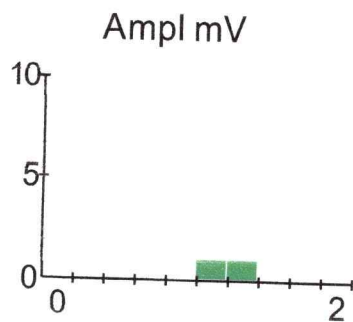
Muscle		Sweeps	Ampl. μ V	Dur. ms	Phases	Turns	Area μ Vms	Ratio	Rate Hz
R Vastus lateralis	Mean ALL		2669.3	13.78	3.8	7	5708.1	2.02	8
	Mean SIMPLE		1696.9	13.26	3.3	5.7	3241.1	1.91	9

Muscle		Sweeps	Ampl. μV	Dur. ms	Phases	Turns	Area μVms	Ratio	Rate Hz
	Total MUPs	4							
	%Polyphasic	25%							
	1.1	21	2183.8	12.60	3	5	4169.4	1.91	10
	1.2	20	1524.3	14.48	3	7	2967.9	1.95	9
	1.3	20	1382.7	12.71	4	5	2586.0	1.87	9
	1.4	15	5586.3	15.31	5	11	13109	2.35	6
R Vastus medialis	Mean ALL		1217.0	8.59	3	4.5	1748.6	1.45	11
	Mean SIMPLE		1217.0	8.59	3	4.5	1748.6	1.45	11
	Total MUPs	2							
	%Polyphasic	0%							
	1.1	43	1056.0	8.65	3	3	1636.0	1.55	12
	1.2	27	1378.0	8.54	3	6	1861.1	1.35	10
R Biceps brachii	Mean ALL		842.9	8.68	3	3	824.4	1.04	14
	Mean SIMPLE		842.9	8.68	3	3	824.4	1.04	14
	Total MUPs	3							
	%Polyphasic	0%							
	1.1	54	369.0	8.54	3	3	465.2	1.26	16
	1.2	38	712.2	7.19	3	3	674.6	0.95	13
	1.3	36	1447.5	10.31	3	3	1333.4	0.92	12
R Deltoid	Mean ALL		495.6	11.06	3.4	4.2	757.8	1.53	10
	Mean SIMPLE		459.2	10.49	2.9	3.4	682.7	1.53	11
	Total MUPs	15							
	%Polyphasic	20%							
	1.1	75	448.1	14.48	3	2	676.1	1.51	14
	1.2	45	289.2	10.83	3	3	415.0	1.44	8
	1.3	42	369.9	6.15	3	3	471.1	1.27	9
	1.4	40	610.5	10.83	3	5	881.3	1.44	11
	1.5	34	632.7	10.42	3	3	929.4	1.47	8
	1.6	14	1044.9	9.06	3	5	1530.6	1.46	6
	1.7	7	538.0	11.88	6	6	665.5	1.24	1
	1.8	6	942.1	13.02	5	12	1896.9	2.01	5
	2.1	127	370.7	11.25	3	4	341.7	0.92	18
	2.2	88	371.6	10.83	3	3	642.4	1.73	16
	2.3	87	350.2	8.65	3	3	567.5	1.62	16
	2.4	61	188.1	13.75	2	4	461.9	2.46	11
	2.5	55	457.1	11.77	3	3	708.1	1.55	11
	2.6	29	376.9	7.81	3	3	567.1	1.5	6
	2.7	28	444.3	15.10	5	4	612.3	1.38	6

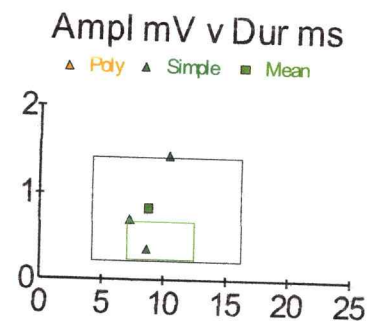
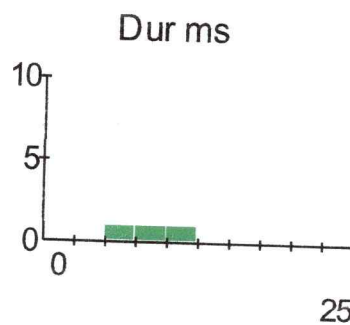
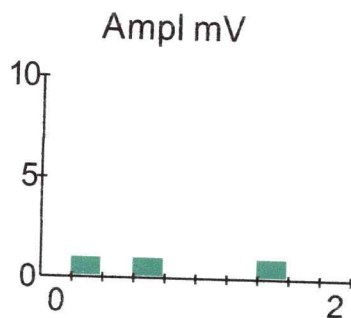
Multi MUP: R Vastus lateralis



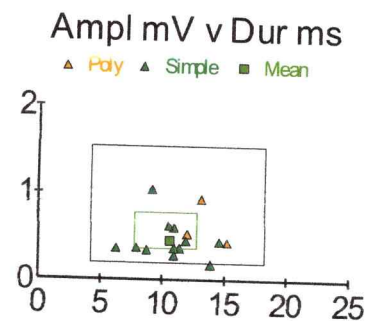
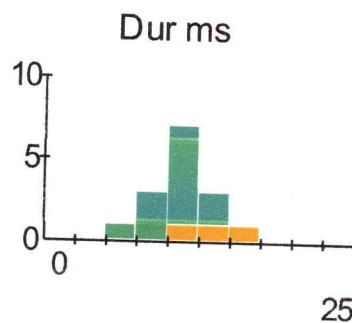
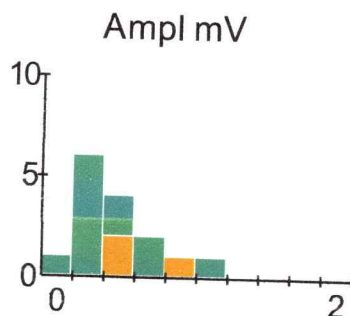
Multi MUP: R Vastus medialis



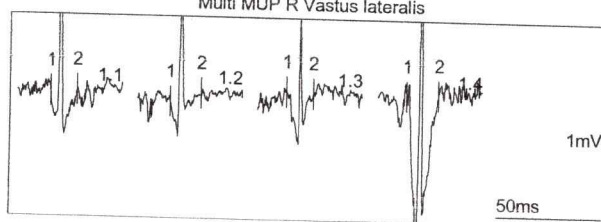
Multi MUP: R Biceps brachii



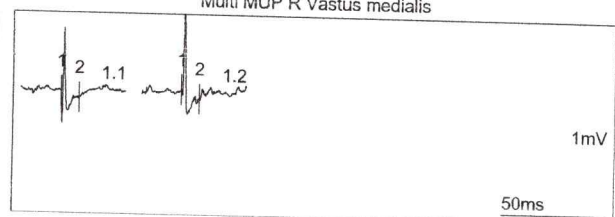
Multi MUP: R Deltoid



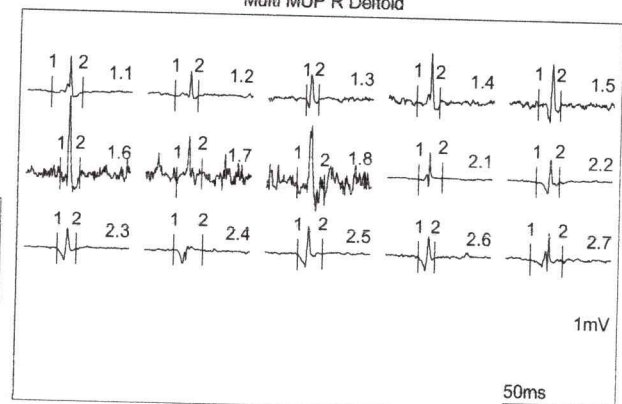
Multi MUP R Vastus lateralis



Multi MUP R Vastus medialis



Multi MUP R Deltoid



Multi MUP R Biceps brachii

