

SCRIPPS CLINIC - Division of Neurology
JOHN R ANDERSON V MEDICAL PAVILION
Autonomic Neuro Lab
9898 Genesee Ave, La Jolla, CA 92037
Telephone: 858-824-5474 FAX: 858-964-3126

Patient MRN: 810034123
Patient Name: HEYDARI, PEYMAN
Date of Birth: 02/02/1970
Test Date: 01/09/2018
Referring Dr: WHITE, ANDREW

Clinical Problem: Disorder of autonomic nervous system; Dysautonomia.

AUTONOMIC REFLEX SCREEN

Comments:

1. HR responses to deep breathing and Valsalva maneuver were normal.
2. Beat-to-beat response to Valsalva maneuver was normal.
3. Patient was tilted for 10 min. Beat-to-beat BP showed a brief, but pronounced reduction in systolic and diastolic BP during the first 30 seconds after table was tilted to 70°. Patient reported lightheadedness (felt he was in a rollercoaster) and felt stomach ache when the table was tilted to 70°. Beat-to-beat BP recovered 1 min after tilt and orthostatic hypotension was not demonstrated. HR response was generous but not excessive. Beat-to-beat BP showed an increase in BP oscillations after 5 min of head-up tilt. Patient reported fatigue, chest tightness, calf soreness, brain fog (out of it) and right knee weakness during head-up tilt. Patient felt toes tingling and legs tightness/cramp toward the end of the head-up tilt. After tilt back, patient reported brain fog improved, patient had no chest discomfort and legs felt better.
4. QSWEAT response was normal over the forearm and foot sites and reduced over the proximal and distal leg sites.

Impression: Abnormal study. Cardiovascular and adrenergic function are normal. There is sudomotor dysfunction which is consistent with a small fiber neuropathy. There is no evidence of significant orthostatic intolerance on this study.

HEART RATE RESPONSES

Test	Parameter	Result	Normal Values	Percentile %
Deep Breathing	HR Range (bpm)	20.0	[> 10.0]	44
Valsalva Maneuver	Valsalva Ratio	1.95	[> 1.44]	48

BLOOD PRESSURE AND HEART RATE RESPONSE TO HEAD-UP TILT

Values with patient to 70° head-up tilt

	Supine	30 sec	1 min	5 min	7 min	10 min	3 min post tilt
BP (mmHg)	117/81	99/68	115/84	117/86	116/86	118/80	113/75
HR (bpm)	85	109	105	93	108	109	91

QUANTITATIVE AXON REFLEX SWEAT TEST (QSWEAT)

Site	Current (mA)	Test Duration (min)	Latency (min)	Normal values (min)	Sweat Output (µl/cm²)	Normal Values	QSweat Percentile %
R Forearm	2	10	1.92	[0.90 - 2.90]	2.10	[> 0.76]	33
R Proximal Leg	2	10	1.82	[0.50 - 2.20]	0.58	[> 0.93]	< 5
R Distal Leg	2	10	1.37	[0.80 - 3.90]	0.77	[> 0.98]	< 5
R Foot	2	10	2.28	[0.80 - 3.90]	0.82	[> 0.78]	6

MV = Missing value

COMPASS-31 DOMAIN	SEVERITY SCORE	% MAX
Orthostatic Intolerance (Max 40)	24	60
Vasomotor (Max 5)	0	0
Secretomotor (Max: 15)	6.4	43
Gastrointestinal (Max: 25)	11.6	46
Bladder (Max: 10)	0	0
Pupillomotor (Max:5)	1	20
Total (Max: 100):	43.0	43

FATIGUE SEVERITY SCALE (FSS): 57

TECHNOLOGIST: 141620

PHYSICIAN: Mary A. Kalafut, M.D.

Electronically signed by Jose R Criado Del Valle at 1/15/2018 2:04 PM

Procedure visit on 1/9/2018

Chart Review Routing History

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Clinical Problem: Transient alteration of awareness

VASOMOTOR REACTIVITY TEST

Patient was tilted for 10 min. Beat-to-beat BP showed a brief, but pronounced reduction in systolic and diastolic BP during the first 30 seconds after table was tilted to 70°. Patient reported lightheadedness (felt he was in a rollercoaster) and felt stomach ache when the table was tilted to 70°. Beat-to-beat BP recovered 1 min after tilt and orthostatic hypotension was not demonstrated. HR response was generous but not excessive. Beat-to-beat BP showed an increase in BP oscillations after 5 min of head-up tilt. Patient reported fatigue, chest tightness, calf soreness, brain fog (out of it) and right knee weakness during head-up tilt. Patient felt toes tingling and legs tightness/cramp toward the end of the head-up tilt. After tilt back, patient reported brain fog improved, patient had no chest discomfort and legs felt better. R MCA velocity decreased by as much as 39% during head-up tilt. An increase in oscillations in R MCA velocity was observed during head-up tilt.

Impression: Normal vasomotor reactivity test.

R MCA-MFV AND HEART RATE RESPONSE TO HEAD-UP TILT

Values with patient to 70° head-up tilt

	Supine	30 sec	1 min	3 min	7 min	10 min	1 min post
R MCA MFV (cm/sec)	43.0	31.1	26.1	42.7	48.5	41.2	44.0
Standard Deviation	1.9	2.4	1.7	5.9	2.7	3.7	1.7
Percent Change		-27.7	-39.3	-0.7	12.8	-4.2	2.3
HR (bpm)	85	109	105	102	108	109	93
Respiration Rate (breaths/min)	39	35	39	31	39	37	38
EtCO2 (mmHg)	14	7	17	10	16	12	20

VASOMOTOR REACTIVITY (VMR)

Side	Baseline MCA MFV (cm/sec)	Breath-holding MCA MFV (cm/sec)	Length of time Breath-holding (sec)	% Increase MFV (from baseline)	Breath-holding Index (BHI)	Normal Value
L	55.4	66.6	28	20.1	0.8	[> 0.69]
R	51.6	66.2	28	28.4	1.1	[> 0.69]

TECHNOLOGIST: 141620

PHYSICIAN: Mary A. Kalafut, M.D.

Electronically signed by Jose R Criado Del Valle at 1/15/2018 2:06 PM

Procedure visit on 1/9/2018

Chart Review Routing History

Vascular Ult transcranial doppler complete

[IMG1957]

Status: **Final result**

PACS Images

Show images for Vascular Ult transcranial doppler complete

Impression

IMPRESSION: Negative for significant intracranial arterial stenosis bilaterally.

EXAMINATION: Vascular Ult transcranial doppler complete

This 47 y.o. male was seen in the Vascular lab for evaluation of intra-cranial arterial flow presenting with history of presyncope.

FINDINGS: Transcranial Doppler evaluation demonstrates normal flow velocities in the bilateral MCA/ACA/PCA, ophthalmic, and terminal portion of the internal carotid artery, as well as throughout the vertebral/basilar system. The siphon portion of the internal carotid artery was not appreciated.

TCI/TCD Velocities: (mean)

Vessel:	Right:	Left:
MCA (Dst)	(40cm/s)	(26cm/s)
MCA (Prx)	(57cm/s)	(55cm/s)
ACA	(50cm/s)	(29cm/s)
PCA	(40cm/s)	(22cm/s)
Siphon	(not apprec)	(not apprec)
VERT	(31cm/s)	(30cm/s)

BASILAR (Prx) (35cm/s)

BASILAR (Dst) (37cm/s)

Technologist: (141620)

Image Study SmartPhrase Guide

Vascular Ult transcranial doppler complete (Order #465224132) on 1/9/18

Signed by

Signed

KALAFUT, MARY ANN

Date/Time

1/09/2018 23:11

Phone

858-824-5400

Pager

Exam Information

Status

Final [99]

Exam
Begun

1/09/2018 07:30

Exam
Ended

1/09/2018 10:00

External Results Report

[Open External Results Report](#)

Encounter

[View Encounter](#)

Reviewed By List

Andrew Allen White, MD on 1/11/2018 12:52 PM

Order Report

Vascular Ult transcranial doppler complete
(Order #465224132) on 1/9/18

Reprint Order Requisition

Vascular Ult transcranial doppler complete
(Order #465224132) on 1/9/18