

Mitchell S. Grobman, M.D.

DULBERG, PAUL
SS#: 323-76-4001

DOB: 03/19/70
DOV: 05/08/02

CONSULTING PHYSICIAN: Frank Sek, M.D.

REASON FOR EVALUATION: Pain and sensory disturbance since a motor vehicle accident.

HISTORY: This is a 32-year-old right-handed gentleman with no significant past medical history who was involved in a motor vehicle accident on March 1, 2002. He reports that he was stopped to make a turn when another car tried to pass him and then turned back quickly into his lane. The other car's front passenger side impacted on his rear driver's side. The patient states that he had turned all the way towards the left to find the car that was passing him when the impact occurred and his left arm was actually between his seat and the doorframe. He was pushed back into the seat and his seat belt held. His left shoulder may have hit the window. He had no bruises or obvious external injuries and he got out of the car without difficulty, walking fine. The next day was his first symptom and it was spasm in the left side of his neck and into the upper shoulder. Over the following week this increased in intensity and spread into the left proximal arm (near the deltoid insertion), into the left shoulder blade and trapezius region and down the paraspinal muscles into the lumbar spine region. From the lumbar paraspinal region it goes into the buttock and also can spread into a region in the left posterior thigh and the left posterior calf. These regions feel like they are deep inside and burn and reside in a region approximately 3 inches in diameter. These symptoms are worsened by walking. In addition, the left foot tingles on the dorsal surface. He has no complaints regarding the right leg or the right arm. There are no cranial nerve complaints. The rest of the review of systems is per the health questionnaire.

PAST MEDICAL HISTORY: Essentially negative.

MEDICATIONS:

1. Flexeril 10 mg b.i.d.
2. Carisoprodol 350 mg q.i.d.
3. Naproxen 500 mg b.i.d.
4. Talwin alternating with Vicodin.
5. Amitriptyline 50 mg q h.s. for the last week only. He is experiencing some daytime sleepiness.

ALLERGIES: There are no known medication allergies.

FAMILY HISTORY: His parents are alive and healthy in their 60's. No significant neurologic problems in the family were identified.

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SOCIAL HISTORY: He is single. He works a printing press but has not been able to do his work due to his injuries. He has smoked one pack of cigarettes per day for the last 11 years and does not drink alcohol or use recreational drugs. He usually exercises regularly.

NEUROLOGIC EXAMINATION:

Mental Status: There are no signs of aphasia, dementia, or other cognitive defects at this time.

Cranial Nerves: Funduscopy examination reveals flat discs bilaterally without significant optic atrophy and without hemorrhage or exudate. Visual fields are intact to confrontational testing both singly and simultaneously. Pupils are round, symmetrical, and reactive to light equally both directly and consensually. There is no anisocoria or afferent pupillary defect. Extraocular movements are full and normal speed. There is no nystagmus. There is no ptosis. Facial sensation is intact to light touch and pin. Muscles of mastication contract symmetrically. Muscles of facial expression, both upper and lower groups, contract normally. The palate elevates in the midline. Trapezius muscles elevate with normal strength. The tongue protrudes in the midline. There is no sensorineural or conductive hearing loss detected.

Motor: With the exception of slight weakness of the flexors of the left toes, the patient can demonstrate normal strength throughout all four extremities. There is no loss of muscle bulk. There is no dysmetria or dysidiadochokinesia. Specifically there is no weakness of finger adductors or the flexors of the distal interphalangeal joints of digits four and five.

Sensory: Vibratory sense is intact throughout. Light touch is intact throughout both legs. Pin is diminished in a region stretching from the anterolateral shin proximally, anterior shin distally and dorsal medial foot on the left. Pin is intact throughout elsewhere.

Reflexes: Deep tendon reflexes are present, normoactive and symmetrical at biceps, triceps, brachioradialis and patellar tendons. The left medial hamstring and Achilles tendon reflexes are slightly diminished compared to the right. Toes are downgoing on plantar stimulation.

Gait: Resting ambulation is normal. Toe walking is intact but he has decreased toe clearance on heel walking on the left compared to the right. His base is normal and tandem is performed without difficulty.

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General: The patient is well-developed, well-nourished and well-groomed. Heart is regular rate and rhythm without murmurs. There is no meningismus. There are no carotid bruits and carotid pulsations are normal. Range of motion of the neck is pain limited, especially for lateral bending and lateral rotation bilaterally. There is palpable hypertension in the muscles of the posterior neck just to the left of midline at approximately the C6 level. There is tenderness to palpation at the medial border of the lumbar scapula on the left. Tinel's sign is negative at the right elbow but induces severe tingling with very light pressure at the left ulnar groove. Peripheral pulses are normal. There is no pedal edema. Pulse is 84. Blood pressure is 114/80. Respirations are 12.

STUDIES: I had available for my review both the plain cervical spine x-rays and the CT scan of the cervical spine, which does seem to indicate a small avulsion fracture inferior to the C5 lamina and no other specific abnormalities. I also reviewed the films of an MRI scan of the lumbar spine and found this study to be normal.

IMPRESSIONS:

1. Musculoskeletal pain due to flexion/extension injury.
2. Sensory disturbance in the left arm consistent with ulnar neuropathy. Due to the position of his arm at the time of the accident, it is likely to be directly related to the accident.
3. Sensory disturbance in the left leg consistent with an L5 radiculopathy. There is no acute compressive lesion but this does not exclude a stretch injury to the nerve root. This also would likely be related to the motor vehicle accident.

RECOMMENDATIONS:

1. Stop Carisoprodol.
2. Increase the Flexeril to 10 mg three times a day.
3. Continue amitriptyline.
4. Medrol Dosepak. Long-term and short-term side effects were discussed at length. The patient was instructed not to use Naproxen while taking the Medrol.
5. EMG and nerve conduction study of the left arm and left leg for above possible nerve injuries.



Mitchell S. Grobman, M.D.

MSG/jak

DD: 05/08/02
DT: 05/09/02

CONTINUATION

NAME Dulberg, Paul

DATE

ADDRESS

5/8/02 Pt. comes to office to be evaluated for neck & back pain due to an MVA. He has had muscle spasms in the neck & the low back and then resulting in cramping in those areas as well. Pt gets bad muscle spasms pretty much down his entire spine. His @ side is worse than @ side. Pt. is off work. Meds: see ~~that~~ list NKDA — mh.

5/9/02 PC from pt - his P.T. is running out as well as his Flexeril and Dr. Sk has told pt that msg should handle this because it is beyond his expertise. Per msg. pt. should cont. P.T. & refill of Flexeril auth. Script faxed to Centegra in McHenry. — mh.

5.20.02 Pt showed 1/2 hr late for Emg rescheduled

5/22/02 Office Visit

Pt here for emg

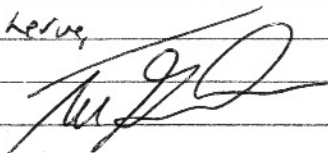
Pt noting sensitivity at @ rib cage

On exam: @ lower rib cage sticks out + @ nipple ~ 1/4" higher than @

R/O muscle spasm vs. rib fracture

Plan - X-rays of ribs

Also splint for @ lower lobe



5/31/02 Per msg - pt's rib X-Rays were not pt. notified. — mh.

6/11/02 PC from pt. wanting another script for PT. Per Mil ok. Faxed script to Centegra. Tom.

NAME

Sulberg, Paul

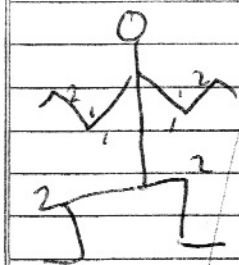
DATE

ADDRESS

7/10/02 Office Visit

Naproxen
Am. Tylenol 100-50x2
Cyclobenzapril 10 tid
Vicodin - very rare

Rib x-ray



symptoms
Worse if forget to take
a dose
Working 4 hrs/day

Using splint on elbow. Getting numbness less frequently
essentially only when back elbow - drinks left hand by
hand
No more shooting pain in elbow but still 2 muscle pain
in low back & upper back
Still 2 muscle spasms in neck, but not + responds to brief massage
Mentally better also
② Shoulder still spasms but can put his arm into a position to block
- Self did finger points in ④ trap ~~lower~~ trapezius
Overall 40-50% better
Ex - narrow strength in hands
medial arm digit ④ hand ↓ compared to lateral + all other digits
④ Triceps ④ elbow/ulnar groove

Imp: ④ Ulnar neuropathy, less symptomatic. No weakness
④ Lateral neck
↓ Muscular skeletal pain

Rec: Continue Flexion
Am. Tylenol same dose
Continue PT
Consider not using splint during day
6 more weeks

[Signature]

8/23/02 Office Visit - Man here also

Spasms in shoulder/neck region gone, but arm still hurts
Am. Tylenol 50 2qpo Per. Sharp from trapezius/upper back area lateral to elbow into back of hand
Cyclobenzapril 10 tid
Naproxen 500 bid
Vicodin 2/week
④ middle little finger numb, rarely tingles medial ④ hand
Drooping things with ④ hand
Using splint at night only - no worse

Ex - Pressure ④ Suprascapular fossa this person
digits 3+4 of R hand dorsally
Straight arm, including hand extension, adduction +
Treat points ④ elbow ④ medial wrist, ulnar wrist, or
medial in arm
5th digit ↓ pain by 15% Still holds ④ shoulder higher
Imp: ④ Severe complaint of ulnar distribution and pressure
in suprascapular fossa duplicating hand symptoms. No back!
Neck spasms improved
Plan: 6-8 wks
④ Severe Meds. Continue PT
④ C-spine + ④ Brachial plexus. ④ F/U ~ 4 weeks

[Signature]

NAME Dulberg, Paul

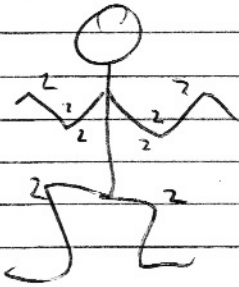
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ADDRESS

9/5/02 PC from pt requesting MRI results. Per msg. it shows mild arthritic d's. There is nothing in the nerve bundle in the shoulder. ——— med m.

9/29/02 Office Visit. Hx & exam discussed at length.
MRI reviewed. Minor soft tissue changes - Likely not the cause of symptoms.
One episode of spasmodic pain in C trapezius region x 3 hrs.
Low back tightens up when driving.
Occ shot of pain into C pinky. Day fraps did.
No overall changes.
No GT symptoms.

Elbow 100 gts
Flexion 10 till
N/A 500 b'd
D'Vincin



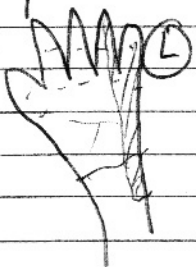
Headaches (predicted MVA) non-exact.
Kouzzi just at C elbow → reds pain into her
Gen normal strength throughout. borderline C finger abduction
Distal nerve
Bilateral - both hands. Marked parest in C thumb
Tuck at elbow questionable → numb but not tingling
Imp: Your neuropathy improving (sensory exam).
Muscle spasm pain.

Plan: No change in meds.
It has no chiropractic contraindications to
chiropractic/osteopathy - may consider it
gets a recommendation
2 months

11/15/02 Pto mom called to cancel same day
Resched 12/20/02 (ok)

12/20/02 Office Visit. Hx & exam. Uses left elbow pad at
Dome better - Spasms of pain all but gone. Spasms in better region.
Apexite improving. No other changes in her Hx.
Held (chiropractic manipulation of ribs & upper thorax (finger pts?)) in her
Same pain in neck & hand. 3-4x/day 2-30 min. "Overloaded circuit"
Same strength with in some bits.
Pain ↓ in ulnar C arm splits 4th digit. extends proximal
Reflexes normal in arm.

Elbow 100 gts
Flexion 10 till
N/A 500 b'd



Imp: Ulnar neuropathy is sensory/pain deficit but no motor deficit.
Muscle skeletal pain improving.
Plan: Repeat EMG C arm only
to eval ulnar neuropathy
Try ↓ Flexion to 5 by 1st

NAME

Dulberg, Paul

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12/23/02 per msg. pt notified that the Emg was slightly better than previous, but still about midm.

12/23/02 Emg Report mailed to Dr. Sek. (ok)

02/21/03 sent second copies to: ~~MELINDA LOVE~~

gk

~~AMERICAN NATIONAL CORPORATE CENTRE~~

~~1949 EAST SUNSHINE~~

~~SPRINGFIELD, MO~~

~~65899-0001~~

error JE

3/4/03 Records sent to American National Property
1949 E. Sunshine Springfield MISSOURI - 65899-0001

2/12/03 Office Visit

Emg results remain. Doubled cardiac velocity across the zone
Flexion 5, no Flexion overload (swollen, but no longer pain + tender) at least once a day
Naproxen 500 bid
moes on + if goes away.

Elbow 100, HHS. Neck still hurt, esp with precipitation, but ok without precipitation
Much more energy when stops Elbow, but can't sleep.
Had wisdom teeth pulled.

Stopped using splint - fell apart. Tends to slog on on elbow bar

JB

④ Thumb

④ Elbow

subtle waves. Flow of Distal phalange @ 5th digit

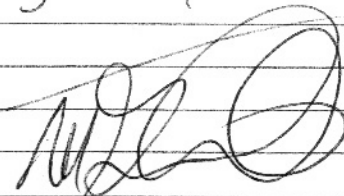
subtle waves, ④ ADM, FDI ok.

ReFlex = a cross

Subtle ↓ on 5th digit

Imp. Symptoms improving. Seen more range of motion
Upper respiratory improving electrophysiology, all c
see de test

Recs: Another elbow splint / pad to use at night
Continue Naproxen. May occasionally use 3/day
Ole Flexion over a week.
Taper Elbow by 25% weekly to off of pad.



CONTINUATION

NAME

Dalberg, Paul

DATE

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6/1/03 Office Visit

~~Flare~~

~~Flare~~

Naproxen bid

Last sleep coming off Flexeril + Elavil, now back to 5 or 6 hours
No loss of pain control with above
Naproxen necessary for pain. Did have heartburn for 2 weeks, now
resolved. No blood/black in stool
Test was great. Some pain in neck on bad days like today
Less trouble in fingers intermetatarsal + mild pain intermetatarsal
Grip in hand still present. Not worse or better
Worn elbow pad at night

Trouble in typing
incoordination of
finger in hand.

Bothered by weakness enough to switch jobs to graphics design
Exam - ① Trunk in ② Ulcer groin } in pg cut
③ ADM 4/5, FDI 4/5
④ FDH+5 okay
DTR = in UEs
Pin ↓ 5th digit + ulnar 4th digit ~ 60%

Imp: Persistent ulcer neuropathy = sensory + motor deficits
Pt interested in surgery if not better.
Some GI symptoms? related to Naproxen
Plan: D/c Naproxen
Vioxx 50mg qd x 5 for 25 ms
3 months. Surgeon referral
See Dr. Set for heartburn relief

[Signature]

8/19/03 PC to pt to confirm the Naproxen refill.
Spoke to pt's mom + she stated the Vioxx was
not helping, so it returned to the Naproxen.
Refill auth. m.d.m.

9/5/03 Office Visit

Naproxen bid

No other med

Stopped Vioxx - not working. Back to Naproxen but still not better. Had
no GI problem. Needs it for neck pain. Not to hold unless water changes
① hand not better. Still in grip weakness. 4th + 5th digits weaker than 2nd + 3rd
Stopped using elbow pad when it fell apart (3 weeks ago)
Exam - ① Trunk ② elbow (ulnar groove)
FDH 5 weeks 4/5 FDI + ADM weak. Fromat's negative
Oppress + APP 5/5. DTRs N= in 4th
Pin ↓ in 5th + ulnar + median 4th ↓ 50% dors. ↓ 20% palmar

Pain in
ulnar band elbow

Imp: Confirmed neck pain
Continued elbow neuropathy despite 19 weeks conservative Rx = weakness
Plan: Continue Naproxen. GI likely different from → consult Dr. Set.
Consult Dr. Setman FX 3 months

Dulberg, Paul

5/11/07 Office Visit

Had transport. - surgery. Fixed the shunt pump. Strength is much better. No shunt pump in shunt. Still st. numb, more than before surgery. Now neck more better same than before. Some unexplained wt loss - 30# in 4 weeks despite good appetite. excessively thirsty, no excessive urination.

No stomach complaints

Exam: Strength now normal throughout. OTR =

Tail now pres anterior to medial epicondyle. Pin ↓ is close palm up to distal wrist ventally. only distal phalange dorsally.

Imp: Good pain + motor response to surgery.

Plan: Continue physical activity / home exercise program.

My continue Naproxen. Check E stomach.

See MD (int. st.) if unimproved wt loss continues.

11/10/07 Office Visit

Strength feeling! Hand doing very well. Typing continues to improve. Repetitive flexion of L elbow → hot stingy pain in hand.

No meds by script

Above 8-10 pills all at once. 3-4x/week. Stopped Naproxen due to blood in stool & on toilet paper for 5-7 days. Stopped after a week of no Naproxen.

Also had heartburn when supine, off of Naproxen resolved. Did not see PMD.

O/w healthy.

Exam: Strength completely normal in hand.

Tail intact to medial epicondyle.

Pin intact in hand including ulnar.

Imp: Excellent recovery in ulnar nerve sensory + motor. Still a neck pain.

Muscle Ache.

GERD/Ulcer a possibility.

Plan - See PMD about Rectal bleeding & Hemorrh. NO more Ache > 4/dy. unless initiated by PMD.

F/U per

CONDELL MEDICAL CENTER
RADIOLOGY DEPARTMENT

PAGE 1

RADIOLOGY NUMBER: 484161
PATIENT NAME: DULBERG, PAUL
ATTENDING DR: GROBMAN, MITCHELL
ORDERING DR : GROBMAN, MITCHELL

EXAM DATE: 5/29/02
TRANSCRIBE DATE: 5/29/02
DICTATION DATE: 5/29/02
ACCT. NUMBER: 1403666
ORDER NUMBER: 432435

EXAM DESCRIPTION: RIBS UNILATERAL

RIB SERIES - IMPRESSION: NO FOCAL RIB LESION OR FRACTURE SEEN.

CLINICAL HISTORY: Status post MVA with left sided chest pain.

FINDINGS: Four views of the left ribs series are obtained. No definite focal lesion or fracture is seen. The lungs are clear. There is no suspicious infiltrate or effusion. There is no pneumothorax.

DK/slr



MAY 30 2002

atient Name: DULBERG, PAUL
Number: 484161
om Number: RADIOLOGY
B: 3/19/70
te: 5/29/02

ysician: GROBMAN, MITCHELL

PHYSICIAN

ELECTRONICALLY SIGNED BY
KIM M.D., DANIEL



NEUROPHYSIOLOGY REPORT

Name: **Paul Dulberg**

Patient ID: 02-0527

Date of Exam: 29 MAY 02

Consulting Doctor: **F. Sek, M. D.**

Motor Nerve Conduction:

Nerve and Stimulation Site	Latency	Amplitude	Segment	Lat. Difference	Distance	Conduction
Median Motor Nerve.L						
Median Wrist	4.0 ms	12.18 mV	Median Wrist-Median Elbow	5.0 ms	280 mm	56 m/s
Median Elbow	9.0 ms	10.65 mV				
Ulnar Motor Nerve.L						
Ulnar Wrist	2.9 ms	11.28 mV	Ulnar Wrist-Ulnar Below Elbow	3.6 ms	230 mm	64 m/s
Ulnar Below Elbow	6.5 ms	9.037 mV	Ulnar Below Elbow-Ulnar Abv Elbow	4.1 ms	110 mm	27 m/s
Ulnar Above Elbow	10.6 ms	8.295 mV	Ulnar Wrist-Ulnar Above Elbow	7.7 ms	340 mm	44 m/s
Ulnar Inching.L						
Site 2 Up	8.3 ms	5.021 mV	Site 2 Up-Site 1 Up	0.2 ms	20 mm	91 m/s
Site 1 Up	8.1 ms	7.723 mV	Site 1 Up-Ulnar Groove	0.5 ms	20 mm	38 m/s
Ulnar Groove	7.6 ms	7.918 mV	Ulnar Groove-Site 1 Down	0.4 ms	20 mm	53 m/s
Site 1 Down	7.2 ms	8.477 mV	Site 1 Down-Site 2 Down	0.2 ms	20 mm	83 m/s
Site 2 Down	6.9 ms	8.261 mV				
Peroneal nerve.L						
Ankle	6.6 ms	3.356 mV	Ankle-Below Fibular Head	5.9 ms	300 mm	51 m/s
Below Fibular Head	12.5 ms	2.594 mV	Below Fibular Head-Knee	2.0 ms	100 mm	50 m/s
Knee	14.5 ms	4.344 mV	Ankle-Knee	7.9 ms	400 mm	51 m/s
Tibial nerve .L						
Ankle	6.6 ms	11.11 mV	Ankle-Pop. fossa	7.8 ms	360 mm	46 m/s
Pop. fossa	14.4 ms	9.258 mV				

F-Waves:

Nerve	Latency
Median Motor Nerve.L	29.2 ms
Ulnar Motor Nerve .L	29.9 ms
Peroneal nerve .L	56.6 ms
Tibial nerve .L	51.3 ms

Sensory Nerve Conduction:

Nerve and Recording Site	Peak Latency	Amplitude	Segment	Onset Latency	Distance	Conduction
Median Sensory Nerve.L						
2nd Digit	3.4 ms	64.01 uV	Median Wrist-2nd Digit	2.7 ms	130 mm	48 m/s
Ulnar Sensory Nerve.L						
5th Digit	3.0 ms	28.96 uV	Ulnar Wrist-5th Digit	2.3 ms	110 mm	48 m/s
Sural nerve.L						
Calf	3.5 ms	13.06 uV	Ankle-Calf	3.1 ms	140 mm	45 m/s

Name: Paul Dulberg .

Needle EMG Examination:

Muscle	Spontaneous and/or Volitional Activity				Maximum Volitional Activity		
	Fibs	+Waves	Fasc's	Poly	Amp	Pattern	Effort
Vastus Lat.L	none	none	none	none	normal	normal	maximal
Tibialis Ant.L	none	none	none	none	normal	normal	maximal
Peroneus Long.L	none	none	none	none	normal	normal	maximal
Gastroc. Med.H.L	none	none	none	none	normal	normal	maximal
Dorsal Interossei - Foot.L	none	none	none	none	normal	normal	maximal
Deltoid.L	none	none	none	none	normal	normal	maximal
Triceps.L	none	none	none	none	normal	normal	maximal
Extn. Dig. Com.L	none	none	none	none	normal	normal	maximal
Biceps Brachii.L	none	none	none	none	normal	normal	maximal
Flex. Car. Rad.L	none	none	none	none	normal	normal	maximal
Flex. Car. Uln.L	none	none	none	none	normal	normal	maximal
1st Dorsal Int.L	none	none	none	none	normal	normal	maximal
Abduc. Dig. Mn.L	none	none	none	none	normal	normal	maximal
Abduc. Pol. Br.L	none	none	none	none	normal	normal	maximal
M-Lumb Paraspin.L	none	none	none	*	normal	normal	maximal
L-Lumb Paraspin.L	none	none	none		normal	normal	maximal

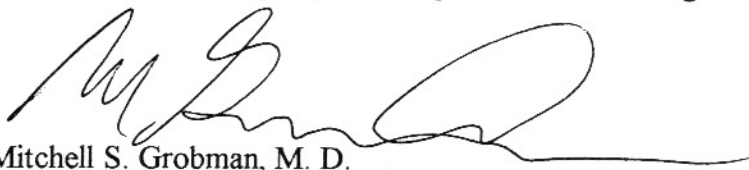
* incomplete relaxation

Impressions: NCV: Motor: Left ulnar response shows marked decrease in conduction velocity across the elbow compared to the forearm segment that further localizes to the segment just proximal to the ulnar groove with short segment stimulation. Left median, peroneal and tibial responses are within normal limits. F-waves: Left median, ulnar, peroneal, and tibial responses are within normal limits. Sensory: Left median, ulnar, and sural response is within normal limits.

EMG: No denervation potentials are seen in tested muscles and muscle regions.

Conclusions:

- 1) Left ulnar neuropathy at the elbow, proximal to the ulnar groove, without denervation in ulnar enervated muscles. No other focal neuropathies are identified.
- 2) No electrophysiologic evidence of cervical or lumbar radiculopathy, or diffuse peripheral neuropathy affecting the left arm and leg.



Mitchell S. Grobman, M. D.

03/02/2002

10400

COMPLETE CERVICAL SPINE

345562

HISTORY:

Neck pain after motor vehicle accident.

Findings: Five views of the cervical spine were obtained. There is a small bony density noted just inferior to the lamina of C5, which is suspicious for an evulsion fracture. There is no dislocation of the cervical vertebrae. The disc spaces and the neural foramina is normal. There is no other bony abnormality of the cervical spine.

IMPRESSION:

A small evulsion fracture adjacent to the lamina of C5. CT scan of the mid and lower cervical spine would be of further help for better evaluation.

cc: Bernhard Binger, M.D.
Daniel P. Campagna, M.D.
S Mouli, M.D.
Copy Rad
Bernhard Binger, M.D.

Electronically Authenticated
S Mouli, M.D. 03/03/2002 14:05

MR # 000-10-93-81 Acct # 0206001700 DB: 03/19/1970
D 03/02/2002 **RADIOLOGY REPORT**
T 03/03/2002 12:58 P jt
470B Daniel P. Campagna, M.D.
Page 1 of 1 **DULBERG, PAUL R**
Rad CopyCopy Rad

S Mouli, M.D.



THE OPEN MRI
AT CORPORATE WOODS

Open MRI at Corporate Woods

555 Corporate Woods Pkwy
Vernon Hills IL 60061-3111
Phone: (847) 883-0308
Fax: (847) 883-0318

MITCHELL GROBMAN, MD

Patient Name: DULBERG, PAUL

MRN Number: 15441

Phone Number: (847) 497-4250

Date of Birth: 03-19-1970/M

Date of Examination: 08-26-2002

EXAM: 72141 C SPINE, A

CLINICAL INFORMATION: Left sided neck pain with left arm numbness and muscle spasms.

TECHNIQUE: Sagittal and axial magnetic resonance images through the cervical spine were obtained. The patient's CT scan of the cervical spine (copied films) from Northern Illinois Medical Center dated 3/2/02 is available for comparison.

FINDINGS:

The C2-C3 intervertebral disc appears relatively preserved.

At the C3-C4 and C4-C5 levels, there is minimal encroachment on the ventral canal by tiny central posterior bulging discs without significant central canal or foraminal compromise demonstrated.

At the C5-C6 and C6-C7 levels, there is shallow broad based encroachment on the ventral canal by degenerative bulging discs and minimal marginal spurring. No significant central canal or foraminal stenosis is demonstrated.

The C7-T1 and visualized upper thoracic discs appear relatively preserved.

Bony alignment is anatomic. The spinal cord is normal in size and contour with no altered signal intensity. There is no Chiari malformation. There is no facet arthropathy.

IMPRESSION:

1. Minor discogenic changes, as described, with shallow bulging discs. No significant stenosis or cord compromise is demonstrated.

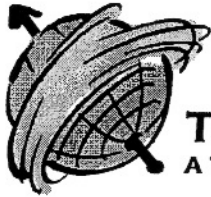
Harold Friedman, M.D.

Dictated: 08/26/2002 HF/dsv

Electronically Signed: Monday, Aug 26 2002

Thank you for referring PAUL DULBERG to our office.

AUG 28 2002



THE OPEN MRI
AT CORPORATE WOODS

Open MRI at Corporate Woods

555 Corporate Woods Pkwy
Vernon Hills IL 60061-3111
Phone: (847) 883-0308
Fax: (847) 883-0318

MITCHELL GROBMAN, MD

Patient Name: **DULBERG, PAUL**

MRN Number: **15441**

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Date of Birth: **03-19-1970/M**

Date of Examination: **08-26-2002**

EXAM: 70543--LT BRACHIAL PLEXUS W/WO CONTRAST

CLINICAL INFORMATION: MVA 3/1/2002. Hx C4,5 Fx; muscle spasms, numbness lt fingers

TECHNIQUE: Sagittal and coronal magnetic resonance images to the region of the brachial plexus were obtained. Contrast infusion was added.

FINDINGS:

There is no mass lesion present in the supraclavicular space. The lung apex is unremarkable. The neurovascular complex is normal in appearance from the side of the neck through the level of the axilla. There is no adenopathy appreciated. Following contrast administration, no focal areas of abnormal enhancement are demonstrated.

IMPRESSION:

Unremarkable MR examination of the brachial plexus.

Harold Friedman, M.D.

Dictated: 08/26/2002 HF/tn

Electronically Signed: Monday, Aug 26 2002

Thank you for referring PAUL DULBERG to our office.

AUG 28 2002



ASSOCIATED NEUROLOGY, S.C.

MITCHELL S. GROBMAN, M.D.
KAREN F. LEVIN, M.D.
MICHAEL I. LEVIN, M.D.

NEUROPHYSIOLOGY REPORT

Name: **Paul Dulberg**

Patient ID: 02-1221

Date of Exam: 23 DEC 02

Consulting Doctor: **F. Sek, M. D.**

Patient History: Persistent left hand symptoms. Previous study 5/29/02 showed ulnar neuropathy.

Motor Nerve Conduction:

Nerve and Stimulation Site	Latency	Amplitude	Segment	Lat. Difference	Distance	Conduction
Median Motor Nerve.L						
Median Wrist	3.6 ms	10.20 mV	Median Wrist-Median Elbow	4.7 ms	270 mm	57 m/s
Median Elbow	8.3 ms	9.649 mV				
Ulnar Motor Nerve.L						
Ulnar Wrist	2.6 ms	10.39 mV	Ulnar Wrist-Ulnar Below Elbow	3.4 ms	230 mm	68 m/s
Ulnar Below Elbow	6.0 ms	9.928 mV	Ulnar Below Elbow-Ulnar Abv Elbow	2.1 ms	110 mm	52 m/s
Ulnar Above Elbow	8.1 ms	9.703 mV	Ulnar Wrist-Ulnar Above Elbow	5.5 ms	340 mm	62 m/s
Ulnar Inching.L						
Site 2 Up	7.7 ms	9.600 mV	Site 2 Up-Site 1 Up	0.3 ms	20 mm	67 m/s
Site 1 Up	7.4 ms	9.974 mV	Site 1 Up-Ulnar Groove	0.5 ms	20 mm	40 m/s
Ulnar Groove	6.9 ms	10.08 mV	Ulnar Groove-Site 1 Down	0.7 ms	20 mm	29 m/s
Site 1 Down	6.2 ms	9.956 mV	Site 1 Down-Site 2 Down	0.2 ms	20 mm	100 m/s
Site 2 Down	6.0 ms	4.365 mV				

Sensory Nerve Conduction:

Nerve and Recording Site	Peak Latency	Amplitude	Segment	Onset Latency	Distance	Conduction
Median Sensory Nerve.L						
2nd Digit	2.9 ms	41.77 uV	Median Wrist-2nd Digit	2.4 ms	130 mm	54 m/s
Ulnar Sensory Nerve.L						
5th Digit	2.4 ms	19.17 uV	Ulnar Wrist-5th Digit	1.9 ms	110 mm	59 m/s

Needle EMG Examination:

Muscle	Spontaneous and/or Volitional Activity				Maximum Volitional Activity		
	Fibs	+Waves	Fasc's	Poly	Amp	Pattern	Effort
Deltoid.L	none	none	none	none	normal	normal	maximal
Triceps.L	none	none	none	none	normal	normal	maximal
Extn. Dig. Com.L	none	none	none	none	normal	normal	maximal
Biceps Brachii.L	none	none	none	none	normal	normal	maximal
Flex. Car. Rad.L	none	none	none	none	normal	normal	maximal
Flex. Car. Uln.L	none	none	none	none	normal	normal	maximal
1st Dorsal Int.L	none	none	none	none	normal	normal	maximal
Abduc. Dig. Mn.L	none	none	none	none	normal	normal	maximal
Abduc. Pol. Br.L	none	none	none	none	normal	normal	maximal

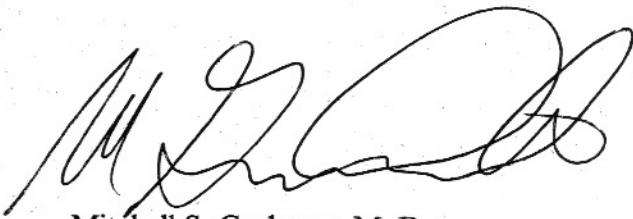
Name: Paul Dulberg

Impressions: NCV: Motor: Left ulnar response has normal amplitude, distal latency, and overall conduction velocity, but relative slowing across the elbow. Additional short segment stimulation study of the left ulnar nerve confirms localized slowing in the segment immediately distal to the ulnar groove. Left median responses are within normal limits. Sensory: Left median and ulnar responses are within normal limits.

EMG: No denervation potentials are seen in tested muscles of the left arm.

Conclusions:

- 1) Left ulnar neuropathy at the elbow localizing to the 20 mm segment just distal to the ulnar groove, without denervation in ulnar enervated muscles. Compared to the previous study of 5/29/02, there is improved conduction across the elbow.
- 2) No electrophysiologic evidence of cervical radiculopathy or diffuse peripheral neuropathy affecting the left arm.

A handwritten signature in black ink, appearing to read 'M. Grobman', with a large, stylized loop at the end.

Mitchell S. Grobman, M. D.



NEUROPHYSIOLOGY REPORT

Name: **Paul Dulberg**

Patient ID: 02-0527

Date of Exam: 29 MAY 02

Consulting Doctor: **F. Sek, M. D.**

Motor Nerve Conduction:

Nerve and Stimulation Site	Latency	Amplitude	Segment	Lat. Difference	Distance	Conduction
Median Motor Nerve.L						
Median Wrist	4.0 ms	12.18 mV	Median Wrist-Median Elbow	5.0 ms	280 mm	56 m/s
Median Elbow	9.0 ms	10.65 mV				
Ulnar Motor Nerve.L						
Ulnar Wrist	2.9 ms	11.28 mV	Ulnar Wrist-Ulnar Below Elbow	3.6 ms	230 mm	64 m/s
Ulnar Below Elbow	6.5 ms	9.037 mV	Ulnar Below Elbow-Ulnar Abv Elbow	4.1 ms	110 mm	27 m/s
Ulnar Above Elbow	10.6 ms	8.295 mV	Ulnar Wrist-Ulnar Above Elbow	7.7 ms	340 mm	44 m/s
Ulnar Inching.L						
Site 2 Up	8.3 ms	5.021 mV	Site 2 Up-Site 1 Up	0.2 ms	20 mm	91 m/s
Site 1 Up	8.1 ms	7.723 mV	Site 1 Up-Ulnar Groove	0.5 ms	20 mm	38 m/s
Ulnar Groove	7.6 ms	7.918 mV	Ulnar Groove-Site 1 Down	0.4 ms	20 mm	53 m/s
Site 1 Down	7.2 ms	8.477 mV	Site 1 Down-Site 2 Down	0.2 ms	20 mm	83 m/s
Site 2 Down	6.9 ms	8.261 mV				
Peroneal nerve.L						
Ankle	6.6 ms	3.356 mV	Ankle-Below Fibular Head	5.9 ms	300 mm	51 m/s
Below Fibular Head	12.5 ms	2.594 mV	Below Fibular Head-Knee	2.0 ms	100 mm	50 m/s
Knee	14.5 ms	4.344 mV	Ankle-Knee	7.9 ms	400 mm	51 m/s
Tibial nerve .L						
Ankle	6.6 ms	11.11 mV	Ankle-Pop. fossa	7.8 ms	360 mm	46 m/s
Pop. fossa	14.4 ms	9.258 mV				

F-Waves:

Nerve	Latency
Median Motor Nerve.L	29.2 ms
Ulnar Motor Nerve .L	29.9 ms
Peroneal nerve .L	56.6 ms
Tibial nerve .L	51.3 ms

Sensory Nerve Conduction:

Nerve and Recording Site	Peak Latency	Amplitude	Segment	Onset Latency	Distance	Conduction
Median Sensory Nerve.L						
2nd Digit	3.4 ms	64.01 uV	Median Wrist-2nd Digit	2.7 ms	130 mm	48 m/s
Ulnar Sensory Nerve.L						
5th Digit	3.0 ms	28.96 uV	Ulnar Wrist-5th Digit	2.3 ms	110 mm	48 m/s
Sural nerve.L						
Calf	3.5 ms	13.06 uV	Ankle-Calf	3.1 ms	140 mm	45 m/s

Name: Paul Dulberg .

Needle EMG Examination:

Muscle	Spontaneous and/or Volitional Activity				Maximum Volitional Activity		
	Fibs	+Waves	Fasc's	Poly	Amp	Pattern	Effort
Vastus Lat.L	none	none	none	none	normal	normal	maximal
Tibialis Ant.L	none	none	none	none	normal	normal	maximal
Peroneus Long.L	none	none	none	none	normal	normal	maximal
Gastroc. Med H.L	none	none	none	none	normal	normal	maximal
Dorsal Interossei - Foot.L	none	none	none	none	normal	normal	maximal
Deltoid.L	none	none	none	none	normal	normal	maximal
Triceps.L	none	none	none	none	normal	normal	maximal
Extn. Dig. Com.L	none	none	none	none	normal	normal	maximal
Biceps Brachii.L	none	none	none	none	normal	normal	maximal
Flex. Car. Rad.L	none	none	none	none	normal	normal	maximal
Flex. Car. Uln.L	none	none	none	none	normal	normal	maximal
1st Dorsal Int.L	none	none	none	none	normal	normal	maximal
Abduc. Dig. Mn.L	none	none	none	none	normal	normal	maximal
Abduc. Pol. Br.L	none	none	none	none	normal	normal	maximal
M-Lumb Paraspin.L	none	none	none	*			
L-Lumb Paraspin.L	none	none	none				

* incomplete relaxation

Impressions: NCV: Motor: Left ulnar response shows marked decrease in conduction velocity across the elbow compared to the forearm segment that further localizes to the segment just proximal to the ulnar groove with short segment stimulation. Left median, peroneal and tibial responses are within normal limits. F-waves: Left median, ulnar, peroneal, and tibial responses are within normal limits. Sensory: Left median, ulnar, and sural response is within normal limits.

EMG: No denervation potentials are seen in tested muscles and muscle regions.

Conclusions:

- 1) Left ulnar neuropathy at the elbow, proximal to the ulnar groove, without denervation in ulnar enervated muscles. No other focal neuropathies are identified.
- 2) No electrophysiologic evidence of cervical or lumbar radiculopathy, or diffuse peripheral neuropathy affecting the left arm and leg.

Mitchell S. Grobman, M. D.