

Fellow of the Royal College of
Surgeons of Canada

Fellow, American Academy of
Orthopaedic Surgeons

Instructor in Orthopaedics
Boston University School
of Medicine

Mordechai Kamel, JD, MD

Diplomate, American Board of
Orthopaedic Surgeons

Diplomate and Senior
Disability Analyst, American
Board of Disability Analysts

October 29, 2010

[REDACTED]

RE: Commonwealth v [REDACTED]
Docket Number: [REDACTED]

Dear Attorney [REDACTED]:

At your request, I reviewed the available medical records regarding the above named and I performed a physical examination on him at the [REDACTED] on [REDACTED]. This report summarizes my findings and conclusions.

Mr. [REDACTED] was involved in a motorcycle accident on [REDACTED], in which he sustained multiple injuries including skull fractures and a brachial plexus injury of the right upper extremity. He was admitted to [REDACTED], treated for his acute injuries and transferred to [REDACTED] on [REDACTED]. There he underwent rehabilitation until discharge on [REDACTED]. He first consulted Dr. [REDACTED] at [REDACTED] on [REDACTED]. He was noted to have no active elbow flexion and biceps strength of 0/5¹ and no motion at the shoulder level (deltoid strength for shoulder abduction 0/5). He was felt to have a significant upper brachial plexus lesion. The clinical exam was confirmed by EMG study. Surgery was performed at [REDACTED] on [REDACTED]. Intraoperatively it was confirmed that there was no innervation² of biceps branch of musculocutaneous nerve³. Scarring was

¹ Muscle strength is rated on a scale of 0 to 5/5 as follows: 0/5 - no contraction; 1/5 - muscle flicker, but no movement of target muscle; 2/5 - movement possible, but not against gravity; 3/5: movement possible against gravity, but not against resistance by the examiner; 4/5: movement possible against some resistance by the examiner (sometimes this category is subdivided further into 4⁻/5, 4/5, and 4⁺/5); 5/5: normal strength.

² During surgery, the elements of the brachial plexus were tested with an electrical nerve stimulator. Stimulating a nerve results in contraction of it's muscles when the nerve is intact. The biceps branch of the musculocutaneous nerve demonstrated no contraction of the biceps muscle when stimulated.

RE: Commonwealth v [REDACTED]

Docket #: [REDACTED]

Page 2 of 5

released from around upper brachial plexus and a branch of the ulnar nerve transferred to the biceps branch of musculocutaneous nerve. Following surgery he was examined on several occasions up to [REDACTED] and at no time did he demonstrate more than 45° right shoulder abduction⁴ or right biceps strength greater than 3/5.

During my interview with him, Mr. [REDACTED] stated that he had been right handed prior to the accident, but at no time during the interview or examination did he make any effort to voluntarily use the right upper extremity except when specifically requested by this examiner. He stated that both his right shoulder and elbow were better than they had been prior to the surgery, but he stated that he was unable to initiate elbow flexion or carry anything in his right hand with elbow flexed. He stated further that his right hand had been left weak by the surgery but that it had been getting stronger in the past two years.

On physical examination I noted that he had a full free range of motion of the cervical spine. With regard to the upper extremities findings are as follows:
Mr. [REDACTED] used only his left upper extremity to remove his shirts and did not use his right upper extremity even to assist. There was marked wasting of the supraspinatous⁵ and infraspinatous⁶ fossae on the right and there was marked wasting of the biceps bulk on the right.

³ See attached diagram of brachial plexus

⁴ Shoulder abduction is the elevation of the arm away from the body to the side.

⁵ The supraspinatous fossa is situated on the scapula (shoulder blade) above the bony spine which can be felt in a relatively horizontal line across the bone.

⁶ The infraspinatous fossa is situated on the scapula (shoulder blade) below the bony spine which can be felt in a relatively horizontal line across the bone.

Joint or Function	Right		Left	
	Range of Motion (degrees)	Strength (0 - 5) ⁷	Range of Motion (degrees)	Strength (0 - 5)
Shoulder:				
Flexion ⁸	0	0/5	180	5/5
Abduction ⁹	30	2/5	180	5/5
External Rotation ¹⁰	35	2/5	95	5/5
Internal Rotation ¹¹	25	2/5	90	5/5
Elbow:				
Flexion from 0°	0	1/5	130	5/5
Flexion from 95°	95 – 120 ¹²	2/5		
Extension	90	5/5	90	5/5
Forearm				
Pronation ¹³	90	3/5	95	5/5
Supination ¹⁴	0	2/5	90	5/5
Wrist:				
Extension	80	5/5	80	5/5
Flexion	80	4-/5	90	5/5

⁷ Muscle strength is rated on a scale of 0 to 5/5 as follows: 0/5 - no contraction; 1/5 - muscle flicker, but no movement of target muscle; 2/5 - movement possible, but not against gravity; 3/5: movement possible against gravity, but not against resistance by the examiner; 4/5: movement possible against some resistance by the examiner (sometimes this category is subdivided further into 4-/5, 4/5, and 4+/5); 5/5: normal strength

⁸ Shoulder flexion is the elevation of the arm away from the body toward the front.

⁹ Shoulder abduction is the elevation of the arm away from the body toward the side.

¹⁰ External rotation is the rotation of the shoulder away from the body. With the elbow flexed and the forearm in front of the body, external rotation will move the hand away from the midline.

¹¹ Internal rotation is the rotation of the shoulder towards the body. With the elbow flexed and the forearm in front of the body, internal rotation will move the hand towards from the midline.

¹² Inability to initiate elbow flexion persists until elbow is passively flexed to 95°.

¹³ When testing pronation or supination of the forearm, one begins with the elbow flexed and the hand perpendicular to the floor with the thumb up.

¹⁴ Supination is the rotation of the forearm such that the hand moves so that the palm faces the ceiling.

RE: Commonwealth v [REDACTED]

Docket #: [REDACTED]
[REDACTED]

Page 4 of 5

The examination as performed would easily have detected malingering or lack of cooperation and it is my impression that Mr. [REDACTED] made best efforts to cooperate fully with the examination.

Based solely on my physical examination and my review of the medical records, I am able to conclude with a reasonable degree of medical certainty that [REDACTED] is physically incapable holding a weapon in his right hand and flexing either his elbow or his shoulder sufficiently to point it anywhere besides the ground. Likewise, Mr. [REDACTED] was physically incapable of voluntarily putting his right hand behind his back and would have required passive manipulation of the upper extremity in order to apply handcuffs.

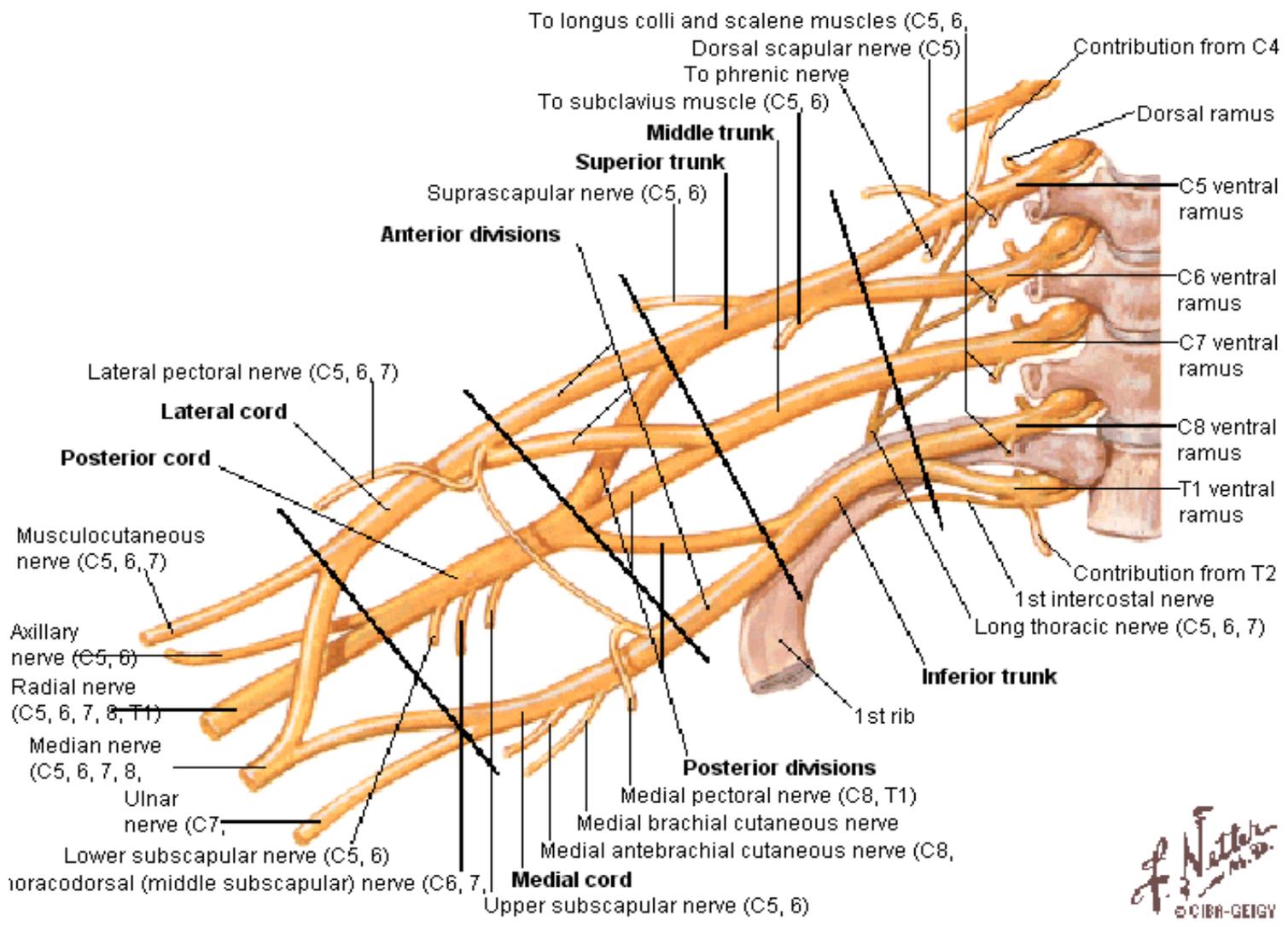
Hoping that this information meets your needs, do not hesitate to contact me if further clarification or information is required.

Sincerely,

MK/msw
Encl.

Snapped with HyperSnap-DX
<http://www.hyperionics.com>

Brachial Plexus Schema



F. J. Netter M.D.
© CIBA-GEIGY