EmG's

State of Ohio,)
) SS:
County of Cuyahoga.)

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IN THE COURT OF COMMON PLEAS

- - -

Doc 398

Jorgen Nielsen-Mayer, et al.,)
)
Plaintiffs,)
) Case No. 165158
vs.)
)
The Center for Plastic Surgery,)
Inc., et al.,)
)
Defendants.)

- - -

DEPOSITION OF MELVIN SHAFRON, M.D.

FRIDAY, MAY 10, 1991

- - -

The deposition of Melvin Shafron, M.D., a witness herein, called by the Defendants for examination under the Ohio Rules of Civil Procedure, taken before me, Ivy J. Gantverg, Registered Professional Reporter and Notary Public in and for the State of Ohio, by agreement of counsel and without further notice or other legal formalities, at 26900 Cedar Road, Beachwood, Ohio, commencing at 6:00 p.m., on the day and date above set forth.

APPZARANCES:

On behalf of the Plaintiffs:

Fred Wendel, III, Esq.
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The Atrium Office Plaza - Suite 850
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Cleveland, Ohio 44114

On behalf of the Defendants:

Susan M. Reinker, Esq.
William D. O'Malley, Esq.
Jacobson, Maynard, Tuschman & Kalur
1001 Lakeside Avenue - Suite 1600
Cleveland, Ohio 44114

Also Present:

Douglas Clark, Videographer

(Thereupon, Defendants' Exhibits 1 and 2 (Shafron) were marked for identification.)

MELVIN SHAFRON, M.D.

a witness herein, called by the defendants for examination under the Rules, having been first duly sworn, as hereinafter certified, was deposed and said as follows:

DIRECT EXAMINATION

BY MS. REINKER:

Q. Doctor, would you please identify yourself?

A. My name is Melvin Shafron. I am a neurosurgeon here in Cleveland.

Q. And would you introduce yourself to the jury, and tell them a little bit about yourself?

A. I am a native of Cleveland, and practice in Cleveland, with my office being in Beachwood, Ohio, where we are at today.

I went to college at what was then called Adelbert College of Western Reserve University, I received my undergraduate degree in 1952. From 1952 to 1956 I went to Harvard Medical School and received my degree from there, after which I served one year as an intern at the University of Michigan Hospitals in Ann Arbor, Michigan.

My training was interrupted for two years,

during which time I was in the Navy, serving as a medical officer aboard one of the line ships.

Q. What two years?

A. From 1957 to 1959.

After completing my military service, I returned to Cleveland. I had one year of training in general surgery, which was a prerequisite for training in neurosurgery, and then from 1960 to 1964, I trained in the specialty of neurological surgery at the University Hospitals of Cleveland, and I have been in practice since that time here in Cleveland.

Q. Do you hold any teaching positions?

A. Yes, I do.

Q. What are those?

A. I am an associate clinical professor of neurosurgery at Case Western Reserve Medical School.

Q. How about belonging to any societies or learned organizations, do you belong --

A. Yes.

Q. -- to any such groups?

A. Yes.

Q. And what groups would those be?

A. I am a member of the American College of Surgeons, the American Association of Neurological

Surgeons, the Neurosurgical Society of America, the Ohio State Neurosurgical Association, a small group in northeast Ohio called the Northeast Ohio Neurosurgical Society.

I am also a member of the American Medical Association, the Ohio State Medical Association and the Cuyahoga County Medical Society or the Academy of Medicine of Cleveland.

Q. Have you ever held any offices in any of the organizations to which you belong?

A. Yes, I have.

Q. And what would that be?

A. I was vice-president of the Academy of Medicine of Cleveland, I was on the Board of Directors for six years, I served on the executive committee for two years, I was president of the Neurosurgical Society of America in 1989.

Q. What kind of a group is that?

A. That is a small specialty society whose membership is by invitation only.

Of course, I am a specialist certified by the American Board of Neurosurgery, and I have been a guest examiner of the American Board of Neurosurgery.

Q. What does that mean, a guest examiner?

A. That means that -- this is a process by which physicians attempt to become certified as specialists in neurosurgery, and I served as an examiner in testing young neurosurgeons to see if they are qualified to be certified as specialists.

Q. So you are one of the people who evaluates young physicians who want to become Board certified neurosurgeons?

A. That is correct.

Q. iiave you published any articles?

A. Yes.

Q. Doctor, you have been talking about neurosurgeons and neurosurgery. What is it that neurosurgeons do?

A. Neurosurgery is that specialty or branch of medicine that deals with the diagnosis and the treatment, whether it be surgical or non-surgical, of a variety of conditions that can affect the brain, the skull, the coverings of the brain, the bony spine, the spinal cord, which is one of the -- which is the main nerve trunk of the body, and the various nerves which come from the spinal cord.

Q. So does all of your practice deal with nerves?

A. Yes.

Q. And how many years have you been doing that?
A. I have been in practice for twenty-seven years.
Q. How much of your time do you spend in actually taking care of patients clinically, or teaching, or writing, or research?
A. A hundred percent of my time.
Q. Are you licensed to practice medicine, by the way?
A. Yes.
Q. Now, Doctor, in your practice as a neurosurgeon, have you become familiar with the long thoracic nerve?
A. Yes.
Q. Now, we have a poster here which might help you, but I would like you to tell us a little bit about the anatomy of the long thoracic nerve.
Can we get that all right on the camera?
A. Yes.
Go ahead.
Q. All set? 1 guess we are all set, okay.
A. ,What we are looking at is sort of half of a body, the left half, that left half is facing us. And what we are seeing here, just a few things to orient yourself, this is the collarbone right here,

this is the arm, this is the spine here, and these are the ribs (indicating).

And right down here, this is a pictorial description of the muscle that we call the serratus anterior, which has its beginning on the ribs, running from way up in the armpit all the way down here (indicating).

Q. And where is the serratus anterior?

A. This represents the serratus anterior (indicating).

Q. Okay.

A. And this nerve that we call the long thoracic nerve has its origin from nerves in the neck, and twigs or branches of motor nerves only, from the fifth nerve, the fifth nerve root of the neck, the sixth nerve root of the neck and the seventh nerve root of the neck join together deep inside the neck to form the long thoracic nerve, which then passes very deeply in the neck behind the collarbone, and then over the first rib, and then down the side of our body to supply the serratus anterior nerve. In other words, this is the nerve which allows the serratus muscle to perform its activities.

Okay, you have given us a lot of information there, but to start with, you said that this nerve

starts from branches up near the spinal cord?

A. Right in the -- right, that is correct.

Q. Is that C-5, the cervical vertebrae 5, 6 and 7?

A. Yes, correct.

Q. Now, we are getting a little ahead of our story here, but from your review of the records, are you aware that Mr. Nielsen-Mayer had had surgery in that area in the past?

A. Yes, he did.

Q. Where was his surgery, do you recall?

A. His surgery was done in, I think February of 1982, at University Hospitals, and it was done between the sixth and seventh bones of the neck, between the sixth and seventh vertebrae, the disk was removed.

Q. Now, just so we all understand correctly, the long thoracic nerve starts in the back, and then --

A. Well, deep inside the neck, that is correct.

Q. And then it comes around under the collarbone down the front of the body?

A. Well, down the side, it comes down along the side, deep in the armpit.

Q. What is the function of a long thoracic nerve?

A. The function of the long thoracic nerve has only one purpose, and that is to supply or to provide the motor innervation of one single muscle. And it is sort of unique, it is a purely motor nerve, it serves no sensory function whatsoever, and it allows the serratus muscle to perform its activities.

Q. So when you say it has no sensory function, what does that mean?

A. That means that any problem involving the long thoracic nerve would not lead to pain, or numbness or tingling in any part of the body.

Q. Does it serve any other muscle except the long -- the serratus anterior?

A. No, it does not.

Q. And the serratus anterior muscle, you showed us on the diagram its beginnings there, correct; is that what you said?

A. Yes, yes.

Q. Where is the long serratus muscle -- I am sorry -- the serratus anterior muscle?

A. It is on the chest wall, this area right in here (indicating).

Q. And what is the function of that muscle?

A. After it leaves the chest wall, it goes

underneath the bone called the scapula, and the fibers of the muscle insert on the inside margin of the scapula, which is the wing bone right back in here (indicating).

Q. What does that muscle do, what is its purpose?

A. It serves two basic purposes probably. One is to fix the scapula to the chest wall during certain movements, and the other is to facilitate a forward movement of the arm like this (indicating).

Q. Does it actually cause the forward movement of the arm?

A. No, no, it facilitates it.

Q. What do you mean by --

A. It makes it a more smooth kind of movement. In other words, of in itself, it does not move the arm at all, it has no attachment to the arm at all, so it can't interfere with arm function in that manner.

Doctor, have you ever treated a patient with an injury to the long thoracic nerve?

Yes.

Based on your training and experience, and everything you have read and learned about the long thoracic nerve in your years as a neurosurgeon, can

you tell us what are the potential causes of an injury to the long thoracic nerve?

A. Well, there is a very, very broad category of injuries that are called stretching injuries, and as described in our literature, and as I understand it, as we understand it, stretching injuries occur in a number of ways.

One, and the most common, is downward traction (indicating), so that there are a number of things that have been described as causing a stretching injury, such as carrying a backpack or a napsack over the shoulders; this kind of position (indicating); unusual movements or sudden movements that increase the angle between the neck and the shoulder; it has been described in patients who reach for trapezes: it has been described, patients who have been lying face down on their hands (indicating); it has been described with patients who are leaning on their hands face down, like reading a book, in this position, as well (indicating).

Q. You mentioned stretching injuries. What other types -- what other ways could the long thoracic nerve be injured?

A. The long thoracic nerve could be injured

directly, a hard blow to the armpit or axilla could conceivably injure it, stab wounds, a gunshot wound that would pass in this area (indicating), and of course, the surgeon's knife.

This was a -- not: a common problem, but this was a recognized complication of doing a certain type of operative procedure, which is not done very commonly today, that is an operation that is called a radical mastectomy, that is a radical operation to treat breast cancer, in which not only was the breast removed, but all the tissues and soft tissues of the armpit are removed at the time.

Q. It that kind of a surgery, the nerve could be cut directly, and in what area are you talking about?

A. It would be the area of the armpit, right in this area right in here (indicating).

Q. Now, Dr. Henderson has already testified that Dr. Artz was nowhere near the nerve as far as cutting it goes, during this procedure.

A. Oh, absolutely, he is certainly correct.

Q. Now, are there any medical problems that can cause an injury to the long thoracic nerve? And when I say, medical, I mean non-surgical types of things?

A. Yes, there are a number of things that are described, and certainly nothing that I have had personal experience with, as far as I know. But it has been described as occurring after brachial plexus neuritis, which is not an uncommon disorder.

Q. Is that bursitis, is what you are talking about?

A. No, neuritis, true neuritis. It has been described -- it is a condition called neurogenic amyotrophy, which I know nothing about, and I can't tell you a thing about.

It has been described in certain cases of serum sickness, which is a type of allergic illness, and it has also been described as occurring after receiving injections in one body part or another.

Q. How about activities of daily living, can things like that ever cause an injury to the nerve?

A. It has been described.

Q. You mentioned before, things like carrying a backpack?

A. Carrying a heavy suitcase, it has been described in people doing archery (indicating), it has been described in people performing a forceful movement of the arm.

Q. How about sleeping?

A. It has also been described of somebody sleeping in a funny position, yes.

Q. Is it always possible to know the source of an injury, the cause of an injury to the long thoracic nerve?

A. No.

Q. Now, Doctor, at my request, have you reviewed some certain materials in this case that pertain to Mr. Nielsen-Mayer's care and treatment?

A. Yes.

Q. Could you tell us, please, what you have looked at?

A. I reviewed a number of records from the University Hospitals relating to his three admissions; I reviewed records from Dr. Schnall; records from Dr. Cole; I just looked at, today, a record from Hillcrest Hospital; I have looked at outpatient physical therapy records relating to this gentleman with respect to the problems he was having after his surgical procedure in 1982; I have looked at a number of depositions.

Q. How about Dr. Artz' records?

A. Oh, yes, yes.

Q. Have you happened to see anything that Mr. Nielsen-Mayer talked about?

A. Yes.
Q. Did you see his deposition?
A. Yes, I did look at his deposition.
Q. Did you also -- by the way, have you had a chance to do any reading about this condition?
A. Lots of reading, yes.
Q. Doctor, have you also had an opportunity to examine Mr. Nielsen-Mayer?
A. Yes.
Q. And when did you see him? Again, feel free to look at your notes.
A. Excuse me, should I just move this?
Q. Yes, get this out of the way here.
A. I saw him in my office on the 12th of October of 1990.
Q. And what sort of an examination did you perform?
A. I treated him no differently from any other patient that I would see. I took a history from the patient.
Q. How about your examination, what did you actually look at or have him do?
A. When I examined him, I had him disrobe, I looked at him, tested the function of his upper extremities, tested sensation in his upper and lower

extremities, tested his reflexes everywhere, made some observations about them.

Q. Did you make a record of your findings on your examination?

A. Oh, yes.

Q. In addition to an examination, did Mr. Nielsen-Mayer give you any complaints, did he report anything to you?

A. Sure. He told me -- do you want me to read what he said?

Q. Yes, why don't you tell us what he complained to you about on that day?

A. When I saw him, his first problem was that he said that he couldn't lift his arm in front of him, he complained of pain behind his right arm, actually behind the shoulder blade, which he said was present most of the time, and interestingly, he said that exercise helped relieve this pain. I asked him specifically if he had any pain in his right arm, and he said no. He said occasionally he would have an aching over the shoulder itself.

He related to me certain events which occurred when he had this operative procedure on the --

Q. Before we get into that, at the moment I

would like you to just look at what complaints he made. How about his elbow, or anywhere else on his arm?

A. Oh, yes, we are going to get to that.

Q. Okay.

A. He told me that during the time that he had his surgical procedure in July of 1988, I believe, he was complaining of numbness and tingling of the entire right arm after the surgery, which occurred immediately afterwards. He said that the entire right arm was numb. This included all the fingers and his thumb. He said that the same was true for the left, but this was not as marked.

He could not recall any arm pain, he said that -- that is when the operative procedure was completed, when he left the operating table.

He said that the numbness of his left arm went away within a relatively brief period of time, and that the numbness of his right arm may have lasted, at the most, twenty-four hours. He said that he had pain in the right arm on his way home.

The pain that he described was located over the right scapula and over the right lateral part of his arm up here (indicating). He also complained of pain on the medial arm, that is the inside of the

arm, and the elbow area, and he said he still had this.

He told me that the right shoulder felt stiff on the way home, and he said that immediately he could not raise his arm.

Q. Doctor, after your examination of Mr. Nielsen-Mayer, did you make a diagnosis?

A. After I examined him? Yes.

Q. And what was your diagnosis?

A. I felt that he had a serratus palsy on the right side.

Q. And what causes a serratus palsy?

A. We have mentioned a number of things, but a problem with the long thoracic nerve.

Q. So you diagnosed a problem with the long thoracic nerve?

A. Yes.

Q. Were the patient's complaints and your findings that day, were they all consistent with a long thoracic nerve injury?

A. Some of them were, and some of them weren't.

Q. And what was not?

A. Well, when I examined the gentleman, I could note that he had winging of the scapula, that is prominence of the scapular bone.

Q. And that is the bone in the back that you mentioned to us?

A. That is correct.

Q. And you saw that?

A. Oh, yes, absolutely.

Q. Okay.

A. He said that he could not or had difficulty elevating his right arm in this fashion (indicating), and that the only way he could do it was if he leaned up against a wall. And he leaned up against the wall and put his arm up (indicating).

Q. What was the significance of that to you?

A. Well, it is the only patient I have ever seen with this who had to raise his arm in that fashion. Every patient that I have personally seen, and every illustration that I have ever seen with a patient who had a serratus palsy from a long thoracic nerve injury could raise their arm in this fashion {indicating).

He had no difficulty with any other arm movements, including abduction, that is this fashion (indicating), external or internal rotation, or any other movements of any part of the arm.

I then tested his sensation by touching various body parts with a pin, I tested sensation by

moving various body parts in space with his eyes closed, and then I struck various body parts with a rubber hammer to test his reflexes, and I noticed that there were no abnormalities in any of these.

Q. Doctor, in the records that you have reviewed, have you found any evidence that this patient had a problem with his scapula before July 14th of 1987, the day of Dr. Artz' surgery?

A. Yes, I have.

Q. And what did you find?

A. When I finally went through the records from University Hospitals, specifically the physical therapist, the patient went to a physical therapist after his operative procedure on the neck for a long period of time.

Q. When was that?

A. The surgery was done in February of 1982, and he had a prolonged period of a number of complaints with reference to his neck and his right upper extremity, and --

Q. What surgery was that again?

A. That was the operation where he had a disk removed from the neck.

Q. Okay.

Cervical disk surgery?

A. Yes.
Q. And do you recall what day that surgery was done, or what month, at least?
A. Well, it was done in February of 1982.
Q. Okay.
A. 2-24-82.
Q. And then what happened after that surgery?
A. Well, he had complaints with reference to pain and difficulty with the right upper extremity and neck for a prolonged period of time, and the physicians who were caring for him referred him to a physical therapist at the University Hospitals.
Q. Now, do you, yourself, perform cervical disk surgery?
A. All the time, yes.
Q. And how long of a period of time was Mr. Nielsen-Mayer getting physical therapy after that surgery in 1982?
A. Well, it went on for at least five months after the surgery.
Q. Is that normal?
A. No.
Q. Now, have you had a chance to look at the physical therapy records?
A. Yes.

Q. And did you find anything in those records as far as problems with the arm or the scapula?

A. Well, he went there because of a problem with his arm. There is a note dated 7-26-82 by Mr. --

Q. What is the date again?

A. 7-26-82, by Mr. Jacobs.

Q. Who is Mr. Jacobs?

A. I presume he is a physical therapist.

Q. What does that note say?

A. It says --

MR. WENDEL: Objection.

Q. Is there anything of significance in that note to you?

A. Yes.

Q. And what is that?

A. Well, the patient was having a great deal of difficulty with pain, and the therapist recommended that with pain resolution the patient ought to have exercises for "strengthening of all scapula stabilizers."

Q. What does that suggest to you?

A. Well, that there was a problem --

MR. WENDEL: Objection.

A. -- with the scapula at that time.

Q. Thank you.

By the way, Doctor, have you ever seen a patient who developed a long thoracic nerve problem following cervical disk surgery?

A. Yes.

Q. And how did you happen to see that patient?

A. It happened to one of my patients.

Q. Did you ever determine the cause for it in that patient?

A. No.

Q. Now, Doctor, going ahead with Mr. Nielsen-Mayer's other treatment, there has been some testimony in this case about being able to determine whether there is an injury or the location of an injury to the long thoracic nerve only through autopsy.

A. No, there are other ways to do that.

Q. There are other ways to do that?

A. Oh, sure.

Q. And what are the ways to do that?

A. Well, besides the physical examination, one can do nerve studies, one can perform an EMG.

Q. And what is an EMG?

A. An EMG is a test that is done usually by a specialist in neurology, but occasionally a specialist in physical medicine, by physicians who

are trained to interpret squiggly tracings that appear on something that looks like a TV screen, but what is done is, is that fine, tiny needle electrodes are placed -- actually placed in certain muscles, and that a skilled physician can interpret the squiggles, or electrical activity that is recorded from those muscles, and on the basis of the nature of those changes can determine, one, is there an abnormality or isn't there, and if there is an abnormality, what the nature of that abnormality is.

Q. So by looking at the function of the response of the muscle, the physician can tell if there is a problem with the nerve; is that a fair statement?

A. That is correct, yes, it is a very fair statement, it is a correct statement.

Q. Did Mr. Nielsen-Mayer have that test done?

A. Yes.

Q. And when was that done?

A. That was done I think about five or six months after the operative procedure, and --

Q. If you could find that report.

A. Yes.

Q. I think it is in Dr. Cole's chart.

A. Yes, it is.

That was done by -- that was done on the 25th

of February of 1988 by Dr. Horwitz, who is a neurologist at University Hospitals.

Q. What did that test show?

A. Well, it is a little unusual. His impression was, and I can't -- the needle EMG is entirely normal with the exception of the right serratus anterior which shows some diminished recruitment but no fibrillations or chronic neurogenic potentials, which is something that one might see with a significant injury to the serratus muscle.

And his impression is that this study shows a possible loss of motor units in the distribution of the long thoracic nerve but is otherwise normal.

So it is a very borderline iffy kind of EMG.

Q. If there is -- what would you expect to see if there was significant injury to the long thoracic nerve?

A. You would expect to see an EMG that is totally typical.

Q. What do you mean by that?

A. Well, I am not an EMGer, but there are no fibrillation --

MR. WENDEL: Objection.

Q. Without getting too specific, but would you -- if there is an injury to the long thoracic nerve,

would you expect to see evidence of that on an EMG?

MR. WENDEL: Objection.

A. Yes, absolutely.

Q. Does an EMG return to normal after an injury to the long thoracic nerve?

A. It certainly can.

If you assume that a patient has a very mild injury, if an EMG were done several years after the patient has achieved, say, totally normal function, the EMG might be normal at that time.

Q. At several years?

A. Several years later.

Q. Would you expect it to be normal six months after an injury?

A. Only in the circumstance that the injury was very mild.

Q. Okay.

A. Otherwise, no.

Q. Doctor, were you able, after your examination of Mr. Nielsen-Mayer, your review of the records, were you able to determine a cause of the winged scapula that you observed, or the long thoracic nerve injury, rather?

A. No.

Q. Do you think there is any way to determine

the cause of Mt. Nielsen-Mayer's long thoracic nerve injury?

MR. WENDEL: Objection. no std set for opinion

A. No, no.

Q. I am sorry?

A. No.

Q. Now, you are aware from your review of the records and the deposition in this case that Mr. Nielsen-Mayer claims that he began having problems with his shoulder and arm after the surgery performed by Dr. Artz on July 14th of 1987.

Are you aware from your review of the records of some of the particulars of the surgical procedure, what happened that day?

A. Yes.

Q. And what is it that you know about it?

A. Well, the patient had a procedure -- the patient was in an operating room for a total of about a half hour, I don't know precisely how long the operation itself lasted. The operation was done under local anesthesia so that the patient was fully awake. It was done with the patient lying face down.

There is some discrepancy as to where the patient's arms were placed, and I am not in a

position to say one way or the other exactly how they were placed.

Q. What is the discrepancy you understand?

A. Well, the patient says that -- assuming that I am lying face down, his arms are straight out like this (indicating).

Q. You mean down in front of him?

A. You know, just hanging in front of him.

There is a suggestion that his arms were not in that position.

Q. And what is the other position?

A. Well, the other position one can be in, you would have your arms either at your sides down here (indicating), or arms under your chin (indicating), or sort of tucked like this (indicating).

Q. Okay.

By the way, do you ever position patients in any of those positions for surgeries that you perform?

MR. WENDEL: Objection.

A. All the time.

Q. I am sorry?

A. All the time.

Q. Now, I would like to show you some photographs that have been marked as Exhibits 1 and

2, and I would like you to assume that those are photographs that were taken by Mr. Wendel of the actual operating table. I think those photographs were taken in April of 1990. That is the actual room and the table on which Mr. Nielsen-Mayer was placed.

Okay?

A. Yes.

Q. Now, I would like you to follow along with me, I am going to ask you to make certain assumptions in order to answer my next question, okay?

A. Okay.

Q. I want you to assume that Mr. Nielsen-Mayer was lying on the table that you see in those photographs on July 14th of 1987; assume that he did, for the moment, let us assume that he did have his arms hanging over the sides of the table for a maximum of thirty minutes; assume that during that time period the patient was awake, that he was pumping his hands, moving his arms gently, trying to get them up on the table, perhaps putting his hands on the headrest extension that you see there.

Assuming those facts to be true, Dr. Shafron, do you have an opinion as to whether

Mr. Nielsen-Mayer sustained a stretch injury to his long thoracic nerve during that surgical procedure?

MR. WENDEL: Objection.

no standard for opinion — prob vs poss

A. I have an opinion.

Q. And what is your opinion?

A. That he could not have.

Q. And what is the basis for your opinion?

A. Well, there are a couple of reasons. One, even if one were to assume that his arms were straight down like this (indicating), this would not produce a stretch of the long thoracic nerve.

Q. Why not?

A. Because it is not the position that is described. The positions that are described are positions that are straight out, out to the side, or like this (indicating), or down like this (indicating).

Q. With the arms straight out in front of him, where is the long thoracic nerve, what is it doing?

A You mean straight out like this (indicating)?

Q. Yes.

A. It hasn't moved. This type of activity wouldn't necessarily -- this position straight down (indicating), would not stretch the nerve.

The other thing, of course, is that if these

bars project from the outside of the table, that would have kept his arms really from being straight down.

MR. WENDEL: Objection. no factual foundation for statement assumes a fact. "if"

Q. What bars are you talking about?

A. There are two -- I don't know what metal, probably stainless steel bars alongside the operating table.

Q. Is there any way the camera could focus in so the doctor can point to what he is talking about?

A. One here, one on the other side (indicating). There are two bars on each side of the table, near the head of the table. This is the head of the operating table, and this is where his head would have been at the time the surgery was done, he would be lying face down, and his arms could not be -- go straight down, or straight down like that (indicating), if one imagines that I am on an operating table.

Q. Why not?

A. Because the bars are around the sides, and they would --

MR. WENDEL: Objection. now makes it factual.

A -- tend to keep -- the arms would have to go around the bars, and so the arms would not hang

straight down.

Q. Any other reason, Doctor, why you feel that during this surgical procedure, under the assumed facts I have given you, that Mr. Nielsen-Mayer could not have sustained a stretch injury to the nerve?

MR. WENDEL: Objection.

A. In an awake patient, the arms are not dead weights, I mean, the patient is moving his arms, the arms aren't flopping like dead weights, there is muscle tone keeping the arms -- maintaining the arms in certain positions, and he is not going to lie totally still like this for a half hour, no way

MR. WENDEL: Objection.

Q. Doctor, you told us earlier that you had an opportunity to examine Mr. Nielsen-Mayer on October

Q. Now, we have just today obtained the records from Hillcrest Hospital. I think you have those down there?

A. Yes.

Q. That was for an admission in July of 1989, which was about two years after Dr. Artz' surgery, and a year before you saw the patient, correct?

A. Yes.

Q. Now, have you had a chance to look at at least parts of those records today?

A. I did today, yes.

Q. And I would like you to look for a document that I am going to show you now, I will show you my copy.

Can you find that in the copy of the chart?

A. Yes, ma'am.

Q. Can you tell us, please, what that document is?

A. This is an admission physical examination that was done by a physician on 7-6-89.

Q. By the way, what was the purpose for that hospital admission, do you have a --

A. He had a problem with -- he has a problem, what we call chronic pulmonary disease.

Q. It is a respiratory problem?

A. It is a respiratory problem, yes.

Q. So this admission had nothing to do with his arms, or anything like that?

A. Correct.

Q. Now again, looking back at that document -- and what was that again, please?

A. This is the admission history and physical examination.

Q. And who was that done by, can you tell?
A. I can't read the handwriting, to be honest with you. It was done by some physician, but I really can't tell.
Q. And on the second page, is it, of that form, that was a physical exam?
A. Yes.
Q. And what were that physician's findings as concerning Mr. Nielsen-Mayer's joints --
MR. WENDEL: Objection.
Q. -- and his ability to move?
MR. WENDEL: Objection.
A. Do I just go ahead and read it?
Q. Yes, what is noted in the chart?
A. Noted that range of motion within the limits of normal.
Q. Okay.
A. He then looked at the back, and the muscles and the bones, and he recorded that the back was symmetrical.
Q. Any comment as to muscle tone?
A. He just has plus. You would have to ask him what he meant.
Q. Okay.
A. I don't know.

He said the back was symmetrical, that is all.

Q. From what you can tell from your review of that examination, did that physician find any problem with Mr. Nielsen-Mayers's ability to move his arms?

W/O

MR. WENDEL: Objection.

A. According to this, no,

Q. Thank you.

Doctor, when you examined Mr. Nielsen-Mayer on October 12th of 1990, was he able to move his right arm?

A. Yes.

Q. And could you show us in what range he could move it the day you saw him?

A. He could raise his arm up like this, like this, he could do everything with this, what we call rotational movements (indicating). He had no weakness of any part of his arm. He would not or could not -- I suspect he would not raise his arm up like this (indicating), unless he leaned up against the wall, he said this is the only way he could do it, which is a little unusual in my own experience, because every patient that I have seen with this has been able to do that.

Q. Based on your examination that day, your examination findings, did you see any reason why Mr. Nielsen-Mayer would be disabled from performing the tasks of daily living, such as eating, or shaving, that kind of thing?

A. No.

Q. He is now employed as an architect. Do you find any reason why he would be disabled to work as an architect?

MR. WENDEL: Objection. no foundation - no statement of duties of job set forth

A. No.

MS. REINKER: Thank you, Doctor. Nothing further.

CROSS EXAMINATION

BY MR. WENDEL:

Q. Doctor, my name is Fred Wendel, as you know, since we took your deposition back in March of this year, and I have a number of questions concerning your examination and your testimony here today.

A. Surely.

Q. Doctor, you say that you do teaching and patient care one hundred percent of your time --

A. That is correct.

Q. -- did I understand that?

A. Yes.

Q. Do you do defense medical examinations?
A. Sure.
Q. And that is not part of teaching, is it?
A. No.
Q. It is not also part of patient care, is it?
A. No.
Let us say ninety-nine percent of the time.
Q. Now, Doctor, when you talk about the long thoracic nerve and its distribution to the serratus anterior muscle, you talked about it passing through the armpit; is that correct?
A. Well, deep inside, yes, over the first rib, near the back of the armpit (indicating).
Q. We also call that the axilla, do we not?
A. Yes, yes.
Q. How many patients have you treated that have had a serratus anterior palsy?
A. In the last two or three years, two.
Q. And before that?
A. I can't remember. It is not very common.
Q. I am sorry?
A. I can't remember. I can't give you an exact number.
Q. So your experience with this type of injury is limited, is it not?

A. Currently, yes.

Q. And historically, has it not been limited?

MS. RZINKER: Objection.

A. I don't understand your question.

Q. Well, you say that it is not a very common injury?

A. I said that, yes.

Q. And you recall that only -- in the last few years, you have only had two patients with this?

A. That is correct.

Q. So it is not something that you see very often: is that correct?

A. No, that is correct.

Q. Have you ever seen any of your patients -- strike that.

Doctor, isn't it a fact that in the patients that you have had in the last few years, you don't know what the cause of their serratus anterior palsy muscle injury were; is that correct?

A. Well, to be precise, very difficult to say.

Q. How many of your patients have ever had a serratus anterior palsy problem from having the placement of their hands under their chin in a surgical position?

A. To be honest with you, I never asked the

patients if they were lying that way. I don't know.

Q. When you are treating your patients, do you ever try and determine the cause?

A. Sometimes it is very difficult.

Q. But do you try and determine the cause?

A. Sure.

Q. Have you ever asked a patient if they have placed their hands or had their hands under their chin --

A. No. Honestly, no.

Q. -- in a surgical position when they sustained the injury?

A. No.

One patient was a patient after surgery, in which the surgery was done with the patient lying on his back. The other patient was a patient who noticed this problem while she was carrying a tray of meat.

Q. Doctor, you can't sit here and tell us today, then, that any of the patients you have ever in your experience treated for a serratus anterior palsy had sustained that injury as a result of surgical positioning with the hands under the chin, can you?

A. No, I cannot. No, no, of course not.

Q. Doctor, you have no information concerning

any brachial plexus neuritis in Mr. Jorgen Nielsen-Mayer's history; is that correct?

A. To the best of my knowledge, that is correct.

Q. And you have no history of a serum sickness in Mr. Nielsen-Mayer's history; is that correct?

A. That is correct, sir.

Q. You have no information or history that there were any injections involved that would have caused this type of injury; is that correct?

A. Well, no, that is not necessarily -- he was injected with a medication called Novocain, or some local anesthetic, for the surgery.

Q. Do you have any belief that that injection caused this injury?

A. It certainly would be most unusual in my experience.

Q. You had no history or evidence in this particular case that Mr. Nielsen-Mayer slept in a funny position, do you?

A. I don't know that.

Q. So in other words, the answer to that is you have no such information?

A. I have no such information.

Q. Thank you.

Doctor, isn't it a fair statement that a

patient with a long thoracic nerve injury which develops into a serratus anterior muscle palsy, the only probiem they are going to have with their range of motion of that right arm is the ability to raise the arm in front of them; is that correct?

A. They can do that, they can do that. They don't have to lean against a wall at all.

Q. Oh, no, not to a certain extent. They have a limitation, do they not, Doctor?

A. There is -- may I answer the question?

Q. Can I get the question out, though.

A. You asked me the question. I thought you asked the whole question.

Q. I don't believe I had finished it.

A. Start again, go ahead.

Q. Doctor, isn't it a true statement that the only limitation in the range of motion a patient is going to have, who has a long thoracic nerve injury resulting in a serratus anterior palsy muscle, will be a problem elevating the arm in front of them?

A. They can do the motion; it is done with not the same smooth motion as someone who would have an intact serratus anterior. In other words, there is nothing in the serratus palsy that prevents the patient from getting their arm up like this

(indicating), they can all do it.

Q. What is winging, Doctor?

A. The scapula becomes prominent because it is not fixed to the chest wall firmly by the serratus muscle during this motion, or particularly this motion of pushing (indicating).

Q. Is the scapula an important factor in elevating the arm in front of the patient?

A. It is a factor. It is not an important factor.

Q. Thank you.

Is the health of the, or the condition of the serratus anterior musculature an important factor in elevating the arm?

A. It is a factor -- no, it is not a factor in terms of elevating the arm. The muscle itself has nothing to do with the arm. The action of that muscle has nothing to do with raising the arm.

Q. But indirectly, doesn't it, Doctor --

A. Indirectly, it affects --

Q. -- in the fact that it --

A. -- the ease with which a patient can raise the arm, and it does not prevent the patient -- a serratus palsy does not prevent the patient from raising the arm above the horizontal.

Q. Doctor, doesn't the serratus anterior muscle affix or help affix the scapula to the rib cage area?

A. To the -- yes, it does.

Q. And the scapula is one of the bones in the shoulder, is it not?

A. Well, it is not really in the shoulder joint.

Q. It is considered one of the three bones in the shoulder joint, is it not, Doctor?

A. Well, that is not really intimately related to the shoulder joint itself.

Q. Okay.

A. It is related to it, sure.

Q. Tell us which bones are related to the shoulder, Doctor?

MS. REINKER: Objection.

A. Well, there is the humerus, the scapula, the humerus, the clavicle.

Q. And Doctor, isn't the scapula in kind of a fulcrum to allow the muscles in the arm and in the chest to raise the arm or elevate the arm?

A. No, it is not. I am not a mechanic, and I can't be very mechanical about this. The arm can be raised without -- the arm can be elevated without a functioning serratus muscle, there is no question

about it. I have said that it facilitates the rotational movements of the scapula when one raises the arm like this (indicating), and it helps do that by helping fix the scapula to the posterior chest wall.

Q. And if the scapula is not well fixed, there is a problem elevating the arm, is there not?

A. There is a problem elevating the arm, yes.

Q. Thank you.

Now, you said that Mr. Nielsen-Mayer had a prolonged period after his cervical disk injury of physical therapy and problems thereafter.

A. Surgical disk surgery, yes.

Q. And you said that that prolonged period was for five months, correct?

A. As far as I can tell.

Q. Doctor, isn't it a fact that the EMG that you spoke of does not, in and of itself, test the long thoracic nerve?

A. It tests the -- the EMG does not test a nerve of in itself. It tests the muscle which is supplied by the nerve.

Q. It does not test the nerve itself?

A. Yes, it does.

Q. Directly, Doctor?

A. No, the electrodes are not put in the nerve, they are put in the muscle. That is a way -- that is the way that study is done, and in a very correct, almost direct way, it tests the integrity of a nerve.

Q. But you don't actually stimulate the nerve itself, do you, Doctor?

A. No, no. No, no, no.

Q. You cannot, because you can't get at the nerve, correct?

A. Oh, I think it probably could be done, but that is not what is routinely or usually done in a test like this, for this -- with this nerve, and with this muscle.

Q. Now, Doctor, what happens with EMGs is certain values are presented to the examiner, and they have to interpret those, do they not?

A. That is correct.

Q. And isn't it a fact, Doctor, that the EMG that was performed by Dr. Horwitz on Jorgen Nielsen-Mayer back on February 25, 1988 was not entirely normal?

A. Oh, I said that.

Q. Okay, I just want to make sure that there is no dispute on that.

A. No.
Q. Okay.
A. It has a -- well, I am not -- the interpretation is there for the record.
Q. Doctor, you have no particular experience with a patient who has had problems with a long thoracic nerve injury after surgical positioning, have you, to your knowledge?
A. Not as far as I know.
Q. Doctor, you don't know what the size of that table was, do you?
A. Do I have the dimensions of it?
Q. Yes.
A. No, I don't know.
Q. You don't know what the width of that table is, do you?
A. No. I have an idea. It is a standard operating table.
Q. But you don't know what the actual measurements are?
A. No, sir.
Q. You don't know what the measurements of Mr. Nielsen-Mayer's chest are, do you?
A. No, sir, I do not.
Q. Now, Doctor, with a patient with a long

thoracic nerve injury with a serratus anterior palsy, they would have a normal range of motion, would they not, save for the fact they cannot elevate the arm easily in front of them?

A. That is correct.

Q. Doctor, do you know what kind of physician performed this examination at Hillcrest Hospital that you talked about before?

A. I can't even read his signature. I don't know.

Q. You don't know what kind of physician he is, then, do you?

A. No, sir, I do not.

Q. You don't know of his competency in making an examination of the muscles or bones of a patient's body?

A. I don't know if it is a he or a she. I don't know who it is.

Q. Let me rephrase that.

You don't know his or her competency, then, to perform an examination of the muscles or bones of a patient's body, do you?

A. I have no idea.

Q. Isn't it a fact that what the patient went in for, that is Mr. Nielsen-Mayer, was basically a

respiratory problem?

A. That is correct.

Q. And he did not go in at that time for purposes of being treated or examined for any problem that he had lifting his arm; is that correct, Doctor?

A. That is correct, that is correct.

Q. Now, Doctor, you found that in your examination on October 12, 1990, that Mr. Nielsen-Mayer did in fact have winging of his right scapula?

A. Yes.

Q. And that is consistent with a long thoracic nerve injury, is it not, Doctor?

A. Yes.

Q. It is also consistent with a serratus anterior muscle palsy?

A. Yes.

Q. And as you mentioned before, I believe, that serratus anterior muscle palsy will cause problems in elevating the arm, will it not?

A. Yes, yes.

Q. And that winging that you talked about is what we call an objective finding, is it not?

A. Yes.

Q Can you tell us what an objective finding is, Doctor?
A. It is something that a doctor or an observer can see that is independent or totally unrelated to anything that the patient can control.
Q. So in other words, what the patient tells you is immaterial; you can see it yourself as the physician, correct?
A That is correct sir
Q. And you don't have to rely upon the truth of the patient's statements to you to make that finding?
A No, that is correct
Q Thank you.
And isn't it also true that during the course of that exam, he in fact did demonstrate to you a difficulty elevating his right arm?
A. Yes, he did.
Q. Doctor, you didn't measure for muscle atrophy, did you, during your exam?
A No, no
Q. Now, atrophy would indicate a problem with the muscle, would it not?
A. I wouldn't know how to measure a person -- I wouldn't know how to measure a patient for serratus

atrophy.

Q. But you didn't measure it anyway?

A. I wouldn't know how to do it.

Q. Okay.

A. I don't know how anyone would know how to do it.

Q. Doctor, a stretch injury can occur to a long thoracic nerve, can it not?

A. Yes.

Q. And if a patient's arms are just dangling down by their side in an unsupported fashion by any means, that can create what we commonly know as dead weight, can it not?

A. Well, if the patient were asleep during an operation, the answer is absolutely yes, but not while he is awake.

Q. Even if they are unsupported?

A. Yes.

Q. Doctor, isn't it a fact that during your deposition, you had testified that you could not say one way or the other whether Mr. Nielsen-Mayer's positioning will cause an injury to the long thoracic nerve: didn't you testify to that during your deposition?

A. I said I didn't know how it could, and I

still say that.

Q. And isn't it a fact -- but you also said during that deposition that you didn't know one way or the other, did you, Doctor?

MS. REINKER: Objection. OR

A. May I see the statement, please?

Q. Certainly.

MS. REINKER: Can I have a cite, please?

MR. WENDEL: Page eleven, lines four through nine.

Q. (Continuing) Let me read it to you, then I will show it to you.

A. Okay, sir.

Q. "Do you have an opinion based on a reasonable degree of medical certainty as to whether that can be a productive mechanism to a long thoracic nerve," that is arms dangling by the sides.

Your answer, "I have no idea."

"Question: You are not saying one way or the other?

"Answer: Correct, no idea."

A. Okay.

Q. Would you check and make sure that --

A. Oh, I am sure you read it correctly.

Q. Okay.

Now, Doctor, today you are saying something differently, are you not?

MS. **REINKER:** Objection.

A. Wait a minute, now. What lines were you reading again, sir?

Q. I am reading the lines four through nine, and it refers above that to the dangling of the arms.

A. Okay.

Well, if one were to really be specific about that statement, dangling to the sides is really a little ambiguous.

Q. Well, you didn't have a problem with it back then, Doctor, did you?

A. Well, no. **No**, no. But dangling straight down like this (indicating).

Q. You didn't question it back then when **I** --

A. Well, I am questioning it now. And the answer to your specific question is, as I said, was, can dangling at the sides, which really is dangling over the edge of the table, not at the side of it -- the question is, dangling over the sides of the operating table (indicating), this is what we mean by that, or this is what I assume you meant by that.

Q. That is what **I** mean by it today.

A. Yes.

Well, I don't think so, in answer to that question specifically. I suppose it is possible, but I don't think it is.

Q. But Doctor, the point I am trying to make here is, today you are telling us that position could not cause this injury. Back then, when you were deposed under oath, you made the statement, you could not tell us one way or the other; isn't that correct?

A. Let me -- may I qualify my answer?

Q. Well, first let me ask it --

A. Yes, that is correct, what I said here, sure.

Q. Thank you.

A. Okay.

Q. Let me have that back if I can, Doctor.

A. Sure.

Q. Doctor, you found no evidence of a laceration of a long thoracic nerve here, did you?

A. There is absolutely no way I could determine that, no.

Q. Doctor, you had no evidence or history of long -- prior long thoracic nerve injury to Mr. Nielsen-Mayer before the surgery?

A. Well, I don't know that.

Q. But you have no history of it, do you?
A. Well, there is history suggested in the University Hospital records, but I don't have anything else other than that.
Q. But Doctor, you don't know what the University Hospital records make reference to, because you didn't make the examination back then?
A. Of course I didn't.
Q. Thank you.
The term, long thoracic nerve injury, was not used in the University Hospital records was it?
A. It is only mentioned by the physical therapist who was going to call a physician. Whether he did or not, I don't know.
Q. And he didn't talk about long thoracic nerve injury in that record, did he, Doctor?
A. No, sir, he did not.
Q. He didn't talk about a serratus anterior muscle palsy, did he, Doctor?
A. Well, he may have, because he mentioned the word scapular stabilizers.
Q. aut he didn't use the term, though, did he, Doctor?
A. No, he did not.
Q. Thank you.

He didn't use the term, winging, back then, did he, Doctor?

A. No, sir, not that I know of.

Q. And you have no history of winging, do you, Doctor?

A. No, sir.

Q. You have no history in Mr. Nielsen-Mayer's case of any prior atrophy before the surgery, do you, Doctor?

A. Atrophy of what?

Q. Atrophy of the serratus anterior palsy -- serratus anterior muscle, I am sorry.

A. First of all, I don't know how anyone can determine that, so I really -- I had never even mentioned the term, because you can't determine whether or not there is atrophy of the serratus muscle.

Q. So the answer, then, is there would be no evidence of it?

A, There is no evidence -- there is no evidence of atrophy, of course not, then and now.

Q. And there is no evidence of winging, though, is there?

A. Not as far as I know.

Q. And you have no history, do you, Doctor,

direct history, that there is an indication that Mr. Nielsen-Mayer had a difficulty elevating his arm in front of him, but had full range of motion in all other movements of the right arm, do you?

A. I don't know of anybody who ever examined him for that before Dr. Artz' surgery.

Q. So I am just asking the question --

A. There is no evidence, sure.

Q. -- there is no evidence?

A. That is correct.

Q. Now, Doctor, you would agree, would you not, that the -- you don't see how the positioning at surgery could cause an aggravation of the previous diskectomy that he had back in 1982; would you agree with that?

A. Say that once more?

Q. You would agree that the positioning at surgery would not cause an aggravation of the previous diskectomy, would you?

A. I wouldn't think so.

Q. Doctor, you don't have the vaguest idea, do you, whether the placement of arms in a folded position could cause a long thoracic nerve injury, do you?

A. It has been reported in the literature by at

least two different patients.

Q. You have learned that since your deposition; isn't that true?

A. Well, I knew it before my deposition, but I have seen the original articles whence it came. The articles I had before that were review articles in which those two cases were mentioned, but since that time, I have seen the original articles.

Q. But back at your deposition, you had that information available to you?

A. Sure.

Q. Do you remember me asking you in your deposition -- and let me read it, and I will show it to you.

A. Go ahead.

Q. Do you believe --

MS. REINKER: Cite, please.

Q. (Continuing) I am sorry, page fifteen, line eighteen through twenty-two:

"Do you believe that the placement of the arms in the folded position on the chest of the patient or upper shoulder area while the patient is lying on their stomach can cause injury to the long thoracic nerve?"

Your answer was, "I don't have the vaguest

idea."

A. Well, I do now.

Q. But you didn't back then, did you?

A. No, that is correct.

Q. But you possessed the knowledge back then, I think you just --

A. I don't know whether I possessed the knowledge back then. All I know is what I am telling you. What I am telling you is the truth.

Q. And now you are changing your story --

A. I am not changing my story.

Q. -- from what you had back during your deposition.

A. I didn't know in March of 1991. I know now, today.

Q. Have you had conversations, by the way, with defense counsel prior to your deposition today?

A. Yes.

MS. REINKER: Objection.

Q. Doctor, you have no idea how long a nerve must be subjected to trauma to result in a permanent injury, specifically long thoracic nerve, do you?

A. It depends what kind of trauma you are speaking of, sir.

Q. How about a stretch?

A. I have no idea.
Q. Doctor, would you agree there is no injury at the nerve root here?
A. Oh, I think that is a correct statement.
Q. Correct statement?
A. Yes.
Q. Doctor, would you agree to your belief that Mr. Nielsen-Mayer had a complete recovery from his diskectomy?
A. Yes, I think so. I think so.
Q. Do you believe that the injury that he now possesses, to whatever extent you believe it exists, is permanent?
A. I think to some extent the changes are permanent.
Q. Do you believe that there is no effective treatment for it at this point?
A. I do believe that.
Q. And do you believe that the only means to have a serratus anterior palsy is to injure the long thoracic nerve in some means?
A. Yes.
Q. And that a stretch type injury to the long thoracic nerve would likely result in the interference of the serratus anterior muscle?

A. Yes.
Q. There is no evidence of any radiculopathy in this case, is there, Doctor?
A. I certainly don't believe so.
Q. Doctor, I believe you testified a little while ago that you did not believe the surgery would have caused this injury. Did I understand you correctly, or not?
A. The surgery itself? That is correct.
Q. How about the positioning?
A. I do not believe so.
Q. Doctor, do you know Dr. Artz, by the way?
A. Yes.

MR. WENDEL: I have nothing further.

REDIRECT EXAMINATION

BY MS. REINKER:

Q. Dr. Shafron, you know Dr. Artz professionally, as a colleague?
A. As a colleague, I don't know him socially.
Q.
A. I can't remember the last time I saw him.
Q. Now, when you examined Mr. Nielsen-Mayer, you found a winged scapula?
A. Yes.
Q. Which comes from some injury to the long

thoracic nerve, you have told us that?

A. Yes.

Q. Is there any way that you could tell how long he had that, whether it was days, months, weeks, years?

A. No.

Q. How did he demonstrate to you that he had trouble elevating his arm?

A. Well, he either wouldn't -- well, he wouldn't elevate his arm above the horizontal (indicating).

Q. So essentially you asked him --

A. Oh, yes, absolutely.

Q. -- to move the arm?

A. But he said, if I lean against a wall, I can do it, and indeed he did.

Q. Did you observe any atrophy of any muscles when you were looking at him?

A. You can't -- you can't measure the muscles of the shoulder --

Q. Did you see anything noticeable?

A. The only way that one can -- if you can't measure -- you can't measure a shoulder girdle, you can't measure one half a chest wall. So you know, you can't -- it is not that I -- you can't demonstrate atrophy of the serratus muscle, there is

no way to do it.

You can infer, though -- let us say he had another EMG examination, if he had a normal EMG, which was basically normal at the time he had his first one, then there should not be any atrophy of the serratus muscle, but there is no way that I can see it, or anyone else.

Q. The difficulty that a patient -- strike that.

When a patient has a serratus palsy, serratus palsy, you mentioned earlier that they have -- that they may have some abnormalities in lifting their arm: is that correct?

A. Yes.

Q. And does that again have anything to do with the movement of the arm itself?

A. No.

Q. And the difficulties that you were referring to that the patient might have, what did you mean by that?

A. The muscles that allow us to move the arm in any direction, there are several in number, none of these muscles is the serratus muscle itself. The serratus muscle facilitates a smooth elevation of the arm (indicating).

Q. So the only thing the serratus muscle does

during that movement --

A. It is a facilitator.

Q. __ is to hold the scapula down; is that correct?

A. Yes, yes.

Q. Doctor, I gave you a question earlier where I asked you to assume certain facts about this particular patient in this particular case, as to whether, with those assumed facts, if they are true, whether you had an opinion that the long thoracic nerve injury Mr. Nielsen-Mayer has was sustained during the surgery: do you recall me asking you that question?

A. Yes.

Q. Just so we all understand clearly, in some other case, with some other facts, do you believe it is possible, arms dangling off the table could cause potentially a stretch injury, with some other case, with some other facts?

MR. WENDEL: Objection. foundation

A. I don't know.

Q. But in this particular case, with the facts as I have asked you to assume them to be, do you have an opinion as to whether the nerve injury occurred during the surgery performed by Dr. Artz?

Std of opinion?

MR. WENDEL: Objection.

A. I gave my answer, I do, and I don't believe that the surgery did it.

MS. REINKER: Thank you, Doctor.

RECROSS EXAMINATION

BY MR. WENDEL:

Q. Doctor, though you may not be able to measure atrophy, there are times you can visualize it, true?

A. Sure.

Q. Now, just so we understand the purpose of the serratus anterior muscle, it, I think we can all agree, does not cause the arm to be elevated itself, there are other muscles that do that, correct?

A. That is correct, sir.

Q. When I was getting into -- what I was getting to a while ago was the using a fulcrum, the scapula, the way in which the body moves, there are muscles that work against one another and with bones to facilitate motions; is that correct?

A. Correct.

Q. And this scapula happens to be one of them: is it not true?

A. Yes.

Q. And the serratus anterior palsy -- I am sorry -- serratus anterior muscle purpose is to hold that

scapula down, correct?

A. For certain movements, correct.

Q. And one of those movements is the elevation of the arm in front of the patient?

A. Correct, yes.

Q. And if that scapula moves or wings, if you will, there is a difficult time elevating the arm; is that true?

A. It is more difficult than normal.

Q. And it is because the scapula is not affixed tightly against the chest wall that causes the difficult movement: is that correct?

A. That is part of it, but the scapula, the movement of the serratus and putting the scapula forward is also part of that. In other words, there is a twofold function, depending on what the specific movement of the arm is.

There is some contraction of the serratus muscle when you put your arm up, because the scapula rotates forward a little bit, too, when you put your arm up like this (indicating), so it is twofold.

And there is difficulty, there no question of that, in terms of elevating the arm up. But it is very difficult to measure in this patient, because he doesn't behave like a normal patient with a

serratus palsy. He is the only patient I have ever seen, and he is the only patient that I have ever seen depicted with a serratus palsy who couldn't raise his arm up unless he leaned up against the wall.

Q. And that is in the vast number of cases that you have had of serratus palsy patients?

A. Not only the vast number of -- not only in the -- of course, you used the word vast, I didn't. Not only in my own patients, but in every picture that I have ever seen of any patient with a serratus palsy, they are all like this with their arms up (indicating), and they are not leaning against the wall.

And the purpose of their illustration being illustrated this way is so that you can see what the shoulder looks like when they have their arms up, and none of them is looking -- is leaning against the wall.

Q. Doctor, in those pictures, the patient doesn't always have their arms up at equal levels, do they?

A. If you would like to see the pictures, I will be glad to show them to you, and they do.

Q. I have seen some of those pictures, as well.

A. Yes. They do.

Q. Now, Doctor, would you agree, then, that a healthy serratus anterior muscle and a properly affixed scapula will make the movement or the elevation of the arm in front of the patient easy or normal?

A. Of course -- well, of course, sure.

Q. And if it is a damaged muscle, and an unaffixed scapula, the movement will be more difficult; would you agree with that?

A. I think that is a reasonable thing to say.

MR. WENDEL: Thank you.

Nothing further.

MS. REINKER: Nothing further.

Thank you, Doctor.

THE WITNESS: You are welcome.

THE VIDEOGRAPHER: Doctor, you have the right to view this videotape to prove its accuracy. You can also waive that.

THE WITNESS: I would prefer that, sir.

THE VIDEOGRAPHER: Very good.

Will counsel waive any or all filing requirements on this videotape?

MR. WENDEL: Yes.

MS. REINKER: Yes.

THE WITNESS: I also waive signature.

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(DEPOSITION CONCLUDED)

(SIGNATURE WAIVED)

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CERTIFICATE

State of Ohio,)
) SS:
County of Cuyahoga.)

I, Ivy J. Gantverg, Registered Professional Reporter and Notary Public in and for the State of Ohio, duly commissioned and qualified, do hereby certify that the above-named MELVIN SHAFRON, M.D., was by me first duly sworn to testify to the truth, the whoie truth, and nothing but the truth in the cause aforesaid; that the deposition as above set forth was reduced to writing by me, by means of stenotype, and was later transcribed into typewriting under my direction by computer-aided transcription; that I am not a relative or attorney of either party or otherwise interested in the event of this action.

IN WITNESS WHEREOF, I have hereunto set my hand and seal of office at Cleveland, Ohio, this 12th day of May, 1991.

Ivy J. Gantverg, Notary Public
in and for the State of Ohio.
Registered Professional Reporter.
My commission expires September 13, 1993.