IN THE COURT OF COMMON PLEAS

OF CUYAHOGA COUNTY, OHIO

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NORMAN BISLER, ET AL.,

Plaintiffs,

vs. Case No.

THE CLEVELAND CLINIC

FOUNDATION, 324655

Defendant.

- - -

DEPOSITION OF HAROLD MARS, M.D.

Wednesday, September 2, 1998

- - -

Deposition of HAROLD MARS, M.D., a Witness herein, called by the Defendant for examination under the statute, taken before me, Karen M. Patterson, a Registered Professional Reporter and Notary Public in and for the State of Ohio, pursuant to notice and stipulations of counsel, at the offices of Harold Mars, M.D., 3609 Park East Drive, Beachwood, Ohio, on Wednesday, September 2, 1998, at 4:00 o'clock p.m.

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APPEARANCES:

On behalf of the Plaintiffs:

Caravona & Czack PLL, by
MICHAEL W. CZACK, ESQ.
1900 Terminal Tower
Cleveland, Ohio 44114
(216) 696-6500

On behalf of the Defendant:

Arter & Hadden, by
VICTORIA L. VANCE, ESQ.
1100 Huntington Building
Cleveland, Ohio 44115
(216) 696-1100

HAROLD MARS, M.D., of lawful age, called for examination, as provided by the Ohio Rules of Civil Procedure, being by me first duly sworn, as hereinafter certified, deposed and said as follows:

EXAMINATION **OF** HAROLD MARS, M.D.

BY MS. VANCE:

Q. Dr. Mars, as you know, my name is Vicky Vance, I'm representing The Cleveland Clinic in this matter, an action filed by your patient, Norman Bisler. We're here today to take your discovery deposition prior to trial, and we coordinated the deposition through Mr. Czack's office.

I was instructed and informed that for purposes of the discovery deposition, you would require a deposit in terms of a prepayment of your deposition fee in the amount of $500. So let me hand that to you now. It's a firm check in that amount.

A. If it is under this amount, certainly there will be reimbursement.

Q. It's my understanding your hourly charge for the deposition would be $325 per hour?

A. Correct.

Q. Doctor, what is the area of your medical specialty?

A. I'm a neurologist.

Q. Do you specialize or concentrate your practice in any particular area or field of neurology?

A. I'm a general neurologist, see a very large variety of cases. I do have a specific area of interest, and that is in movement disorders.

Q. What is movement disorders?

A. Those are a group of diseases that have to do with alteration in mobility, characterized by -- I'll give you the names of the few diseases, perhaps that will be the best way, but these would be diseases that encompass Parkinson's disease, Huntington's disease, dystonias, choreas, movement disorders, tics, as such.

Q. How much of your patient practice is devoted to patients who are under your care for movement disorders as distinguished from other neurological considerations?

A. Perhaps ten to 15 percent.

Q. The balance of your practice being a variety of general neurological conditions?

A. Yes.

Q. You're board certified in neurology?

A. I have fellowship through the Royal College of Physicians and Surgeons of Canada, which gives me automatic reciprocity in the United States.

Q. Are you board certified in any other medical specialty here in the United States?

A. I'm board eligible in internal medicine.

Q. Ever take those boards?

A. No.

Q. Where did you receive your medical school training?

A. McGill University, Montreal, Canada.

Q. Did you do your residency training in Canada?

A. In part. I did a -- after graduation, I did an internship, I did one year of general surgery residency, a year of residency in internal medicine, all at University Hospitals in Montreal. I then did a second year of residency in internal medicine, and three years

residency in neurology at The Cleveland Clinic.

After that, I returned to Montreal and I did a further three years of fellowship at the Montreal Neurological Institute.

So then I -- in that interim, I obtained what I referred to as fellowship level certification. There are two levels of certification in Canada. One is a fellowship, which is the highest level, and the second is certification of the specialty.

Q. Is part of your training in general surgery? Was that just one year in general surgery?

A. Yes.

Q. What year was that?

A. Oh, goodness, 1961. 1962 I discovered that I was bored in the operating room and realized that if I was bored in the operating room, I would be a terrible surgeon, and I discovered then that my interest was more in the diagnosis, the more intellectual challenges.

Q. I take it then that in your practice of neurology, you do not practice in an operating room setting?

A. No

Q. That is correct?
A. That's correct.
Q. Have you ever practiced as an anesthesiologist?
A. No.
Q. I take it, given your background, that you are not trained in cardiothoracic surgery?
A. Correct.
Q. Nor are you trained in cardiothoracic anesthesiology?
A. That is correct.
Q. Ever practice as a CRNA, certified registered nurse anesthetist?
A. No.
Q. You have never performed heart surgery?
A. No.
Q. Bypass surgery?
A. No.
Q. Redo bypass surgery?
A. No.
Q. Have you ever observed a case of bypass surgery?
A. Many years ago.

Q. From start to finish?
A. Probably.
Q. Back when you were in your general surgery --
A. Way back when.
Q. -- year?
A. Yeah. That's when they were starting to do those procedures when I was a resident at the Clinic, and during my time there, I'm sure I had seen one or two cases of it.
Q. But we're going back into the --
A. We're going way back.
Q. Way back?
A. Into the 60s, yes.
Q. Do you claim to have any expertise in proper positioning of patients for bypass surgery?
A. No.
Q. You did have occasion to care for and evaluate Mr. Bisler; is that correct?
A. Yes.
Q. According to the chart that I've seen, and I did take a look at your original chart here a moment ago, it appears you saw him in your office about four times between May of 95

and September of 95; is that about right?

A. I saw him five times --

Q. Oh, okay.

A. -- between the dates of 5-24-95, and the last time, 11-8-95.

Q. Did you actually see him on 11-8-95, or was that just a --

A. I saw him that day. There was one day, 6-30-95, where I made some comment regarding a telephone conversation.

Q. Has your office billed the patient for the services performed in this case?

A. I would suspect so. I would hope so

Q. Did you bill the patient or did you bill his attorney?

A. That I don't know.

MR. CZACK: Objection.

Q. Was this patient referred to you by Mr. Czack?

A. Yes.

MR. CZACK: Objection.

Q. On how many occasions has Mr. Czack referred patients to your office?

MR. CZACK: Objection.

A. Oh, goodness, over the last ten

years, maybe three or four times.

Q. Any patients currently under your care who were referred to you by Mr. Czack?

MR. CZACK: Objection.

A. At the moment, I'm not sure.

Q. Do other attorneys in Mr. Czack's office also refer patients to you?

MR. CZACK: Objection.

A. Yes.

Q. If I broaden the question to ask other patients referred by his office over the past ten years, what would that number be?

MR. CZACK: Note a continuing objection.

A. Over the past ten years -- obviously, Mr. Caravona -- over the past ten years, I would perceive maybe a total of 10, maybe 10, 12, no more than that. One or so a year.

Q. For the purposes of your care and treatment and evaluation of Mr. Bisler --

A. Yes.

Q. -- did you receive or review any records from any outside physicians or institutions?

A. At the time I saw him, no.

Q. So nothing else was reviewed during the time that you were caring for this patient?

A. That is correct.

Q. During the time you were caring for Mr. Bisler, did you make a request to any other provider for records?

A. I have nothing that indicates that I did.

Q. Let me first ask you: Do you have a memory of seeing and treating Mr. Bisler in your office?

A. Specifically, no.

Q. Do you have any recollection that Mr. Bisler brought with him for your review any records or materials from outside providers?

A. No. If he had, I would have photocopied them and included them in the chart or have made reference to them.

Q. Do you have a recollection of speaking with any of Mr. Bisler's other doctors or providers with respect to his care during the time that you were caring for him?

A. No. I did fax some information over to a Dr. Frederick Schnell.

Q. Those are some lab reports or lab

results?

A. Yes, I think so.

Q. Did you ever talk to Dr. Schnell, as best you can recall?

A. No.

Q. Ever talk to any doctors from the Clinic?

A. No.

Q. At any time since November of 95, since you stopped treating this patient actively, have you received or reviewed any materials about Mr. Bisler from any other providers?

A. Yes, I have.

Q. Can you tell me what you have reviewed?

A. I was shown the defense medical today.

Q. Can you be more specific what you're referring to as the defense medical?

MR. CZACK: Dr. Stanley's report.

A. There was a report from an anesthesiologist regarding Mr. Bisler that I looked at.

Q. Other than reviewing Dr. Stanley's report, have you been provided with anything

else?

THE WITNESS: Is it Dr. Stanley?

MR. CZACK: Yes.

Q. Do you know Dr. Stanley?

A. No.

Q. Or know of him?

A. No.

Q. Have you made request for any other materials to review at any time since taking on this patient back in May of 95?

A. No.

Q. When you first saw the patient in May of 95, did you take a history from him?

A. Yes.

Q. What history did you obtain?

A. Going back to the original hand notes, that was on 5-28-95, and that occasion Mr. Bisler was 65 years of age. He reported that he had a variable increase in his blood pressure, that he had experienced two myocardial infarctions, one in 1965, the second in 1968.

He then underwent some bypass surgery in 1979, and in 1992, this was repeated at the Clinic.

He told me that after surgery, that

is, after the second surgical procedure, he noted some pain in the back part of his skull. He stated that his head was placed in some head support at the time of the surgery. The pain, though, in the area had persisted.

He had seen a Dr. Sweeney, this is Dr. Pat Sweeney, who is a neurologist at the Clinic, and he was told by him that he had a pinched occipital nerve.

Mr. Bisler then told me that his symptoms have persisted all this time up to when I saw him, and that would be approximately three years or so after the surgery. He had been treated with niacin, which is a vitamin and a blood vessel dilator, Carafate, that's for valve problems.

He had been seen as well by the pain management group at the Clinic, received some nerve blocks to that area and stated to me these were ineffectual. The pain persisted. He described this as extending over the entire back portion of the occipital area extending to the crown portion of his head, and he described this as a burning sensation.

I discussed some of the medications

that he may have been on, specifically some anticonvulsant therapies such as Tegretol or Klonopin. These have not been tried.

He had been treated with Zoloft, which is an antidepressant, for a period of time. That was stopped. And when I saw him, he was receiving Pamelor, also an antidepressant, which he said was of no benefit.

Mr. Bisler told me that he would frequently awaken with a headache. He had been a car salesman previously but now felt that he was unable to work because of the pain. He denied any double vision, loss of vision. He did have a hearing loss and used a hearing aid. There was no episodes of paralysis, but he did note that if he stood up suddenly he would develop a little lightheadedness, unsteadiness.

There were no bowel or bladder problems that he was able to relate to me.

Q. That's the extent of the history you obtained?

A. Yes.

Q. Did you obtain the history from the patient --

A. Yes.

Q. -- or from any other family members?

A. No. This was from the patient.

Q. Do you recall if he did have family members with him who contributed to this conversation?

A. I normally would indicate if the wife says something or if a brother or somebody says something, There's no indication in my notes,

Q. Have you ever discussed this patient with Dr. Pat Sweeney?

A. No.

Q. Did you have Mr. Bisler fill out any forms, questionnaires, inventories, anything along those lines?

A. No. It's not something I normally do. The only thing we have him fill out is the initial registration.

Q. Do you know if Mr. Bisler obtained any neurological treatment for these complaints since seeing Dr. Pat Sweeney and before he saw you?

A, You mean other neurologists?

Q. Yes.

A. Well, he saw three people that I know for management of this. He saw Dr. Sweeney, he

saw me, and he saw pain management group at the Clinic, but I don't have specific names here. Thereafter, there's a fourth person he saw, and that would be Dr. Schnell.

Q. What sort of doctor is Dr. Schnell?

A. I suspect that Dr. Schnell may be his internist, but I'm not sure.

Q. Had you ever dealt with Dr. Schnell before you have come to know him professionally?

A. No, I don't know him. I think I know the name, but I don't know him.

Q. Do you know when Mr. Bisler saw the pain management doctors at the Clinic in relationship to when he was seeing Dr. Sweeney?

A. No. I suspect that he saw them after he saw Dr. Sweeney.

Q. Do you have any sense of how much time elapsed?

A. Not at all.

Q. You mentioned a couple of medications. I just want to go to that page of your notes. You said that he had been treated with niacin.

A. Yes.

Q. Which is a vitamin, and --

A. Carafate.

Q. Carafate. Who prescribed those medications?

A. I'm not sure.

Q. Were they prescribed for purposes of --

A. It may have been Dr. Schnell. On the initial sheet, I have listed Dr. Schnell, so I would be presuming that those were prescribed to him by Dr. Schnell, but I'm not sure of it.

Q. Do you know if they were prescribed for purposes of dealing with these occipital pains?

A. I doubt it.

Q. You doubt it?

A. Yeah.

Q. So when you have in your notes treated with niacin and Carafate, that's not specific for the --

A. No.

Q. -- head problem?

A. No, I wouldn't think so.

Q. You also mention further down on that page that he had been treated with Zoloft --

A. Yes.

Q. -- and also Pamelor.
A. Yes.
Q. Both antidepressants?
A. Yes.
Q. Who prescribed those, if you know?
A. I have a notation, LMD, local medical doctor. I would suspect that would be Dr. Schnell again.
Q. Again, do you know if those were prescribed for purposes of dealing with occipital pain complaints?
A. It may have been. Antidepressants are frequently used in pain management, and so those medications may in fact have been prescribed.
Q. But you don't know for sure?
A. No, I don't know for sure.
Q. Have you obtained any history from the patient that he has a history of depression?
A. No.
Q. You indicate in your note that he had been treated with Zoloft, and then it was stopped. Did the patient stop taking it or did the doctor DC it, or how did that happen, if you know?

A. I don't. I can only infer.

Q. In terms of the Pamelor, was that prescribed to replace the Zoloft or in lieu of the Zoloft?

A. Yes, I would think so.

Q. Do you know what time period elapsed between stopping the Zoloft and starting the Pamelor?

A. No.

Q. Neither was of benefit for purposes of the occipital complaints?

A. At the time I saw him, apparently he was not having any benefit from these.

Q. He indicated to you that he had been a car salesman but now he was unable to work?

A. Yes.

Q. Did he say why he was unable to work?

A. Because of the pain, I would presume. But, again, I don't have a specific written down.

Q. Do you know if there were any other health considerations Mr. Bisler had that contributed to the decision to stop working?

A. No.

Q. You don't deny that there might be other considerations?

A. No.

Q. You're just not aware of them?

A. That's correct.

Q. He told you that when he stands up suddenly, he feels lightheadedness?

A. Yes.

Q. Did he tell you if he ever had that kind of complaint before or in any other circumstance?

A. No.

Q. Did he ever tell you that he had episodes of lightheadedness before the second surgery in 1992?

A. No, he did not.

Q. Did you ask him that?

A. Not specifically, no.

Q. In other words, I'm trying to find out if he simply didn't comment on it, or if he denied a prior history of the lightheadedness.

A. The lightheadedness that is noted here was in response to specific questions that I asked. So the lightheadedness was not something he volunteered, but it's something that I was

able to elicit, but it doesn't surprise me that someone would have some lightheadedness given the history of hypertension, myocardial infarctions and surgeries.

Q. Did you determine through your questioning how often he experienced these episodes of lightheadedness?

A. On a per day frequency, no, E did not.

Q. Every time he stood up rapidly, did he experience lightheadedness?

A. I can't answer that. What I can say is there's a position component to this, but I can't say to you whether this happened each time, nor can I give you a grading as to its severity.

Q. Did you determine from Mr. Bisler if he had a history of prior headaches prior to the second surgery?

A. He didn't comment on that.

Q. Do you remember if you asked him questions that would have elicited comments on that subject?

A. There's nothing specific in my notes on that.

Q. So you don't have information one way

or the other about that?

A. No. In terms of headaches antecedent or pains antecedent to the surgery, no, I do not have that information.

Q. Do you know if Mr. Bisler had had prior neck complaints prior to the second surgery?

A. No.

Q. Do you know if he ever had any complaints about cervical spine problems?

A. No, I do not.

Q. Do you know if he had ever been diagnosed with arthritis in his neck prior to the second surgery?

A. No.

Q. When you first saw the patient then on May 24, 1995 after taking the history, you did perform an examination of the patient?

A. Yes, I did.

Q. According to your notes you have recorded a blood pressure reading, and could you also read what else you have written in terms of your physical exam findings.

A. Well, there's some abbreviation that occurs in my notes.

Q. **Okay.**

A. There is a notation that, as you commented on, the **blood** pressure was **140** over 90, which is acceptable; that he was alert times four, that's to time, place, person, circumstances. Then there's an arrow, and the arrow indicates that on my routine examination, certain parameters were looked at, and were found to be normal.

Now, to recap what is included in all of that would be an examination of cranial nerves, an evaluation of the fundus, ocular movements of the eye, ophthalmoscopic examination, an examination of facial musculature and movement, gag reflex, carotid pulsations, bruits, whether they are present or absent, reflexes in all four limbs in a variety of sites. Muscle strength is determined again in all four limbs in a variety of sites. Sensory perception to pin and vibration, and then a variety of coordination tests.

In addition to all of this, there are certain parameters that one looks at or observes even prior to the examination. This would include gait, stance, level of consciousness,

speech impairment, speech awareness, utilization of language, appropriate responses and so forth.

Q. Now, did you record in your notes the findings ***of*** your physical exam in terms of the cranial nerve testing, fundus exam, facial musculatures and **all** of these other items *you* described to us?

A. That is inherent in the arrow. If there's an abnormality, then the abnormality is written under the arrow.

Q. So it's not your practice to specifically write out each and every finding that you determine or arrive at in the course of your exam?

A. Positive findings, yes; negative findings, no. Since I have a set pattern for the examination, that set pattern is followed in every patient. It is then elaborated on if abnormalities are detected.

So if **I** detect that there's, for example, an area of sensory loss, then the exam focuses a little bit more carefully on that, and we, again, narrow in on that, but the basic standard in neurological examination, as I said, and **I** will not waste my time or anybody else's in

duplication of lengthy notes when they're all normal.

Q. It sounds like you have a certain pattern, habit, practice that you follow when you do a neurological exam?

A. Sure. We all do. Everybody does,

Q. And you follow that customarily --

A. Yes.

Q. -- as part of your practice? And the fact that it's not written down in detail item-by-item doesn't suggest that you failed to do the exam?

A. That is correct.

Q. You know your habits and customs and practices in that regard?

A. That is correct.

Q. And it would be your expectation that other neurologists, other physicians, also have customary approaches that they may take in doing their exam findings?

MR. CZACK: Objection.

A. I would think that any competent neurologist or any competent physician has a certain profile of exam, of what they examine, and then would elaborate on that should there be

some abnormalities found.

Q. When you perform any of these portions of this examination, do you use any instrumentation, hammers?

A. Yes.

Q. Stethoscopes, funduscopes, things of that nature?

A. Yes.

Q. The fact that we don't see anything written down here about that equipment being utilized, does that mean it wasn't utilized when *you* performed your exam on Mr. Bisler?

A. Not at all.

Q. Again, is that because you have a habit and custom as to how you perform these exams?

A. That is correct.

Q. And you don't require that sort of detailed itemization in order to tell you that's how you did the exam in this case?

A. I know how I did the exam

Q. In terms of positive findings or abnormalities, what, if anything, did you find when you examined Mr. Bisler?

A. That he had a well healed scar from

the coronary artery bypass procedure, that's a sternal scar. But relevant to his complaints, there was an area of increased sensitivity to touch and to pin in the right occipital area of the skull.

Q. What does the term hyperparesthesia mean?

A. Hyperparesthesia is a hyperesthesia, increased sensitivity or a perversion of sensation where it may seem to be increased rather than decreased; increased irritability.

Q. In other words, a touching or sensation to a patient with that problem, they may react to something that others might not react to?

A. No. It's a matter of magnitude of response.

Q. Okay.

A. So that you will have -- if I touch an individual in an area, they will feel it, presumably. If they have a stroke, for example, in that area, there may be an area of hypoesthesia, or lack of sensation entirely.

But in many neuropathies, there is a perversion of sensation. The sensory perception

of the individual of that stimulus is altered, and often there are a variety of adjectives that people will utilize to describe what is sometimes very difficult for them to describe. They will describe things like a burning feeling, a feeling of warmth, a feeling of cold, a feeling of increased sensitivity, a feeling of itchiness or formication, as if worms are crawling under the skin. These are all symptoms -- or words that people will use to describe an area of altered sensation.

Q. In Mr. Bisler's case, did you note whether he used any particular phraseology?

A. The word I used was hyperesthesia, which means increased sensitivity to the stimulus.

Q. And is that what Mr. Bisler said to you? I'm trying to find out if he used --

A. He didn't use the word hyperesthesia, I wouldn't expect him to. I wouldn't expect him to know what res ipsa loquitor meant, for that matter.

But when I examined for sensation, I asked whether one side feels the same as the other, and in this instance, he reported that he

did not feel that the feelings elicited were the same; they were different, and that the area on the right back portion of the skull was hypersensitive.

Q. You had told us that patients will use different expressions in trying to communicate.

A. They may. He didn't in this instance.

Q. That's what I wanted to find out. Did Mr. Bisler use any phrases?

A. No.

Q. Did he talk about warmth or worms or burning or --

A. As a matter of fact, he did. He did. If we go back to the pain over the entire posterior, he felt pain over the entire back of the head on both sides, and he used the term burning sensation.

Q. Did he indicate to you that it was a constant burning sensation, or periodic burning sensation, or under what circumstances would he feel the burning sensation?

A. No, he did not specifically.

Q. You don't know if it was constant or

periodic --

A. No.

Q. -- or only upon certain --

A. No.

Q. -- stimuli?

A. No. I know the pain has been persistent, but whether it lasted two hours a day or 24 hours a day or five seconds a day, that I have no information on.

Q. The next portion of your handwritten notes appears to be setting forth your impression.

A. Yes.

Q. And what was the impression that you recorded at the time of that visit?

A. That he had a post compressive neuralgia of the right occipital nerve.

Q. What did you do, doctor, to arrive at that impression?

A. That is a clinical impression that's based upon the history that he gave me, plus the finding of altered sensation in the distribution of that particular nerve.

Q. And in terms of the altered sensation, that's based on the finding that he

complained of an increased sensitivity to the touch?

A. Yes.

Q. What exactly did you do to his head in order to determine that he had an increased sensitivity to touch?

A. I would use a sharp object, either a pin or a caliper or a piece of sharp wood that I broke and utilized. These are the things I normally will use.

Q. In terms of touching around in an area?

A. Touching around in an area, one side to the other.

Q. Do you know now what particular object you used? Do you have any recollection of that?

A. No. I'll use any one of them, either a piece of sharp wood or a caliper with one end or a pin.

Q. And then as you're pressing or touching, what are you asking the patient to tell you?

A. I ask whether there's any difference from one side to the other

Q. Besides the patient history and the physical exam findings that you have detailed for us, did you rely upon any other bases to form the clinical impression that's noted in your chart on May 24th?

A. On the initial visit?

Q. Correct.

A. Let me see when we did that test. I don't believe so. There was a procedure that was done, but that may have been later.

At the time that the impression was written, that of a post compressive neuralgia, I did not have any other procedures or any other information.

Q. Did the physical exam findings provide you with the information to form the impression of the right occipital nerve involvement?

A. Well, not just the physical findings. The history was an important component.

Q. Let me try to explain what I'm getting at. You have in your impression post compressive.

A. Yes

Q. How did you come to the diagnosis or impression that it was a post compressive problem with the nerve as opposed to any other etiology involving that nerve?

A. All right. Reasonable question. Again, a lot of it is inferential, and a lot of it has to do with clinical experience, and in this situation, we go back to the history. The history was that his head was placed in some sort of a head support for the surgical procedure, that these symptoms developed subsequent to that.

Now, we've already established that I have no expertise in anesthesia, nor in cardiac or cardiothoracic surgery, but when an individual is having an operative procedure such as this, he has to lie somewhere, and he has to be supported somehow, and in a coronary artery bypass procedure, this is going to be supported for a long period of time. Therefore, there must be pressure exerted at various points of the body. This is not an air mattress that is used to support the individual; he's on a flat surface. And with the development of the -- as part of the procedure, he would have an endotracheal tube and he would be receiving anesthesia, and typically

what's happened -- what is done is that there is some extension of the head backwards to facilitate the placement of an endotracheal tube and maintenance of anesthesia. If it reflects forward, one would have a lot of problems.

So my perception would be that the head would be put back a little bit, that there will have to, therefore, be some portion of the back of the head resting upon something for a period of hours.

The development of the pain that he described developed subsequent to the surgery, and so it is a reasonably logical conclusion that the pain developed subsequent to prolonged pressure at a certain point on the scalp through which that particular nerve traversed.

Q. Do you know what sort of head support item was used for this man's surgery?

A. Not specifically. Mr. Czack showed me a donut sort of appliance, I guess you'd call it.

Q. When were you shown that?

A. Today.

Q. Were you shown a picture of the donut or the actual item?

A. No. I think that was the actual thing, wasn't it? What that was was a circle, foam, maybe about one inch thick or so, fairly compressive, with a center portion cut out.

Q. Have you ever personally placed patients in donuts of that nature or observed them while they were so placed?

A. I'd have no reason to.

Q. So returning to my question as to how you formed your impression of a post compression neuropathy, you're relying upon the patient's recitation of the events involved with the surgery and his subsequent complaints of pain?

A. And the finding that there's an alteration of sensation in an area that would correspond to my perception of the area that would be in contact with a hard surface during the course of surgery.

Q. Now, was Mr. Bisler's head in contact with a hard surface, or was it in contact with this foam donut?

A. Maybe both. I don't know that.

Q. Assuming that this foam donut was used, how would you explain how he could have suffered a compression injury to the occipital

area of his head?

A. Well, for one thing, I don't know whether the foam was adequate to lift his head entirely off the operating table. I don't know how much pressure was exerted by his head on the foam. I mean, people -- even though you have a piece of foam, there's still compression, you still have constant pressure of the body at a certain point. We know from clinical experience that compressive neuropathies are often against fairly soft-ish objects. If the pressure on a nerve is at a certain point, it may result in a neuropathy. I mean, there is a host of examples that I can give you.

Q. Any involving the occipital nerve?

A. Anything that prolongs -- anything with prolonged pressure on the occipital nerve may result in a neuropathy. Wearing glasses, for example, may also cause a neuropathy if the nerve exits at an appropriate point where the support for your glasses are.

Q. Limiting the discussion, though, to occipital neuropathies, are you familiar with any examples or --

A. I have seen occipital neuropathies in

the past, and it often occurs when individuals have been lying for a prolonged period of time with their heads in one location.

Q. You have been in private practice for how many years, doctor?

A. Oh, goodness, private practice. Before private practice I was a full time academic.

Q. Okay.

A. So, I mean, you know --

Q. Since you completed your training in neurology.

A. Well, all right, let's take it from 1967 when I completed the fellowship at the Clinic. So we're talking --

Q. Roughly 30 years plus?

A. Yes, 30 years. Long.

Q. In the course of that 30 years' experience, how many patients have you diagnosed with having an occipital neuropathy?

A. Not -- it's not that common.

Q. The answer is none?

A. No. I didn't say that.

MR. CZACK: Objection.

A. I said it's not that common, and over

the past 30 years, I would estimate that I have seen this maybe about three times, four times.

Q. Since it is a rare finding, did you happen to write up any case reports or any articles in the literature, anecdotal reports --

A. No.

Q. -- with respect to those three or four?

A. Did I personally?

Q. Yes.

A. No.

Q. Do you know if those patients of yours were the subject of any reports to the literature?

A. No. I have not done a Medline search, but I'll be happy to.

Q. I'm asking if those patients you had were the subject of articles

A. No.

Q. Do you recall in those three or four cases, and I assume that that does not include Mr. Bisler --

A. That's correct.

Q. -- of those three or four, do you have any recollection of what were the

circumstances that --

A. Yes.

Q. -- that led to the complaints in those cases?

A. In one or two of them, this was associated with a -- with an inflammatory process, giant cell arteritis. In the other two or three, and I'm not certain, we're really talking about a long, long time now, that was associated with a prolonged coma where people had been unconscious for a period of a few hours.

Q. I'm sorry, you said --

A. Prolonged coma, loss of consciousness.

Q. In those cases, were the patients in comas for more than a matter of six or seven hours?

A. No. That would be about the time, four to six hours would be about --

Q. In those two or three other cases?

A. I can't recall specifically, but, you know, anybody who is in a coma for more than 30 minutes is a reasonably prolonged coma

Q. You don't specifically recall if --

A. No. No. It would be a few hours, I

would suspect.

Q. Were these patients who had been in comas for a matter of days or months or weeks or --

A. No. Hours.

Q. -- that *you* happen to have treated with that?

A. Hours.

Q. Did you say it was joint sell or giant cell?

A. Giant.

Q. Based on everything you knew about those other cases and the circumstances that prompted or led to the development of the neuropathies in those cases, did you make any finding or judgment or impression that there had been any negligence in the care of those patients --

A. No.

Q. -- that led to their development of an occipital nerve neuropathy?

A. No.

MR. CZACK: Objection.

Q. If I was to ask you, in your experience, 30 some years, have you treated

patients or diagnosed patients with occipital nerve compressions --

A. Yes.

Q. -- are we still talking about the same population of patients?

A. Pretty much.

Q. If I use the phrase "occipital nerve compressions," does that call to mind any other patients --

A. No.

Q. -- than the three to four to five or so that you have seen?

A. No.

Q. Are you aware of occipital nerve compressions arising spontaneously or without any known antecedent event?

A. No. That's an oxymoron. A compression has to cause it. The term compression implies compression, so there has to be something that does that, whether it is a blow to the head, whether it is wearing a cast that comes up to the, you know, a hard cast to the neck, whether it is an alcoholic who was unconscious and is lying on a hard surface. There has to be, you know, a compression to cause

a compression neuropathy.

Q. In the case of Mr. Bisler, where along the occipital nerve did he suffer the point of compression?

A. That I am unable to specifically indicate for the simple reason that it's a very difficult thing to determine. The area of altered sensation would be at a point distal to where the actual compression occurred, and that will vary from individual to individual.

In Mr. Bisler, I would believe that it is a branch of the occipital nerve, but that's about as close as I can get to it. There's no direct way of analyzing the function of the nerve in that area. There are some ways one can look at that, but not very easily.

Q. When you say he suffered a compression of the occipital nerve, do you distinguish in his case between the greater occipital and lesser occipital nerve?

A. I would think that, based upon the area that was involved, we're talking the greater occipital nerve.

Q. Again, if I go back and ask you about your years of practice, of the three to four to

five other cases of occipital neuropathies, did any of those involve the greater occipital nerve?

A. I can't recall. I can't recall at this time.

Q. Given Mr. Bisler's symptoms, do I understand that you can't be specific in saying where along the length of the greater occipital nerve did the actual point of compression occur?

A. No.

Q. Does the greater occipital nerve trace its roots to C1-C2?

A. Yes, that's where it originates from, the upper cervical spine.

Q. Is there any test that could be performed to look at Mr. Bisler's greater occipital nerve and determine the point at which there was a compression? Is that anatomically possible?

A. Since you're asking possibilities, I would think that it's possible that if an MR scan was done in that area with selection of windows to try to pick up any inflammation within a nerve, and then compare one side to the other, then it is conceivable that there's a possibility

that that may be found, but you're really asking, you know, a very difficult diagnostic question, because you're dealing with a nerve that is not readily approachable.

We're not obviously going to make a cut in the person's skull or scalp to subject the nerve to direct examination. That's the way you would find out. Neither is it a nerve that -- that we **would** be able to access easily by electromyography. And since we're talking about sensory component of the nerve, it's not one that has a muscle that you can stick an EMG needle into and find out evidence for denervation.

Q. Given the anatomic limitations on the structure that we're talking about here, are you, therefore, reliant in large measure upon the patient's subjective history and complaints and their reaction to your testing in order to make judgments and determinations about the extent and nature of their injury?

A. That, and, in addition, we did another test that supported that there was some problem with sensory perception in that area.

Q. I'll get to that in a minute. I do want to ask you for your thoughts on that.

Of these three or four other cases that you have had in your practice, how long ago was the last one you have had?

A. Oh, gosh, I told you this is not something I see commonly. I think an orthopedic surgeon who applies casts to the head may see it more often than I do. I can't say. In the 30 years, three or four cases, and I don't have a file.

Q. I take it then because of the lack of a ready memory on these patients, it's not someone who's been here in the last two, three, four, five years?

A. Yeah. I don't think I've seen another case in the last few years. No, I don't think so, not for the last two or three years. Five years ago I think I did see a case of an occipital giant cell arteritis, but that I said is a little different, although the symptoms may be somewhat similar.

Q. Are you aware that patients can develop occipital nerve neuropathies spontaneously?

A. Oh, sure.

Q. And what would be the signs or

symptoms of a patient having an occipital nerve neuropathy?

A. They may be identical.

Q. I'm sorry?

A. They may be identical.

Q. Is an occipital nerve neuropathy seen in patients who have complaints of headaches or migraines?

A. Generally not, no.

Q. Do patients who suffer from headaches or migraines complain of pain in their occipital. region?

A. They may, but the pain that they are experiencing in that area has more to do with a tightness, persistent tightness, of the musculature in that area and is not associated with a sensory deficit.

Q. You said that patients can have an occipital nerve neuropathy occur spontaneously?

A. Yes.

Q. How does that happen?

A. Well, there may be a sudden infarct of the nerve, and that is something that we may see in a population of people who are hypertensive, who are diabetic, who have a

vascular disease. That is then something that would be termed a mononeuritis multiplex. That is where a single nerve is targeted, or affected. In individuals who have peripheral neuropathies that are of a metabolic toxic origin, those are symmetrical and generally would not involve something like the occipital nerve.

So the one thing that comes to my mind, I suspect there are others; yes, there would be others, there would be neuropathies that may develop as a consequence of certainly leprosy and do all kinds of nasty things. Syphilis can produce individual mononeuropathies. A tumor growing along the course of the nerve can cause a neuropathy. But there would be other symptoms that would go along with all these things. So then you're faced with a constellation of positive findings, but also negative findings, which would mitigate against specific diagnoses.

Let's be honest, leprosy is not a common cause of neuropathy in the United States of America

Q. Did I understand you to say that patients who have perhaps hypertension or diabetes can have spontaneous occipital nerve

neuropathy?

A. I would imagine that the -- yes. And the reason I say that is individuals with diabetes or hypertension or vascular disease are more prone to the development of the condition that I spoke of a little while ago, a mononeuritis multiplex.

Q. Does Mr. Bisler have diabetes?

A. Yes.

Q. Does he have hypertension?

A. Yes.

Q. Does he have vascular disease?

A. Yes.

Q. Have you ever --

A. However, having said all that, the question must still be put, why specifically this nerve at this time.

Q. But didn't you indicate that patients with those kinds of conditions can have a mono --

A. Mononeuritis multiplex. I also said that this would be unusual, okay, because mononeuritis multiplex actually tends to affect the nerves in the frontal part of the head generally more commonly around the eye, eye movement.

So when we are talking about possibilities, and I said yes, it's possible that mononeuritis multiplex can develop, you know, spontaneously affecting the occipital nerve, what we didn't address is how often would this happen. Could it happen? Sure. Is it a probability? Much less so.

Q. Given the fact that we only have such a relatively few number of cases of occipital neuropathies?

A. I don't know what the number is. To be very honest, it would have been -- Rad I been more aware this would have been your line of questioning earlier today, I would have accessed Paper Chase and gotten a printout of all the cases of occipital neuropathies associated with a variety of things.

Since this is a discovery deposition, I can inform you that by the next time we meet, I will in fact have done that.

Q. It sounds like we'll be taking another discovery deposition prior to trial, doctor.

A. It may be. The questions you're asking are questions that I can't answer, but

that doesn't mean that the answers aren't there. It's just that I have to access that information.

Q. Have you ever cared for patients who have presented with complaints of neurologic findings or problems following bypass surgery?

A. Yes.

Q. What kinds of, or range of, neurological complaints or problems have you seen of patients who have presented to you with a history of recent bypass surgery?

A. By and large, these are individuals who have experienced confusional episodes -- well, that one can attribute to a lack of oxygenation or perfusion to the brain to individuals who have developed a full hemispheric infarct. Very rarely you can have individuals who have catastrophic hemorrhages. If you're going to include hemorrhages and small embolic infarcts, the vast majority of neurologic complications that you will see in association with cardiopulmonary bypass surgery will be secondary to infarction.

Q. Besides infarction, have you seen reported, or perhaps have you, in your own patient experience, seen patients with

neurological complaints that are not embolic or ischemic --

A. Certainly.

Q. -- and yet still be somehow traced back to bypass?

A. Sure. I've seen people with neuropathies of a limb secondary to improperly placed intravenous infusion material or individuals who developed some neurologic complications following a cardiac catherization, which is part of the entire process we've been talking about.

Your specific question was what sort *of* complications one normally sees. I'm telling you the one that we normally see, and by far the most common, will be infarct of one magnitude or another.

Q. But it would be fair to say that there is a range of spectrum of neurological complaints that can be experienced simply by patients who have gone through the experience *of* bypass or artificial perfusion?

A. Yes. Yes. It's fairly common. The numbers are anywhere from 35 to 45 or so percent, far more than was initially anticipated.

Q. Let me ask you about the testing that you did on Mr. Bisler.

A. Yes.

Q. I believe it's called a current perception threshold evaluation.

A. Current perception threshold, yes.

Q. Taking you back to May of 95 when it appears that this exam was performed --

A. Yes.

Q. -- at that point in time, for how long had you been performing or applying this type of test?

A. This test has been around for many, many years in one form or another. 95, we had been doing this test by that time for at least eight years.

Q. Has it been known by other names, or has it always been referred to as a current perception threshold test?

A. It's sometimes known just as a CPT or a -- it can be also known as a sensory stimulation test. There are probably a whole host of synonyms for this.

Q. Did you actually perform the test yourself, or do you have a technician?

A. I have a technician. What I did was I demarcated certain areas on the patient's skull, and I marked them, and -- and that's what I did. Then the technician applied the stimulus at the area that I indicated.

Q. Did you actually mark Mr. Bisler's head?

A. Yes.

Q. Or do you mark on a diagram?

A. I mark the head.

Q. How is the head prepared for the test?

A. There's no preparation necessary.

Q. Do you have to shave the head or anything like that?

A. No. No. What would be done is at the time that particular location is being examined, she would rub it with a somewhat abrasive material.

Q. Across the hair or over the hair?

A. Over the hair, across the hair, in between the hair, to the scalp.

Q. Are there electrodes of some type placed?

A. Yes.

Q. How are they affixed to the scalp?
A. With glue.
Q. With glue?
A. Yes, with conductive gel.
Q. Do they stay on the patient's hair?
A. They stay on the scalp. They're applied to the scalp, not to the hair.
Q. How long does the test take to perform, or how long did it take in Mr. Bisler's case?
A. I can't tell you specifically. A test like this would take maybe about 20 minutes to do from start to finish.
Q. Does the technician have any sort of a worksheet or paperwork upon which he or she records the results? All I see in your chart is your final copy of the report.
A. Yeah, and there is a sheet somewhere; it's usually filed out in 1995. It isn't on premise. It's in some vault.
Q. Is it still retained, or might it have been discarded?
A. I suspect we can recapture it.
Q. Is the technician --
A. But the numbers are just taken

directly from one onto the other.

Q. The exam is, in this case, is number 95-020. That would suggest to me during the year 1995 this happened to be the 20th such test performed?

A. Yes.

Q. What training, if any, did your technician receive in order to learn how to perform this test?

A. There's very little training that's necessary for this test. It's a pretty straightforward procedure.

Q. Is that done here on site?

A. Yes.

Q. Have you actually performed this test yourself?

A. Yes, I've done this test.

Q. In your personal experience, how often have you performed the, we'll call it, CPT exam?

A. Oh, gosh.

Q. I'll make it easier. On patients where you're testing the occipital region.

A. Specifically, let's say zero.

Q. What about your technician, as far as

you know, given the patients seen here?

A. Specifically, over this period of time, I think this may be the only one specifically for the occipital area. This is a test that can be done in any portion of the body and the technique is the same, regardless whether it's the big toe, the thorax or the occipital area. There's nothing different in the procedure that is dependent upon the location.

Q. Would it be fair to say that 95 percent of the time when you cause the CPT test to be administered to one of your patients, it's on a peripheral limb to test for a peripheral neuropathy?

A. No, because peripheral neuropathies are often better determined by ordinary electromyographic nerve conduction studies. This can sometimes serve as a corroborative test, but it is more useful in looking at areas where individuals report an area of numbness rather than numbness affecting a limb.

It would be virtually impossible, for example, to use nerve conduction studies to evaluate an area of numbness on the back or the thigh or the chest. So it is in that instance

where an individual is complaining of localized numbness that the current perception threshold test, **CPT** test, may provide useful information.

Q. The paragraph on your test report refers to the fact that Mr. Bisler's results were analyzed and then compared to established normal population control values.

A. Yes.

Q. Was this normal population control from your own patient population --

A. No.

Q. -- or from the test?

A. This is from the literature and that which has been provided by the manufacturers of the equipment.

Q. Okay.

A. As **I** said, this equipment has been around now -- 1995 -- we're talking about this has been around easily for 10 years and had undergone many years of evaluation in many centers in the country, and so a range of responses had been developed, and this information was provided to us by the manufacturer.

Q. Do you have a booklet that lists

these normal values *so* that you can compare your patients' results with normal values, or does the machine somehow do this?'

A. No. The machine doesn't do this. We know that there's a certain range of responsiveness. But equally important, and maybe even more important, would be differences from one side to the other. I mean, God gave us two parts of the body.

Q. I'll get to the right and left aspect of it, and I understand that's important, too.

A. It's critical.

Q. In terms of comparing Mr. Bisler's results with the norm, the normal patient population, where are those normal patient values set forth; in a booklet from the manufacturer or in some kind of a listing you have?

A. In a booklet from a manufacturer, or if you want, there are a whole slew of references that we have access to that I have.

Q. Are these patient values or normal values specific for the nerve results when testing the occipital region? Is it that specific?

A. There may be. There may be that. I

can't tell you that right now. We have normal values that are -- well, here, for example, is one. We're talking about the trigeminal nerve, which is a nerve --

Q. We're not in this case.

A. I didn't say that. Please.

Q. I thought you said --

A. Please. I'm not stupid. Please, I know the trigeminal is not the occipital, and don't underestimate my intelligence.

Q. I'm not intending to do that,, doctor

A. You're not listening. The trigeminal nerve is a peripheral nerve that affects the face, and even though it is not the same nerve, there is a reasonable likelihood that the parameters of sensory perception over here will be fairly similar to over here (indicating). Maybe over here might even be more sensitive than in the back of the head.

So that if you at least take those numbers, you can use them to extrapolate to other areas that should be either at least as sensitive or maybe a little less sensitive.

Now, the numbers that we are given,

the lower the number is, the greater the degree of sensitivity. The higher the number is, then the less of a sensitivity.

Q. Let me stop you right there.

A. No. Let me finish. But I would not make a major distinction between a number of 128 and 116 or 72 or 70, or 50. The number differential I would start to think of as being important is if there were at least a factor of two or three above what one would anticipate elsewhere. You can have this if you wish.

Q. The numbers that we see recorded on your report, are these the actual numbers that were registered when Mr. Bisler did the test?

A. When the technician did the test on Mr. Bisler?

Q. That's what I meant.

A. Yes.

Q. So when we see, for example, right temporal, the number 72, the number 8, those were actual values?

A. Those were actual values that were generated by the test, yes. The numbers indicate the degree of -- well, let me give you an example. It's very simple. If you hook yourself

up to a battery, okay, you will feel a shock. The intensity of the shock will depend on a few things. It will depend upon the amount of current; it will depend upon the voltage; it will depend whether your hands are wet; it will depend whether you're making a good electrical contact with the battery, do you understand, whether the skin is thick, whether the skin is not thick or so forth.

So you have a variety of factors that feed into whether you will feel the electrical shock. The bigger the battery, the bigger the shock, everything else being constant; you will agree to that.

And what this basically does, in very simplistic terms, what this test does is to determine the level at which the patient perceives the shocks. The shock stimulus, the intensity of the stimulus, is changed, and the shock is given at a specific frequency, so it's not a -- it's not quite like holding a -- a battery contact and getting a shock from that. We give specific stimuli, and what this does is to stimulate nerves of specific sizes.

Q. What does the term MA refer to?

A. Milliamps.
Q. Milliamps?
A. Yes. Thousandths of an amp,
Q. So these numbers 72, 8, are being expressed in terms of milliamps?
A. Yes.
Q. Is an amp a measure of intensity?
A. Current. It's the amount of current.
Q. Current.
A. Electrical current.
Q. How does the amount of current differ from what's referred to -- is it the hz value?
A. Hz refers to hertz, that's frequency.
Q. When this test is administered, is it started for the patient at zero milliamps, and is there some measure where it's increased and you wait €or the patient to say I feel it?
A. That's correct. And we often go at it from a variety of points. We may start high and work our way down rapidly, then go back up. It's done with a variety of -- in a variety of ways to minimize any subjective biases that the patient may have.
Q. In Mr. Bisler's case, do you know how this test was exactly administered, started at

zero and moving up?

A. No, I do not.

Q. Do you know if it was administered to him more than once in order to test the reproducibility of the results?

A. Yes.

Q. Do you know how many times it was in fact administered in order to test the reproducibility?

A. No. No, I don't.

Q. If it was done more than once for reproducibility purposes, are these numbers we see here average amounts or one set of values?

A. I can't tell you that. They often are done more than once. In Mr. Bisler, there's something that stands out so remarkably that in fact, you know, statistically the differences between 999, which means no reported response at all, to a very strong shock.

Q. So the 999, is that a default value that goes in?

A. That's not default. That's maximum. That's maximum current that this instrument can generate. Clearly, there's going to be a limit to how much current you apply to an individual

before you electrocute them. So there are certain safety parameters, and in this particular instrument, 999 is the maximum number that this instrument will generate, according to FDA regulations.

But the point is that here no response was obtained in stimulating the very small myelinated fibers, the larger myelinated fibers and unmyelinated fibers. The small myelinated fibers are those that are stimulated selectively by the 2000 hertz stimulus; the larger myelinated sensory fibers by the 250 hertz; and the larger unmyelinated fibers by the five hertz.

Normally we wouldn't have done that in the face or the neck, and in him, because there was no response at all to the higher frequency, we took it down to the five hertz and didn't get a response on it.

Q. So was the five frequency test not done for the right temporal, right neck, left temporal, left occipital and left neck?

A. It would appear so. It would appear we did that only for the occipital on the right side.

Q. So the 999 indicates that despite the maximal stimulus intensity, there was no reported sensation --

A. Correct.

Q. -- or perception?

A. Perception.

Q. Again, just so I'm clear, did you have available in May of 95 a set of values for the normal patient population when testing the right temporal, occipital, neck region, left temporal, occipital and neck region?

A. I gave you that sheet. That sheet gives you for the trigeminal nerve, I believe, and the trigeminal nerve, if we --

Q. But I'm asking if there's anything specific to these nerve sites that were tested on Mr. Bisler.

A. Ma'am, you have asked me that already.

Q. I take it the answer is no?

A. The answer is I don't have specifics for this area.

Q. Okay.

A. But I do have specifics for a

which is a more sensitive nerve than the occipital nerve, we have a range of numbers. There's a minimum, a maximum, a mean and a standard deviation, and Mr. Bisler falls well beyond for the occipital area.

It's of interest that what we did is we looked at a variety of areas in him, and I would guess that since I did the marking, I probably would have used an 01, 02 location, which is an EEG location for the scalp; that's where the normal electrodes would be placed for an EEG, 01, 02.

Then a temporal location, which would be a mid temporal location, that would be above the ear on both sides, and then the neck. And in this instance I'm sure it would have been the mid -- the lateral posterior portion of the neck. These would be the areas that would be marked. So the areas that would have been marked would have been here, here, here, here, here, and here (indicating).

Q. Do you have a specific memory of this, or are you just understanding --

A. I know this is what I would have done.

Q. But without having any record before you as to exactly Mr. Bisler's case; is that true?

A. The areas that are marked are right temporal, right occipital, and right neck, and those would have been the areas that would have been demarcated for the symptoms and the area that he was complaining of.

Q. The final paragraph of the impression section of this report, I see the phrase that in the right occipital area you determined that there's a significant hypoesthesia.

A. Correct. Isn't that interesting?

Q. Yet in your other notations you thought there was hyperesthesia. Can you explain that?

A. Yes, I can. Remember what I said, that people with a neuropathy will describe a variety of feelings and symptoms. What I found on the examination was an increased sensitivity to the pin prick. When we came to measure the individual responses of the individual nerves, he in fact was less. And we have found individuals that can go both ways, that there are some individuals in whom there is exquisite

sensitivity to the stimulus, and there are other individuals who have severe diminished perceptive response, and it can go both ways.

It implies, and the only thing that can be gotten out of this without trying to pilpul the words further, is that the test indicates an abnormality in nerve function. That's all you can really get out of this.

Q. So if I understand correctly, when you performed your physical exam test, you determined that this man was experiencing a hyperesthesia?

A. No. No. What I said -- when I performed the test, what I got from him was that he reported to the stimulus that was given, and that's a cruder stimulus, a sensation of increased sensitivity.

Q. Plus your choice of the word hyperesthesia?

A. Hence the word hyperesthesia. When we tested specific nerves or nerve diameters with specific stimuli, now that's a little different than just sticking away with a rather blunt instrument or whatever, he reported a lack of sensitivity to those particular stimulations. It

could possibly have been that had different stimuli at -- different frequencies been used, perhaps there was one specific frequency to which he would be hypersensitive, but that information isn't available. The literature speaks only of these three frequencies.

Now, that is what we restrict our exam to. That is all the machine is capable of generating.

Q. These test results, given what the machine tells you, are they able to tell the examining physician when the patient developed the hypoesthesia condition?

A. No.

Q. Are they able to tell you for how long the hypoesthesia condition has been present?

A. No.

Q. And is it able to say under what circumstances the hypoesthesia condition developed?

A. No.

Q. Have you ever written any articles in the literature about your experience with the CPT test?

A. No.

Q. Do you know if the CPT test was administered on any other portions of Mr. Bisler's body other than these areas as noted in your report?

A. Not by me.

Q. What was the brand name of the equipment that you utilized in May of 95, in case it's changed?

A. It is called a Neurometer made by Neurotron, Incorporated in Baltimore, Maryland.

Q. Neurometer?

A. Neurometer.

Q. You have had this since at least 95?

A. Oh, yeah. I would point out that prior to this test becoming available, there was another way of testing. When I was in residency at the Clinic, we were taught to use what is called Frey hairs, F-R-E-Y, I think, which is a little handle through which a small little piece of plastic is inserted at a 90-degree angle, all right, and the plastic would be of different diameters, and so each time you went at someone like that (Indicating) with it, it would give a varying stimulus, from the very thick to the very

fine. Well, this is a heck of a lot more sensitive than that.

Q. Did you bill for administering this test to Mr. --

A. Yes, we did.

Q. -- Bisler? Is this a charge that insurance companies pay for?

A. Yes. I think.

Q. Has it ever been deemed, in recent years, since 95, or at the time in 95, to be either experimental or investigational such that it's not paid for?

A. Not to my knowledge.

Q. We also have in the materials that have been made available to us a letter that you sent to Dr. Schnell in November of 1995.

A. November of -- yes.

Q. This letter appears to indicate that you had prescribed is it Tranxene for the patient?

A. Yes.

Q. Is Tranxene used for -- is it an antianxiety medication?

A. Yes.

Q. A benzodiazepine?

A. That is one of its functions,

Q. Why did you prescribe it for the patient?

A. I've often found that in individuals who demonstrate hyperesthesia, or painful or burning type neuropathies, that Tranxene may be very effective in diminishing those symptoms in the same way, in some way, that other medications will do this. One medication that I initially tried -- I tried a couple things. The first medication I tried on him was Tegretol. Then I tried Klonopin and some Elavil, and then the last one that I tried was the Tranxene.

All of these medications are medications that we use in individuals with a neuropathy to decrease the intersynaptic transmission that may actually block pain perception or in some way modify pain processing.

Q. When you were explaining your choice of Tranxene, you again said that you have used that in patients with hyperesthesia?

A. Yes.

Q. Here again, does this patient have a hyperesthesia or hypoesthesia or both?

A. It depends on how you evaluate the symptomatology. If he is complaining of a burning sensation, that implies that there may be some distortion of sensory processing. That is the situation where I would use anticonvulsants like Tegretol, or I would use a medication such as the antidepressants, Elavil more so than the Pamelor, the Tranxene.

If one is dealing with an individual who has numbness, okay, a loss of sensation, and that is what he is complaining of, regardless of any fancy tests that machines do, in that situation, I would not use this medication.

The dysesthesia that he's talking about, the burning sensation, you might almost look upon that as a, I'll use the word, a positive symptom, something that's there that he's complaining of. A hypoesthesia would be a negative symptom in the sense that he's not aware of sensation in that area. So I would not use the medication in that situation.

Q. I'm going to go back to a point I know you were trying to explain to me a moment ago.

How is it that he complains of a

burning sensation, you call it a hyperesthesia, but when you plug him up to the machine, we get an absence of a reading in hypoesthesia. Which is it, hyper or hypo?

A, It can be both. It can be both. What I said is that when I tested his sensation, I use what is relatively a crude instrument, a pin. That stimulates a whole bunch of nerve fibers simultaneously. Do you understand that?

Q. Yes.

A. When I did the CPT, I selectively stimulated one group of fibers at a time, and in selectively stimulating one group of fibers at a time, I determined that there was a diminished responsiveness to that particular frequency.

Now, had I given him a global stimulation, which I can't do, a global electrical stimulus that,. let's say, is like white noise, rather than a specific frequency, the results may have been different.

Q. But you did not do that?

A. Can't do that. The machine is not capable.

Q. In terms of the occipital placement at the nerve, was it placed over the greater

occipital nerve or the lesser occipital nerve?

A. It was placed, if we go to here --

Q. Again, the question is in Mr. Bisler's case, where was it placed?

A. I'll tell you where, if you give me a chance, because it will have gone in a traditional location. Mr. Bisler or anybody else who had that symptomatology would have had the electrode placed in the same area to his -- this area here. The occipital nerve supplies this area here, and it would have been, and I'll mark it, approximately here, and here (indicating). Well, maybe even a little lower; here and here (indicating). I'd have to feel the patient's skull, the occiput. But it would be over the prominence, the back of the head, bilaterally. This is the traditional 10/20 international electrode placement protocol for performing electroencephalography. Those are the occipital locations.

Q. That's an EEG?

A. EEG. But that's a recognized location, so that it would be an 01/02. So that if this is the left side and this is the right side, the designation would be 02/01. That's

where I would have put the markings.

Q. How would *you* have marked on Mr. Bisler?

A. With a highlighter.

Q. Over his hair?

A. On his scalp. Moving the hair and marking the scalp.

Q. With just a yellow highlighter?

A. Yes. That's all.

Q. Did I understand you to say that you prescribed Pamelor and Elavil for the patient?

A. No. I did not prescribe the Pamelor, but I did prescribe the Elavil.

Q. You did?

A. Yes.

Q. And when did you prescribe that?

A. 6-28-95.

Q. Did you take him off *of* Tegretol?

A. Yes, that same day.

Q. He was having a reaction from the Tegretol?

A. Yes.

Q. Is that reaction that he was complaining of, the jerky movements of his hands, is that seen with Tegretol?

A. Yes. You can see it with Tegretol.
Q. It's a reported side effect?
A. Yes.
Q. Or adverse reaction?
A. Yes, tic type movements.
Q. Can you quickly read for us your 6-28-95 note?
A. 6-25?
Q. 6-2%.
A. My notes indicate that he has had some tremors of his hand, jerky like movements. This was not present before the Tegretol. His finger testing was normal, which indicated there was no dysmetria; that's important, but it would indicate whether it was a Tegretol overdosage. What I told him to do was stop the Tegretol and start Klonopin and Elavil.
Q. What is Klonopin?
A. Klonopin is a benzodiazepine derivative, but very effective -- or it's an anticonvulsant, an antianxiety, and also is very effective in slowing the interneuronal transmission.
Q. Then you also started him on Elavil at the same time?

A. Yes.

Q. Just while I'm thinking of it, going back for a moment to your original neuro exam, at least as you have recorded it here, it was essentially normal in all respects except for what we see noted as an abnormality?

A. Yes.

Q. I'm just going through your handwritten notes now. 6-30-95, you took a telephone call from the patient?

A. Yes.

Q. Can you read that note for us, please?

A. Sleepy. He's been on the medication only one day. He was going to be seeing Dr. Schnell, and I think -- let me see something here. 6-30. Yes. On 6-28 I sent him down for a blood test, which is something that I would often do, and why -- I'm not sure if I initialed that phone call. I probably did, because the blood test was drawn on 6-28, and then the telephone call was made on 6-30, and it was probably made because of a finding of the elevated glucose of 348.

Then I do indicate that I was going

to fax the blood tests to Dr. Schnell. There's an arrow that says to Schnell, which would mean C Dr. Schnell.

Q. Why did you draw the blood on June 28th and not at the initial visit on May 24th?

A. There was blood drawn on the initial visit.

Q. But not this panel?

A. No, not this panel.

Q. Why was this panel. drawn?

A. This panel was drawn because of the development of the jerky like movements, so I wanted to be sure there was nothing wrong with his sodium or the liver function.

Q. Can you read the note of July 26 for us.

A. He saw Dr. Schnell. He was started on some medication, presumably that would be for his diabetes. He checks the CHO, carbohydrates, the sugars, and that was fine. He still has pain in the area.

States that he had some nerve blocks at the Cleveland Clinic. I would presume those would be suboccipital nerve blocks, but I don't have any specific information. That would be a

logical conclusion, though, and that there was no alteration, no noted change, with this medication. He did not want any repeat blocks. He has persistent symptoms.

And at that time I suggested that he increase the Klonopin from three times a day to four times a day.

Q. Going back to the beginning of that July 26 note, you state that the patient did see Dr. Schnell, and I can't read your handwriting there.

A, Was started on medication.

Q. What medication was he started on?

A" I would presume that it was for his diabetes. I don't have the specific drug.

Q. You don't have the drug noted?

A, No.

Q. You don't also indicate or note what the indications were for the drug?

A. Oh, I would know. The man was clinically diabetic

Q. So you're inferring from the sequence of your notes and the blood results that the visit to Dr. Schnell resulted in a new medication and a new medication for the diabetes?

A. I initiated the visit to Dr. Schnell because of the finding on the blood test. The man was diabetic and of a magnitude that required treatment, So when he tells me he's been started on medication by Dr. Schnell, it would be my logical presumption that it would have been for the diabetes.

Q. What is the word that is written after medication?

A. Check medications and Rx.

Q. I understand.

A. Check CHO. CHO is shorthand for carbohydrates, sugar, and okay.

Q. That's a reference to Dr. Schnell checked those and found them to be okay?

A. I'm not sure he or the patient. I don't have that specific information.

Q. Did you do that check?

A. No.

Q. In your statement that he had had some nerve blocks done at The Cleveland Clinic, when were those performed?

A. I have no idea.

Q. Given the placement of that statement in this July 26 note, did you understand that the

nerve blocks had been performed sometime between July 26 and the most prior visit that the patient had with you?

A. No. I don't think we can make that inference. He still had some pain in the area. He told me he had some nerve blocks at the Clinic; he may have discussed that. He also told me, though, that he had, I think -- that he had nerve blocks. He told me he had nerve blocks the first time I saw him. Whether we're talking about the same nerve blocks or not that were told to me on 5-24-95 or 7-26-95, I can't answer that. They may in fact have been the same nerve blocks, or there may have been additional nerve blocks. I don't know.

Q. On July 26, did you continue the patient on the Elavil?

A. No. We had -- I think that was actually stopped. He had been very sleepy on that telephone call of 6-30,. He said he was sleepy and he had been on medication for one day. Although it's not indicated in the notes as such, it is probable that I told him to stop the medication because he was that sleepy.

Q. What was contributing to the

sleepiness, the Elavil?

A. It could have been both the Elavil and the Klonopin. I elected to stop the Elavil because the visit a month later, he was receiving Klonopin, and I asked him to increase it.

Q. There's nothing in the June 30th note or July 26th note that indicates that you asked him to stop any medication; correct?

A. That's correct. No, I'm sorry. We go forward, if we jump ahead to 9-27-95, there's a notation he is in fact on the Elavil ten milligrams.

Q. Elavil was never discontinued?

A. Elavil was never discontinued. Maybe he was sleepy because he was severely diabetic.

Q. Why don't you read for us, if you can, the September 27, 95 note.

A. He's monitoring his glucose, he's on a diet, and that he's okay, so I presume the glucose is okay. He developed a tremor and he -- the tremor that he developed previously to the Tegretol again. I guess he developed a tremor while on the Klonopin, and that was stopped. He was on Elavil ten milligrams at bedtime, and we stopped that. We stopped that, because at this

point in time, I became aware he was still on Pamelor and --

Q. Where does it say that?

A. Is on Pamelor, it says,

Q. We don't know who prescribed the Pamelor?

A. We did. We talked about that. Presumably it was Br. Schnell. And when the Elavil was prescribed, I'm sure, although it's not recorded -- that when he had told me on the visit, first visit, 5-24-95, that he was on Pamelor, but that was without benefit. Then on 6-28 when I told him to start the Elavil, I must have told him to stop the Pamelor, and he did not.

So he continued with that, and that became evident on 9-27 when I found out that -- I told him to stop the Elavil, and he told me then that he is on the Pamelor, and that's underlined.

Q. Let me make sure I understand the sequence here.

On June 28, 95, you started the patient on both the Klonopin and the Elavil?

A. Yes.

Q. It is not specifically noted in the

June 28 note that you instructed the patient to stop Pamelor?

A. Correct.

Q. On June 30th, he calls to report that he's very sleepy, but no specific reference at that point about stopping any of the medications?

A. No. But he had only been on the medication for one day.

Q. July 26, we have a reference to increasing the Klonopin?

A. Yes.

Q. Nothing is stated in that note about the Elavil?

A. Correct.

Q. So presumably Elavil is being continued?

A. Correct.

Q. We get to September 27, 1995, and now we find that the patient had developed a tremor and was off the Klonopin. Who took him off the Klonopin and when did that happen?

A. I don't know. I don't have that information. It may well have been that Dr. Schnell had stopped the Klonopin. I do not know.

Q. Do you know when it was stopped?
A. No.
Q. The reference that he was taking Elavil, again, this is the September 27 note, what does it say about the Elavil?
A. On ten milligrams Elavil at bedtime. Stopped. Is on Pamelor.
Q. Is that the same dosage of Elavil you prescribed for him on June 25?
A. Yes, 10 milligrams is a rather low dose.
Q. Did you then stop the Elavil on September 27th?
A. It says stopped.
Q. Does that mean that you stopped him or that he had stopped?
A. It says I told him to stop.
Q. Do you know what dosage of Pamelor he was then taking?
A, At that point in time, no. I do know that most previously he was on 15 milligrams twice a day.
Q. Is there a contraindication to prescribing Pamelor and Elavil at the same time?
A. Only if -- they're both

antidepressants, and one doesn't give two antidepressants simultaneously, and when E prescribed the Elavil, it was my presumption that the Pamelor had been discontinued because it was reportedly without benefit. So I must have told him to stop that and start that, and then it was only later on that I found out he was on both. But that's presumption. I'm reading between the lines.

Q. Now, in the September 27 note, you indicate that you're going to try him on the Tranxene --

A. Yes.

Q. -- three times a day?

A. Yes.

Q. Is that t.i.d.?

A. Yes.

Q. With meals?

A. Yes.

Q. And Tranxene, again, is the antianxiety medication?

A. Yes.

Q. Any contraindication to being on Tranxene and Pamelor at the same time?

A. No.

Q The next sentence reads see in -- I can't read your handwriting

A. Six weeks.

Q. And you also write there are no nerve blocks wanted.

A. Yes.

Q. Still tender occipital area. Did you see the patient then in six weeks?

A Approximately, yes

Q That's the November 8 visit?

A Yes

Q Can you read that notation for us?

A Sees Dr. Schnell regarding diabetes mellitus, DM pain and hypersensitivity scalp present No change with Tranxene, which makes him drowsy Blood pressure 140 over 90, weight 224 Neurologically stable; that is, there was no changes I told him to gradually reduce the Tranxene by one every three days, and then because this is already a chronic situation, he didn't want any narrow blocks, he had been on a variety of medications, I didn't see any reason to continue seeing him.

Q In your November 8, 1995 note, do you write the word 'hypersensitiwity' or

"hyposensitivity?"

A. Hyper.

Q. Hyper. It seems from the chronology of the tests *you* did and the **blood** work, especially, on the patient that you may have been the one to -- at least I found some blood work regarding the glucose situation.

A. Yes.

Q. Do you know for how long the patient had an elevated glucose?

A. No. No. First off, I point out that this was a random test, and it was done at 1325 minus 12, 1:25 in the afternoon. He had probably had lunch, so it was nonfasting. But even if it was nonfasting, it's still elevated.

So that one cannot determine the magnitude or the severity of his diabetes on the basis of that one test.

Q. Okay.

A. Presumably there would be something in the records from The Cleveland Clinic that might have indicated it.

Q. In your report that you prepared on June 16 of 1995, the very last paragraph, you make a comment about the prognosis for Mr.

Bisler's symptoms.

A. Yes.

Q. You stated that they are now permanent.

A. Yes.

Q. What is your basis for making that judgment?

A. In my mind, I use a time period of anywhere from six to 12 months. If symptoms are present in excess of that period of time, then, according to my criteria, these symptoms have become chronic. And if they have persisted for in excess of one year and have become chronic, in essence, it's permanent

Q. That same paragraph states, your impression, that there is a causal association between this neuralgia and the intraoperative compression of that nerve as sustained in 1992.

A. Yes. That's a clinical judgment.

Q. That's clinically based on the information that the patient provided in terms of history --

A. Yes.

Q. -- and the testing that *you* have talked to us about?

A. Yes.

Q. You don't state here any opinion or impression as to whether there was any negligence associated with the surgery?

A. No, not at all.

Q. You're not going to venture a comment on that issue?

A. No, not at all.

Q. Do you have an opinion there was no negligence?

MR. CZACK: Objection.

A. I don't think that's relevant. I'm not aware of how his head was positioned at the time of surgery. I'm not aware of whether there are certain maneuvers that people do during a lengthy procedure to minimize prolonged contact with any one particular part of the body with any potential pressure site. Therefore, I don't feel that I'm competent, in fact, to pass on that issue.

Q. Based on your experience of having diagnosed and treated patients with compression -- or let's say occipital neuralgia, we'll use that phrase, occipital neuralgia, in your practice, has it been your impression that

occipital neuralgias only occur when there has been negligence or malpractice?

A. No.

MR. CZACK: Objection. You said occipital neuralgia; right? That's what you limited that question to?

MS. VANCE: I referred to occipital neuralgia.

A. Yeah.

Q. That's based on your experience of treating?

A. Sure. The answer is no.

Q. If I were to be more specific and say a greater occipital neuralgia, what has been your experience that patients experiencing a greater occipital neuralgia, that those conditions only occur in the presence of malpractice?

A. The answer would be the same.

MR. CZACK: Objection.

A. There are many reasons why. We have gone into this.

Q. There are many reasons that are nonnegligence reasons --

A. Yes

MR. CZACK: Objection.

Q. -- for patients to develop symptomatology similar to what Mr. Bisler has complained of?

MR. CZACK: Objection.

A. Correct.

MS. VANCE: I don't think I have any further questions for you, Dr. Mars.

To the extent that you do undertake any further research or investigation into any of the issues that we've covered here today such that your opinion would either be changed or better informed or differently informed than what we have expressed here today, I would ask for another opportunity to redepose you just on that limited new material you have developed between now and the time of trial.

MR. CZACK: Based on that limited condition, that's fine.

MS. VANCE: I'm not going to plow back over old material. Just to find out if he s done anything new between now and the trial date.

THE WITNESS: If I have another deposition, a pretrial deposition, then I would indeed make a Medline search, and I will be more

than happy to provide you with a photocopy of anything that is generated by that search.

MS. VANCE: I'm only interested in another pretrial deposition if ysu indeed undertake any sort of further work or investigation, if you will, into the issues in this case to prepare yourself for trial, anything that you do differently between now and the time of trial.

THE WITNESS: Right.

MS. VANCE: Be that literature search, Medline work, further examination of the patient, anything along those lines. That's what I'm interested in.

THE WITNESS: That's what I will do.

MS. VANCE: If you don't do any of these things, I don't need to see you until trial.

THE WITNESS: Fair enough.

MS. VANCE: If you do do these things, let me know.

THE WITNESS: No. I will let Mr. Czack know, and he will let you know.

MS. VANCE: That's exactly right, Thank you.

THE WITNESS: My pleasure. I will waive.

(Deposition concluded at 5:49 p.m.)

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CERTIFICATE

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

I, Karen M. Patterson, a Notary Public within and for the State of Ohio, duly commissioned and qualified, do hereby certify that the within named HAROLD MARS, M.D. was by me first duly sworn to testify to the truth, the whole truth and nothing but the truth in the cause aforesaid; that the testimony as above set forth was by me reduced to stenotypy, afterwards transcribed, and that the foregoing is a true and correct transcription of the testimony.

I do further certify that this deposition was taken at the time and place specified and was completed without adjournment; that I am not a relative or attorney for either party or otherwise interested in the event **of** this action.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal of office at Cleveland, Ohio, on this 2nd day of September, 1998.

Karen M. Patterson, Notary Public
Within and for the State of Ohio

My commission expires September **27, 1999.**