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THE COURT OF COMMON PLEAS
WASHINGTON COUNTY, OHIO

MARILYN F. DODD,

Plaintiff,

vs. CIVIL ACTION
NO. 03-PT-24

ABDI SEYED GHODSI, M.D. and
MARIETTA MEMORIAL HOSPITAL,

Defendants.

The deposition of ABDI GHODSI, M.D., taken upon oral examination, pursuant to notice and pursuant to the Ohio Rules of Civil Procedure, before Annette R. Lovejoy, Certified Court Reporter and Notary Public in and for the State of West Virginia, at 10:07 a.m., Thursday, July 24, 2003, at the office of Abdi Ghodsi, M.D., St. Joseph's Hospital Physicians Office Building, 600 18th Street, Suite 606, Parkersburg, West Virginia.

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ABDI GHODSI, M.D., WITNESS, SWORN

EXAMINATION

BY MS. TRESL:

Q. Hi, Dr. Ghodsi. We've already met. Jacqueline Tresl, attorney for Ms. Dodd. Have you had your deposition taken before?

A. On this matter?

Q. No, at any time.

A. Yes.

Q. Let me just review a few basic things and then we'll start with the questions. First of all, when you answer your question, if it's yes or no, would you say yes or no rather than nodding or shaking or saying, uh-huh or huh-uh?

A. Okay.

Q. I will assume that you understand my question when I ask it if you answer it. If you don't understand it, will you tell me, I don't understand, and ask me to repeat it or rephrase it?

A. Okay.

Q. So you understand if you answer me, I will assume that you understood the question?

A. Yes.

Q. State your name and address?

A. Abdi Ghodsi, G-H-O-D-S-I. Do you want my home address?

Q. Please.

A. 5509 11th Avenue, Vienna, West Virginia, 26105.

Q. Are you currently associated with any other physicians?

A. I am associated with Dr. Khosrovi, who's a neurosurgeon here in town. We share office expenses and employees.

Q. Are you associated with Dr. Gold, also?

A. We share call and we share some office expenses together.

Q. You personally aren't incorporated or have any organization related to --

A. No.

Q. How long have you been involved with Dr. Khosrovi?

A. Three years.

Q. And Dr. Gold?

A. Three years.

Q. You said you've had your deposition taken before. Can you tell me in what

situations?

A. I've done a number of Workers' Compensation depositions.

Q. So in those cases you were serving as an expert?

A. Yes. I had seen the patient and they wanted my deposition regarding my treatment of a patient.

Q. So you were commenting as an attending physician in some of them?

A. Yes.

Q. About how many depositions have you given for Workers' Compensation?

A. Probably about four or five.

Q. Were they all here in Parkersburg, Marietta area?

A. Yes.

Q. Were any of them related to the vertebroplasty or osteoporosis or anything related to this case?

A. No.

Q. Have you ever been a defendant in a case?

A. Yes.

Q. How many cases?

MS. CLOUSE: Note an objection, but you can answer at this point.

A. When you say, defendant in a case, can you --

Q. Were you named on the complaint?

A. Yes, I have been.

Q. How many cases were you named on the complaint?

A. Including this one, three.

Q. Can you just tell me briefly about the two previous -- do you know?

MS. CLOUSE: Again, note an objection, but you can answer.

A. Had a malpractice suit filed last year regarding a lumbar spine surgical case and that has been since been dismissed. I did have a deposition for that case and there was one suit that's pending, a lumbar spine instrumentation case.

Q. What kind of instrumentation?

A. Fusion.

Q. Was that following vertebroplasty or kyphoplasty or was that independent of anything else?

A. It didn't have anything to do with vertebroplasty.

Q. What about that malpractice that was dismissed, did that have anything to do with vertebroplasty or kyphoplasty?

A. No, a diskectomy.

Q. Do you have a caption or can you tell me something that the party -- the plaintiff in this one that's pending?

A. It's Dodd -- no, I'm sorry. It's Rousch.

Q. Can you spell that?

A. R-O-U-S-C-H.

Q. When was that filed?

A. I'm not sure. It was last year. It would be in Wood County.

Q. Have you ever served as an expert witness in a case?

A. No.

Q. Have you ever been contacted to serve as an expert witness?

A. Informally I have, but I have not reviewed any cases.

Q. Did you decline when you were asked

informally?

A. It was a generic kind of -- would you like to do this and I said, no.

Q. Your CV, I think we have it. Did you give it to me? Do you want to tell me then briefly about your medical background, your schooling, that sort of thing?

A. I did my undergraduate at the University of Iowa. I graduated in 1988, bachelor's in chemistry. I did my medical school at University of Iowa, started in 1989, completed in 1994 and I did my residency at the University of Iowa hospitals and clinics in neurosurgery, completed in July 2000.

Q. Are you board certified?

A. No.

Q. Have you sat for the certification?

A. I have completed the written aspect of it. The oral part is still pending. It needs to be done within five years of completing residency.

Q. How many times -- did you pass on the first time with the written for the board certification?

A. Yes.

Q. Have you taken the orals and not passed or have you not taken the orals?

A. I have not taken them.

Q. Have you written anything in the medical literature?

A. Yes.

Q. Can you tell me about that?

A. I think it may be best if you look through them. There's a bibliography on the second page.

MS. TRESL: If I can just have a minute.

MS. CLOUSE: Off the record for a second.

(Break.)

BY MS. TRESL:

Q. This CV is current as of when? Is this current as of today? Has anything changed on this CV?

A. No, it's current.

Q. I can assume then that you are still currently a member of all these societies on page 2, neurosurgeons, gene therapy?

A. I'm not an active member of the American Society of Gene Therapy or the American Chemical Society or the Society of Neuroscience.

Q. You are currently ACLS certified, BLS certified?

A. Yes.

Q. I believe the answer to Interrogatory already answered this, but let me ask it for the record. You have never had your license revoked or privileges revoked?

A. No.

Q. And I'm sure the answer is no, but have you ever been treated for drug or alcohol abuse?

A. No.

Q. Do you subscribe to any journals?

A. The Journal Neurosurgery and the Neurological Surgeon Journal.

Q. And do you find articles in there relative to the vertebroplasty and kyphoplasty?

A. Yes.

Q. Can you -- is there one that sticks out in your mind or several that stick out in your mind as having been very helpful in the past or that you continue to reference today that I

could look to?

MS. CLOUSE: Objection. If you can think of any, you can answer.

A. There's one, but I can't give you the reference that -- I just recall off the top of my head. It's the only one I really recall.

Q. What do you recall about it?

A. It was out of South Korea and they reviewed their cases and talked about their successes and problems.

Q. Did you review that article for today's deposition?

A. No, I haven't.

Q. Do you own any text books?

A. Yes.

Q. Do you know the titles of those?

A. Yes.

Q. May you tell them to me, please?

A. I think I can provide you a list of them. They are really too numerous for me to even remember off the top of my head but if you like, I can provide a list to you.

Q. Is there one or two that you find especially reliable that you turn to for

neurosurgical questions?

A. I use surgical text from Schmidek Sweet frequently. There is a spine book that I use with Dr. Menezes as the editor with Dr. Sonntag. There's a handbook from Greenberg that I use frequently. There is an operative atlas and description by Kemp, K-E-M-P, that I use once in a while. Those are the main things.

Q. Do you consider those reliable text count on the information you read in them?

MS. CLOUSE: Objection. You can answer.

A. I certainly think that some of the stuff in there is valid. I certainly don't trust everything it says. A lot of what you find in text books is people's opinions and anecdotes, but it certainly gives you things to think about and compare.

Q. What about teaching? Have you done any teaching about osteoporosis, fracture of the vertebra, kyphoplasty?

A. I haven't done any teaching on that, no. You are talking about in a formal educational --

Q. Even informally I suppose if you have residents assigned to you or someone shadowing or someone you are mentoring. I suppose in any context really.

A. Patients certainly I would be teaching, but other than that, nothing that sticks out in my mind in a formal session or even in an informal session.

Q. Is there anything that you can point me to that you relied -- and this is going back a ways -- to your care and treatment for Ms. Dodd, an article or reference or text book that you referenced specifically in her care?

A. No.

Q. You brought with you today the medical records; is that correct?

A. Yes, from Marietta Memorial Hospital.

Q. In that folder you have?

A. This is my clinical chart.

Q. Is that all the office records of Ms. Dodd, that hopefully I have?

A. Yes.

Q. Is there anything else in there other than medical records?

A. No.

Q. Any notes that you've taken to prepare for today?

A. No.

Q. What have you reviewed for today's deposition? I assume it's in front of you.

A. I reviewed the chart and some of these records.

Q. Have you reviewed anything else?

A. I've reviewed Greenberg.

Q. That would be the text book?

A. Yes.

Q. What part of Greenberg did you review?

A. The vertebroplasty section. That's all I reviewed really.

Q. Did you look at any of her imaging studies or MRI or CAT's, any of the films?

A. Not recently.

Q. When is the last time you reviewed them, more or less?

A. I think I briefly looked at one of the images about a week ago.

Q. Which of those did you look at about a week ago?

A. I think it was the CT scan after the operation.

Q. The 25th?

A. Let me check the date, yes, the 25th.

Q. Why did you review that image particular and none of the others?

A. I was reviewing with counsel.

Q. You did not review any of the other images then, just the one on the 25th?

A. No.

Q. Did you review any of the images since the time you treated Ms. Dodd, which I believe you said is April 24 up until a week ago? In other words, when you received the complaint, when you first understood that Ms. Dodd was having continued troubles, did you review anything between then and last week?

A. Let me understand, from the time that the suit was filed until today?

Q. From April 24, which is the last time you saw her because I assume --

A. From April 24? I certainly reviewed things back on April 24, but since then I have not reviewed the images except one week ago when

I briefly looked at the CAT scan.

Q. Did you discuss Ms. Dodd and the lawsuit or the particulars of her care and treatment with anyone other than your counsel since April 24, 2002?

A. I cannot remember that. I can tell you that since the lawsuit was filed I haven't discussed it with anybody.

Q. I want to spend a lot of time over the records because they are very easy to follow here. Let's start with your office record of September 19, 2001. On page 2, the bottom paragraph it has the lumbar spine MRI as well as plain x-rays, and I won't read the rest of it to you because you can read it there. First of all, when was that lumbar spine MRI taken and who took it?

A. The lumbar spine MRI was done on December 27, 2000, in Marietta Memorial Hospital.

Q. December 27, 2000, at Marietta Memorial. Is that what you said?

A. Yes.

Q. So at the time you were writing your

note, you were -- this review of the lumbar spine MRI was nine months old; correct?

A. Yes.

Q. Would you have been able to see on that MRI that was nine months old any anatomical defects that might have made Ms. Dodd prone to leakage of cement?

A. No.

Q. Did you review that MRI with an interventional radiologist?

A. No.

Q. Could pathological changes have been going on that you would not have necessarily seen on MRI?

A. What do you mean by pathological?

Q. Cordical defects, weaknesses that would allow the cement to leak out?

A. Are you speaking generally?

Q. Yes.

A. About an MRI?

Q. Yes.

A. Yes, I think you can see them sometimes.

Q. And sometimes you cannot?

A. Yes.

Q. Is that reliable to rely on an MRI that is so old before you make a decision to do a vertebroplasty?

A. Sure. I think you have to go with the exam, too. If there's changes on the exam that doesn't make sense, you may need to get more recent imaging.

Q. So tell me about your exam that led you to believe you didn't need to get more recent imaging?

A. She did not have any deficits in her legs, any findings of neurological deficit referable to a nerve root or to an impression of the spinal cord.

Q. So therefore, a fresh MRI would not have probably shown you anything new?

A. I don't think that necessarily follows, but it could have shown something new, but I have to go by the patient's symptoms and findings on exam, whether I need to order a new study or not.

Q. And you felt that you didn't need to order a new study?

A. No, I didn't.

Q. Routinely how often do you order newer studies for patients? Is it a very rare thing that you feel you need to order new imaging studies?

MS. CLOUSE: Objection.

A. I think if the quality of the imaging is poor I order new studies. If the patient's symptoms have changed since the previous imaging, I order new study. If I find something on the exam that doesn't correspond to that imaging, then I will order new imaging.

Q. So we can say then that Ms. Dodd's symptoms were compatible with her MRI from December 22, 2000; correct?

A. I cannot answer that when you say compatible.

Q. Consistent with?

A. Can you rephrase the question?

Q. Sure. You said that as long as the symptoms you were seeing did not contradict, let's say, the MRI, the older study, you didn't feel that you needed to order a newer study; correct?

A. Yes.

Q. So therefore, can we say that the symptoms that Ms. Dodd was having were compatible with the MRI in December 22, 2000, which is why you didn't need to or feel the need to order a newer study?

A. I certainly thought there were some findings on the MRI that could explain her symptoms.

Q. I'm assuming that this is a typo, but while we're on it, the MRI from the 26th, comparison is 12/27/01. I'm assuming that that's a typo, that there is no MRI of 12/27/01?

A. It's supposed to probably say 2000, I would assume.

Q. So there was not a study done on 12/27/01, that we don't have a record of?

MS. CLOUSE: To your knowledge anyway.

A. I have no knowledge of that. I don't think there was. If so, I would expect to have seen it if there was.

Q. Now, this is -- if I can turn your attention to the operative record, the first surgery on the 24th.

A. Okay.

Q. The operative record says, kyphoplasty and many times through your earlier notes you write, kyphoplasty, yet it appears that she had a vertebroplasty.

A. I think it depends on your definition of kyphoplasty. I think by definition now, she had a vertebroplasty because now a kyphoplasty tends to refer to people putting balloons in the bone and then putting the cement in through the balloons, but when a patient has a kyphosis in their spine and you are doing something to either repair that kyphosis, that could be a kyphoplasty. A balloon by itself when you put it in the bone, that's one type of kyphoplasty, but you can go in and do a big operation to repair a kyphotic and call that a kyphoplasty also. By doing a fusion possibly, that could be a kyphoplasty. I think -- and I should technically have said vertebroplasty.

Q. Because you did not do a fusion in this first surgery; correct?

A. I did not, but by putting cement into the bone -- if you are making the bone stronger,

you may be preventing further kyphosis later and I think maybe that's what my thinking was when I dictated the kyphoplasty, but technically it is a vertebroplasty.

Q. While we are on the technicalities, this was a transpedicular approach, yes?

A. Yes.

Q. Tell me how many vertebroplasties -- and let's just lump in even if you called them kyphoplasties previous to this -- let's just say we're referring to vertebroplasties, not the tamping. How many had you done prior to January 24, 2002?

A. I would say approximately 10 to 15.

Q. Prior to that what had you been doing for patients like Ms. Dodd with those presentations?

A. If I thought the pain was coming from that site, I would -- we could do a fusion.

Q. Why is it -- I'm assuming you felt vertebroplasty is -- will you tell me why do vertebroplasty rather than fusion?

A. I think fusion is an extensive procedure. It requires general anesthesia. As

with any surgical procedure, sometimes it doesn't work and there are some complications and risks. I think the vertebroplasty is done under a local anesthetic and that reduces the risk to the patient.

Q. So is that really the only benefit to doing a vertebroplasty, that it's done under local as opposed to general?

A. It's not as expensive of a procedure.

Q. In what way?

A. It's shorter duration. The patient does not have to be in the operating room as long.

Q. How about invasive? How does it compare to fusion with evasiveness?

A. It's less invasive.

Q. In what way?

A. You don't have to make an incision. It's a percutaneous technique.

Q. How did you learn to do the vertebroplasty? Who trained you?

A. I trained at the University of Iowa.

Q. So they were doing it when you were at the University of Iowa?

A. Yes.

Q. Tell me about that training for vertebroplasties.

A. What specifically do you want to know?

Q. Did you -- was it like a three-month period where any vertebroplasties that were scheduled, they would call you in to do it? Did you oversee 10, do 10, sort of how did it work because I'm assuming there was a training period?

A. You were assigned to certain staff during your residency and if that staff had a case on and I was the resident, then I would assist him with that case and if he put on a kyphoplasty or vertebroplasty, I would do that case with the staff.

Q. During that time were you actually doing them before you were finished or were you just assisting him and he was doing them?

A. In residency you are always an assistant technically even though you are listed as -- you dictate and stuff, you are basically the staff is responsible for the patient in residency assistant.

Q. Did you ever place the needles, let's

say, while you were a resident?

A. Yes.

Q. And the 10 to 15 vertebroplasties you did previous to Ms. Dodd, was that done in residency or on your own here?

A. I think about half of them were in residency.

Q. So you did perhaps five to seven-and-a-half since residency, on your own?

A. Prior to Ms. Dodd's case, yes.

Q. What years were you doing those five to seven-and-a-half on your own?

A. From July 2000, when I came here until today.

Q. Do you consider the vertebroplasty has a high level of risk?

A. I think the risks are low.

Q. How about kyphoplasty, the tamping kyphoplasty?

A. Are you talking about the balloon technique?

Q. Correct.

A. I haven't done those.

Q. So you don't do kyphoplasty?

A. I haven't done one as of yet.

Q. Did you in your residency?

A. I don't recall ever doing one in residency.

Q. Was Ms. Dodd a candidate for kyphoplasty as well as vertebroplasty?

A. I have not looked at the literature really well comparing kyphoplasty and vertebroplasty but just from my reading of journals and stuff, it appears that she would have been a candidate for kyphoplasty also.

Q. Do you know if there's a higher or lower risk of cement leakage with kyphoplasty?

A. I think the people who do kyphoplasty seem to think that it is a lower risk, but I don't know if anybody has shown that in a good study. I certainly haven't heard of a good study that shows that.

Q. Jumping ahead just a little bit, I'm assuming that Dr. Gold also does vertebroplasty since he assisted you in the second surgery?

A. That had nothing to do with assisting me on the second surgery, but he does do vertebroplasty.

Q. Do you know if he does kyphoplasty?

A. I don't think he does.

Q. I believe you answered this in your interrogatories but just to go over it, was there anything that you believe that Ms. Dodd did or didn't do that attributed to the outcome of her vertebroplasty?

A. Are you talking about -- what outcome are you talking about?

Q. The fact that -- the complications that she experienced as a result of the vertebroplasty?

A. I don't think she did anything to effect the complications, no.

Q. In your September 19 note and your December -- maybe December 19 note, you talk about your discussions with Ms. Dodd in relation to her treatment options, vertebroplasty. Can you recall those conversations that you had with her apart from your office records?

A. I can recall some of it, yes.

Q. Can you share those with me, maybe starting from September. Am I correct that you saw her in September and December 19 and then

January 23, 24? You did not see her between September 19 and December 19?

A. No, I did not.

Q. Tell me what you remember about those conversations, please.

MS. CLOUSE: Do you want him to start with September and sort of work his way through the--

MS. TRESL: If he could. If he remembers the September 19 visit.

A. My recall has a lot to do with the notes that's here. I think after I had reviewed her studies we talked about the options, the treatment options. I thought that she was developing kyphosis and it would probably get worse with time. She was relaying to me that she was having severe pain that was not responding to the treatments that she was pursuing.

I think I talked to her about -- I usually talk to them about two different options, one is to treat the pain and one is to treat the underlying problem that is causing the pain. Treating the pain involves medications,

physical therapy, maybe pain injections and pain blocks, bracing these things can treat the pain and I talked about treating maybe the underlying problem that's causing the pain which were the fractures. I thought there were fractures and that involved two possible surgical treatments. One was the vertebroplasty and one was the fusion.

I did recommend to her that as far as the surgical procedures were concerned, I thought the vertebroplasty was the better option because of the decrease in the amount of anesthesia time and the invasiveness of the procedure and risks and I think she was not sure at that time whether she wanted to do anything surgically and I give her a follow-up appointment in three months and I asked her to call me if she wanted to see me sooner or if she wished to discuss these things any more.

In December she came back and she was having worsening pain, I believe, and I think we again talked about the different options and I think at this point she decided she would like to proceed with the vertebroplasty. I'm not

sure specifically but I usually discuss some of the potential problems that can happen and the hospital stay.

In her case her coumadin that would have to be discontinued and how long afterwards in terms of her recovery, her hospitalization, her follow-up visits, things like that. We usually discuss that but I don't specifically remember the details of that.

Q. Do you remember if she had family with her at either visit?

A. She did not.

Q. You remember that specifically?

A. Yes.

Q. In the first -- when we were going through the first September visit, you talked about that you had -- you had talked to her about vertebroplasty and fusion, can we agree that your records don't discuss fusion or else I just don't see them?

A. I'm sorry. Say that again.

Q. September 19. I'm looking at page 3 and it might be somewhere and I just haven't seen it, but you have told me that you discussed

vertebroplasty and fusion with her and I see here you discussed bracing and vertebroplasty.

A. I probably discussed fusion with her, too.

Q. But we can agree that the records don't reflect that you discussed fusion with her?

A. The last sentence says, I suspect if kyphosis continues to progress you may need a fusion otherwise so I probably would have discussed the fusion with her.

Q. Do you remember anything else about those two visits?

A. Not specifically. I think I reviewed the films with her the first visit. I may have reviewed them on the second visit. I'm not sure.

Q. Do you remember her demeanor during either visit?

A. Nothing stands out in particular.

Q. Can you recall discussing with her the possibility of cement leakage associated with vertebroplasty?

A. I don't recall specifically at those two meetings but that would be my standard that we

had discussed that.

Q. What do you discuss in terms of complications associated with vertebroplasty specifically as part of your routine?

A. I talk about infection, possibility of needing antibiotics or even a surgery if it was an abscess. I talk about possibly losing a significant amount of blood and needing a blood transfusion. I talk about spinal fluid leakage, headaches and possibly needing a drain or a procedure to repair that. I talk about the cement can leak into the blood vessels and cause an embolus to the lung and can be very serious and then I talk about the cement may leak into the canal and cause significant problem with nerve damage and I specifically outline what that nerve damage could lead to, weakness, numbness, paralysis, bowel or bladder dysfunction. I talk about the needle may cause an injury to the nerves or to the spinal cord and bleeding around that area can cause significant pressure on the spinal cord or the nerves and then I talk about the risk of anesthesia like heart attack or a blood clot in

the legs or in the lungs, pneumonia, blood infection, stroke and death. Those are the specific things I discuss with the vertebroplasty.

Q. Let's talk about the first surgery if we could. How many vertebroplasties have you done since January 24, 2002, more or less?

A. Probably about five or ten.

Q. It's not a real common procedure that you do?

A. No, by no means.

Q. Is that because of the area? I mean, in the bigger cities are they doing gobs of them or --

A. I think there are people doing a lot more than here, but I tend to be very conservative and I think most people respond to some conservative measures rather than needing surgery, some therapy or medications. They tend to respond or just give it enough time from the time of the injury.

Q. Tell me why -- let's just kind of go through this and answer my questions as we're reading through it. First of all, I have never

seen any informed consent and I'm sure it exists. You refer to it. I asked for it but we're kind of behind on discovery. If I could take a look at it and then ask for a copy of it or maybe you could put it as an exhibit and it could come with the transcript.

MS. CLOUSE: You mean the informed consent form for the surgery?

MS. TRESL: I'm missing little bits and pieces and I'm not sure why. Thank you.

MS. CLOUSE: If you want to mark that before we're done, we'll just make another copy of it.

(Deposition Exhibit No. 1 marked.)

BY MS. TRESL:

Q. If we could, talk about why you inject barium initially, looking to the first surgery.

A. I look for -- to see where the contrast goes and the main thing I want to look for is that it doesn't fill up the venous complex real well because we may need the cement to go into the vein if the barium strongly fills up the

veins.

Q. Is barium strong enough for contrast medium?

A. I don't know if we were using barium. Sometimes we use isovue. It says barium sulphate. Yes, I think I usually can see it.

Q. With the barium?

A. Yes.

Q. Do you know why a tantalum or tungsten are added to the PMMA, the cement?

A. To make it more radiopaque.

Q. Were either of those added to Ms. Dodd's PMMA, the cement, before it was injected? Am I correct that it's added before it's injected into the cement, the tantalum or --

A. Yes. I cannot recall specifically, but I usually do add them.

Q. Where would I look to see if you did add them in Ms. Dodd's case?

A. The operating room should have some records of that.

Q. Apart from the records that I have?

A. It should be somewhere in here, in the nurse's records of the operating room, I think.

Q. Can you see if you can find that for me?

MS. CLOUSE: Off the record.

A. I can't find the referral to that.

Q. Is that something that is available somewhere and you could get to me?

A. I don't know.

Q. Who makes the decision whether or not to add those either/or chemicals. Is that the surgeon's decision or the hospital?

A. Yes.

Q. So is it sort of like the suite knows when they are going to do a vertebroplasty with you what you want mixed into your -- as kind of like a standing order of how you want your cement mixed so to speak?

A. I think the representatives are there with the company and they assist with those kind of decisions, too. I just usually add it in.

Q. Was one of the assistants from the company likely there for Ms. Dodd?

A. Yes.

Q. Do you remember that there was?

A. Yes.

Q. So we could talk to that representative and that person would likely know?

A. Yes, they may know.

Q. They are the ones that are sort of mixing it for you?

A. No, they cannot touch anything in the operating room.

Q. Do you mix it?

A. The nurse or the surgical assistant mixes it.

Q. Do you always sort of ask for the same mixture or does it vary patient to patient?

A. I think it's about the same.

Q. Which do you prefer, the tantalum or the tungsten, if that's what you use?

A. I don't remember if that's what I used and I don't have any preference. I don't know which one it was.

Q. But it's your testimony that during Ms. Dodd's vertebroplasty you did mix either tantalum or tungsten or something to --

A. I believe I did, yes.

Q. We'll see if we can get to the bottom of that. What size needles did you use for

Ms. Dodd's vertebroplasty?

A. I don't recall.

Q. What size do you generally use for your vertebroplasties?

A. I don't recall. I think they just come in a kit.

Q. So you have like a vertebroplasty kit?

A. Yes.

Q. Do they make it up special according to what you like or is that something that they get --

A. No, it's standard.

Q. From a vertebroplasty company?

A. Yes.

Q. Where do the needles need to be placed in relation to the vertebral body?

A. Within the vertebral body.

Q. Anywhere specifically or just within the vertebral body?

A. I think -- I usually like to place them in the anterior portion of the vertebral body.

Q. Let's talk about this correct -- after adjustment and correct positioning of the needle on both views in the first operative report.

Tell me -- just tell me what you were seeing that caused you to feel that you needed to adjust and correct the positioning.

A. I don't recall specifically but I think on one view I was -- I thought the needle was going too medially so -- on the AP views so I came out and went a little more laterally.

Q. Did you literally remove -- would this be a trocar now or needle?

A. The needle is inside the trocar.

Q. Did you pull out the needle and then reinsert it the way you wanted it to be?

A. Yes. I don't know if I completely pulled it out.

Q. Do you generally pull it out or do you just sort of wiggle it?

A. I generally pull it back to where I can get some give in the needle and I can direct it to the direction I want.

Q. In this case do you remember if you pulled it out so you could get direction or if you pulled the needle out and started again?

A. I don't remember.

Q. It seems to me that it would make

significant difference. If you pulled the needle all the way out and put it back in, you would probably have to use the same hole; correct?

A. Not the same hole, the same entry point.

Q. So the trocar remains in, you pull the needle through it and either pull it in or out of the skin, re-adjust it and put it back in?

A. Right.

Q. How did you know after that adjustment that you had correct positioning?

A. I like to watch the needle go in under lateral view so I make sure I have a good position of the pedicle as the needle goes through the pedicle. Then once I get it into good position laterally I resume fluoro and look at it AP and check to make sure the AP view looks okay.

Q. When you are inserting the needle are you seeing real time visualization or is somebody hitting a foot pedal and getting block views?

A. Combination of both. Sometimes I do continuous fluoro, sometimes I see a picture and

then off and then picture off.

Q. Do you remember in this case which it was?

A. No, I don't.

Q. This operative record says that the fluoro time was 12 minutes, 20 seconds, I'm assuming. Does that give you any idea if it was on continuously or not?

A. It must have been some continuously because that's a long time.

Q. So you are watching real time inserting the needle?

A. Yes.

Q. Just tell me about that. You describe it to me.

A. I stand on the right side of the patient. The fluoro machine is set just in front of me. One part of it is here, one part is on the other side of the patient. My assistant stands there, then the fluoro machine is directly in front of me and I have the needle in and I'm watching the needle there as well as aiming to where I want it to go and using feel. So if I have the needle in my hand, I say

continuous and I watch on the fluoro and then I advance and I watch on the fluoro.

Q. So you were watching and you didn't like the position so you pulled the needle back?

A. Maybe I liked the position on the lateral but when I saw it on AP I didn't like it so I pulled it back.

Q. In the vertebroplasties that you've done, how often does it happen that you have to adjust and correct the positioning?

A. I don't have a big number. I talked about 15 or 20 cases, but I think adjusting because I don't like the view on the AP maybe once or twice. Adjusting because the contrasts seems to go into blood vessels, I've done that numerous times. I've even taken needles out and put them back in different angle.

Q. How many times has that happened?

A. Maybe more than 30 times, maybe less than 10. I don't know. I can't tell you.

Q. Is this a biplanar fluoroscopy or how would you describe the --

A. It's a single plane fluoroscopy but you have to swing it around if you want to get an

AP.

Q. Do you have at your disposal a continuous CAT scan fluoroscopy -- I guess is one technique?

A. No.

Q. But you have heard of it?

A. I have heard of a CAT scan and I've heard of a fluoroscopy, but I've never heard of a CAT scan fluoroscopy.

Q. Tell me what caused the leakage of the cement on the left side that you are seeing there. However, on the left side there was leakage of cement. Do you know what caused that?

A. You're looking at the L-2 level?

Q. Yes.

A. You are asking my opinion?

Q. Yes.

A. I think when I probably adjusted the needle there was some tracks and I think the cement may have came up along the side of the needle that leaked through a tract that was created by the needle.

Q. Sort of like as the needle was going up,

it was like ripping? Explain that to me, creating a tract.

A. Let's say I put the trocar in with a needle and I don't like the position and I pull it out.

Q. The needle?

A. Both.

Q. The trocar and the needle?

A. Yes, and then I replace it. Now, if I put cement into that second position, the tract from the first path could -- potentially cement could leak back up that tract. That's really the only thing I can put together with this when I think about the case is that maybe the cement leaked through the previous tract.

Q. Is that -- I'm going to guess it's not common since you've only done 20 or 30 vertebroplasties. It's never happened to you before?

A. The cement leaking?

Q. Into the tract?

A. I can't tell if it's in the tract. That's my theory, but yes, I've had cement leak before. I recall one case where cement has

leaked before.

Q. Before we get to that, is there any literature that talks about the tract and the effect of pulling out and putting it back in?

A. Not specifically about that. I haven't read anything specifically about that.

Q. So knowing that, do you still do that? I mean, would you -- having had the experience of Ms. Dodd, would you still pull the trocar and the needle out, reposition and insert it with the thought that there may have been a tract that the cement can leak through or into?

A. I still do them.

Q. That same way?

A. Yes. If I have to readjust the needle I go ahead and if I have a good positioning of the needle and inject cement in, yes.

Q. Is it reasonable and prudent to inject cement or continue with a procedure when you know that you have cement leakage?

A. I think if you are getting leakage of cement in the canal you need to stop.

Q. Looking at the CAT scan of the 25th, did we have leakage into the canal?

A. At the L-2 level?

Q. Anywhere.

A. Yes.

Q. Did we have it at the L-2?

A. Yes.

Q. So looking at the CAT scan, there was leakage of cement in the canal so then it was contraindicated to continue to inject cement. Is that what you are saying?

MS. CLOUSE: Objection.

A. No.

Q. Explain it to me then.

A. I don't exactly know which part you want me to explain.

Q. I said should you continue to inject cement based on what you just said and you said, not if it's leaked into the canal, then I assume you stop the procedure?

A. No, not necessarily.

Q. You tell me.

A. If you have the needle in and you are injecting cement and you see it, you visualize that it's going into the canal you need to stop that injection. You need to readjust the needle

or not put it through that area. In this case, I have two needles in at the same time. One on the right and -- they were both in position, they pass me the cement. I inject one side then I inject the other side and then I inject the other side. So I inject in the right and then I inject to the left and I think there's some leakage, then I don't inject to the left anymore.

Q. But you continue injecting?

A. If I inject through the right and it doesn't leak, I may continue to inject.

Q. Do you have in the back of your mind that it may have leaked into the canal?

A. No, I had no idea it leaked into the canal on this case.

Q. But if you had an idea that it leaked into the canal, then you would not inject anymore cement. Am I understanding that correctly?

A. If I thought that the cement had leaked into the canal, I probably would not inject anymore.

Q. Did you think about maybe getting a CAT

scan before you proceeded injecting more cement?

A. No, I didn't think about getting a CAT scan.

Q. Do you know when the dura was torn? Was it during the first surgery or the second?

A. Probably the first.

Q. Explain that to me.

A. I think the needle must have just gone medially along the pedicle and hit the dura. That's the best I can think of it. That's how -- when I tried to think what happened, what went wrong, that's what I thought.

Q. That would be when you were adjusting and correcting?

A. Yes.

Q. So -- and then was the tract -- so where was the tract in relation to the tear in the dura?

A. I think the needle probably went into the dura and then came out the other side of the dura and then went into the vertebral body. Do you need me to get a model?

Q. I was actually going to ask you to draw me a picture but a model would be great.

A. I don't know if I have a model with the dura or not.

Q. Give us something that we can memorialize.

A. Let's say that this is the body and this is where you want the cement to be. This is the pedicle. This is the sac, the dura sac. The nerves or the spinal cord are in here and these are the laminas of the bone. The needle comes in through here and goes into the body. So the two needles you put in from this side go into the body and you inject the cement in the anterior portion of the body. What I think happened in Ms. Dodd's case is that I had the needle pointed too medially in one of the passes and the needle would have probably gone through the dura and was here like this (indicating) and when I took it out and adjusted it and got it back to where I liked it, it was in the pedicle and potentially when I injected through here, maybe the cement leaked out through this tract into the sac.

Q. So there were actually then two holes in the dura?

A. There has to be by definition.

Q. When you pulled it back, is it possible that there were even two more holes or do you assume that it went and out through the same holes or it pulled back through the same holes?

A. I only saw one hole when I went in for the second surgery and that would be the entry hole.

Q. What did you see when you saw the hole? I mean, literally a hole?

A. I think I just saw spinal fluid leaking through an area. The dura is a tough material to kind of -- like a ligament almost and I saw the spinal fluid through that hole so I just put a stitch through it.

Q. Where is the thecal sac in relation to that?

A. It sits like this.

Q. So the cement was actually --

A. This is the sac. This is the clonus.

Q. And the thecal sac is --

A. The dura is the thecal sac.

Q. That's the same thing?

A. Yes.

Q. When you saw cement butting up against the clonus, the cement was actually in --

A. I didn't see cement butting up against --

Q. Let me get the exact language. The butting to the conus and the --

A. Conus, C-O-N-U-S.

Q. And the butting cauda equina. So is -- I think that's the second operative note.

A. In the second operating note there was cement here because I did open this sac up and look inside.

Q. The cement was inside here or butting against this?

A. It was in the intrathecal sac touching the conus.

Q. But not inside the conus?

A. I don't think it was inside the conus, but I didn't open the conus to look. That's the spinal cord and you don't want to touch that.

Q. Thank you. Can we mark that as an exhibit and have it for --

(Deposition Exhibit No. 2 marked.)

BY MS. TRESL:

Q. I'm assuming that this is an H&P, 1/24.

A. Yes.

Q. If I can refer you to the second page, it says here that, I have also discussed the potential possibility that the procedure cannot be done because of cement leakage.

A. Yes.

Q. Now, when a lay person like me reads that, that sounds like, gee, I see cement leakage in the first surgery so I'm going to stop and I can't proceed but you are telling me --

A. I am referring to cement going to the veins primarily.

Q. And you can visualize that under fluoro?

A. Yes.

Q. But you can't visualize it going into the dura?

A. I think potentially you can. If you see the cement leaking into the canal, you can see that.

Q. But in this case you didn't?

A. I didn't see it leak into the canal. I

saw some leakage and I thought it was leaking into the psoas.

Q. But did that concern you?

A. That's what I was referring to when I said I saw leakage.

Q. Did it concern you that it was leaking into the psoas muscle?

A. Yes.

Q. But not enough to stop the procedure?

A. I didn't inject through that side anymore.

Q. But it seems like if you were injecting on the other side then --

A. Can I get that back a second. The psoas muscle sits right here. Just like the needle can go this way, it can go this way and it can break the bone here and here and cement can leak into this the psoas muscle.

Q. Why did you choose in your mind that it was leaking in the psoas muscle?

A. Because I switched fluoro to AP and I looked and the leakage looked to the side of the vertebral body.

Q. Did you switch fluoro in a way that

would have allowed you to see if it was also in the dura?

A. On the lateral you can't tell because you say, well, if the cement is sitting here or here there's no difference, but if you switch to AP, then you can tell if the cement is here or here. I switched to AP and saw that cement had leaked here. I thought everything was in the psoas. I didn't think there was anything in the canal.

Q. Did you look to see if there was anything in the canal?

A. To the best of my ability I looked, yes.

Q. But we can agree there was cement in there later on CT scan?

A. Yes, and I went back in and I saw the cement with my visual eyes on the second surgery. I visualized the cement in the canal, yes.

Q. So I guess I don't understand why when you were switching the fluoro looking from different directions you saw it in the psoas muscle but you didn't see it in the dura and yet you should have been able to see it both, I

believe is what you said.

MS. CLOUSE: I'm going to object just because I think he's explained to you a couple of times now what he thought he saw and --

MS. TRESL: Go ahead and answer.

A. I didn't think I could see any cement in the canal.

Q. Did you have the ability, did you say, gee, I'm going to switch it and I'm going to look and see if it's in the canal?

A. Yes.

Q. And you looked?

A. And I didn't think it was in the canal.

Q. Because you didn't see any in the canal?

A. I thought the leakage was in the psoas. I thought I had seen some leakage and I looked on the AP and there was a lot of cement or -- I'd like to just clear something up, though, because the cement you can see on the fluoro but the dye, you can also see on the fluoro. Sometimes you can think that's cement but it's actually dye because we do test inject dye and

that's one of the notes you'll see on one of my dictations. I say, I am not sure if this is cement in the canal or not. The reason I'm sure it's cement in the canal because I went back and looked and there was cement in the canal. I thought maybe it could be dye in the spinal canal. Could it be dye around the conus? That could have easily been dye rather than cement, but I took a good look and I did not think that there was any cement in the canal.

Q. But just let me be clear because, you know, sometimes if you think if you've solved a problem and you see where the problem is coming from, sometimes your mind just thinks and that's kind of in a different direction. So logically I would think if I were in there and I saw that there was dye on this side -- I mean, cement on this side, I wouldn't necessarily think to look that there was also cement on the other side, but your testimony is that you looked and you knew that there was no cement in the canal?

A. In my mind I didn't think there was any cement in the canal.

Q. Do you know if all these images are

available because I have not been able to get them? Is there records saved of what you were seeing?

A. I think you'll have to check with the hospital, what they say.

Q. I did.

A. Usually I specifically ask for some pictures saved. I say, save that picture for me and then at the end I say, print all the pictures for me. Usually if I ask them to save something, they print it for me or put it in the records but I don't know if they keep a tape, a running tape or anything like that. I don't believe there is anything, but you'll have to check with the hospital.

Q. What they've told me is that there are three films that you requested of -- I believe it's the vertebroplasty at each level. That's what we have or that's what they say they have. So routinely you don't keep -- when there's questions like this, you don't ask them to save the continuous real time as you are taking it?

A. I don't know if they have a capability of doing that or not.

Q. Thank you. I believe I understand now. So you finished the surgery and tell me what you thought about the vertebroplasty when you completed it?

A. I was very satisfied with it.

Q. Why?

A. Because I had got a good amount of cement at all three levels. I had basically achieved the goal that I had set out to do in the surgery, to get an adequate amount of cement in each level to bolster it up.

Q. When you were doing the other levels did you have any idea that there was any cement leakage or any difficulties?

A. No, in fact, the other two levels went very smoothly.

Q. So presumably Ms. Dodd goes to the recovery room?

A. Yes.

Q. And if she begins to be recovered there's some difference in the weakness in her ability to push against the nurse's hands; correct?

A. Pull up.

Q. At that point did you begin thinking maybe there was some neurological deficit or what went through your mind when the nurses told you that?

A. Well, you immediately think about what could potentially be wrong and the most common reason is the needle hit a nerve when you put it in and the nerve is stunned or inflamed. You think about bleeding potentially but usually that doesn't effect just one nerve root. She seemed to have mainly one nerve root that was a problem.

Q. So does that make the reasonable neurosurgeon suspect that you stunned a nerve as opposed to bleeding?

A. I thought that's probably what had happened. I thought maybe the needle had hit the nerve that was going down her leg or hit the last of the conus and that was what was causing the weakness in the leg.

Q. Did you think at that time that perhaps it was because of leaking cement?

A. I may have. I'm sure it must have gone through my mind because you go through a

differential of what -- everything that could potentially have happened wrong. So I'm sure I thought about it, that it could have been cement, too, yes.

Q. If you think about it and you are not sure, is there a way to determine if it's cement versus that a nerve is stunned?

A. I think you can get some x-rays and you can get the CT scan and the MRI.

Q. Did you consider getting a CT scan or MRI?

A. I put her on some steroids and I thought if she's certainly not improved with the steroids I would get a study.

Q. Was there any reason not to get a study and put her steroids at the same time?

A. I can't think of any reason other than, you know, I can order thousands of studies on one patient in the hospital. I can order a CT on them everyday when they have brain surgery but I don't because you just go by your clinical judgment and try -- what's the ideal test for a brain study, it's an MRI. Do you want a MRI on a patient every day that they are in the

hospital just because they had surgery, maybe you missed a little bleeding, do you get MRI's on them every day or do you examine them and if something goes wrong, something changes maybe you order a test and then what test do you order? Do you order the CT scan which maybe not as accurate but it's quicker and less costly and you got to use your resources appropriately. I think what I thought is that, give her a little bit of time, give the anesthesia to wear off. Sometimes anesthesia can lead to some exaggeration of weakness, give her some steroids. I thought if she got better then we could continue to follow her, but if she didn't get any better I would get some studies.

Q. But we can agree that you knew that cement had leaked?

A. Had leaked into the psoas muscle.

Q. There had been some cement leakage?

A. Yes.

Q. And we can agree that she had some neurological deficits as she was being recovered?

A. Yes.

Q. So can we agree that it would be reasonable to get a CAT scan to see if the cement was causing the neurological deficit?

MS. CLOUSE: Objection. You can answer.

A. No, I don't think it would be reasonable.

Q. If you find that -- let's say that you know that cement has leaked and that it's causing a neurologic deficit. What would the reasonable neurosurgeon do knowing that?

A. I think treat her with steroids, give her some time, see if she would get better. The study that I have seen regarding this is that as many as 30 percent can leak some cement into the canal. The majority are not symptomatic.

Q. But for those that are symptomatic, what does the reasonable neurosurgeon do?

A. I think you try to figure out what's going on.

Q. How do you try and figure out what's going on?

A. With the examination and appropriate imaging.

Q. But in this case you didn't get the appropriate imaging until the next day; correct?

MS. CLOUSE: Objection.

A. I did get x-rays in the recovery room.

Q. Would they have shown where the cement was?

A. Yes.

Q. So the x-rays that you got on the 24th, did they show what the CAT scan confirmed on the 25th?

A. I don't remember exactly. I don't have a note written up for that day.

MS. CLOUSE: You can look at the x-rays if you want.

MS. TRESL: I'm looking at this. The only one I know from that date but I don't know if that's correct or not.

MS. CLOUSE: I don't see one either. I'm sorry.

THE WITNESS: Do we have those films?

MS. TRESL: I do have those

films, actually not in my possession, but I have copies of those films.

THE WITNESS: It says, spine, lumbar, two or three views.

MS. TRESL: For the record, we're looking at Exam 331967 spine, lumbar, two or three views, vertebroplasty at OR, date of exam, 1/24/01. I think that would actually be 1/02, wouldn't it?

BY MS. TRESL:

Q. Is it your testimony then that this series of films would have showed you whether or not there was leakage into the canal?

A. Potentially they can show you.

Q. We know on the 25th there was cement in the canal, so why then would this one not have showed us what the CAT scan did?

A. Because the x-ray is not has good as the CAT scan.

Q. But you relied on this to tell you whether or not there was cement in the canal?

A. I don't know if I relied on that for that. I can't say I relied on that to tell me

there was no cement in the canal. I thought the appropriate treatment was give her steroids, give her some time to see if she would have any recovery.

Q. What if you knew these films came back on the 24th, an hour post-op and you saw there was cement in the canal coupled with her neurological deficits. What would the reasonable and prudent treatment be then?

A. I think there are different potential treatment options. I think one is if you get the study and you see something, you can go in and explore it, one is you can leave it alone and see if it gets better, treat her with steroids and time, which is the course we followed after we had the CT. We discussed it with Ms. Dodd. We spent a lot of time talking about what we could do. I didn't know if the compression would make it any better -- decompression would make it any better. I really wasn't sure and I was worried that she would be worse.

Q. Can we agree that Ms. Dodd was taking a lot of pain medication post vertebroplasty until

the time you went in to do the decompression?

A. Can we agree that she was taking pain medication? Yes.

Q. Did you feel that she could really understand and give informed consent?

A. Absolutely.

Q. Based on what?

A. Based on my conversations with her. She was very elusive. She weighed all the options. She asked all the appropriate questions.

Q. So is it your testimony then on the 24th when you explained to her and the family that there was cement leakage, you gave them the option of going --

A. I don't know if I explained that to them on the 24th.

Q. Talk to me about the discussion you had with Ms. Dodd on the 25th, on the bottom paragraph where you talk about -- I have discussed with her potential option for surgical exploration and removal, et cetera. Talk to me about that.

A. I think -- I thought that there may be some cement in the canal. The cement looked

very suspicious for being inside the dura. Usually the leakage would be outside the dura. I thought that she had some deficits and there was flexion and the bladder. I wasn't sure if the bladder was related to the procedure or not but maybe. Sometimes narcotics right after the operation can cause the bladder to be weak. So I had a lot of mixed feeling. One option was to go in and try to get the cement off. As neurosurgeons we're trained to rush in there and get the pressure off, but I knew it was right around the conus. I knew there would be significant amount of risk trying to get that cement out of there because I knew it was hard. Cement gets hard almost immediately and she had a very bad complication. She had a foot drop and possibly bladder dysfunction but she wasn't paralyzed and I just didn't want to make anything worse. It was a difficult decision and that's why I discussed it with different people, what to do, what's best to do and I think I gave her the option. I said, can you live with the weakness in the foot and she said, yes, I can live with it. I said, can you live with the

bladder, no, I can't live with that. I said, then it may be worth going in and trying to see if we can make things better.

Q. Did you have the discussion with her on the 25th or the 26th?

A. Both.

Q. Is it more advantageous to do the decompression and/or laminectomy closer to the vertebroplasty or --

A. I don't think there is any convinced literature to say how quickly you do it. As -- intuitively to me, the quicker the better, but generally in spine surgery, if somebody comes in with a bad fracture and they have a spinal cord injury and they are getting better, there is absolutely no indication going in right away. If they are staying the same, there's no indication in rushing in. If they are getting worse, you need to go in there right away and decompress. So this is what the literature tells us over the years, that if things are getting worse, decompress, if things are staying the same or improving, you can take your time and do the operation at a time that's good.

Q. So it's your testimony then that you are not familiar with the literature that says when a patient comes back from vertebroplasty with suspicion of cement leakage, that the reasonable and prudent neurosurgeon gets a CAT scan, determines if there's cement. If there is, takes the patient immediately for emergency decompression surgery?

MS. CLOUSE: Objection, you can answer.

A. You'll need to repeat that. Are you saying there's literature that says that?

Q. Would you disagree with literature that says that?

MS. CLOUSE: Objection, you can answer.

A. I would have to see that literature.

Q. Have you read any studies that say when a patient has a vertebroplasty and the neurosurgeon or the spine surgeon or interventional radiologist has suspicion that there's cement somewhere in there, that the standard of care is to get an immediate CAT scan?

A. I have not heard that study.

Q. So it's your testimony you are not familiar with those guidelines?

MS. CLOUSE: Objection.

A. I don't think there is such a guideline.

Q. So it's your understanding if a patient has a suspicion for cement in the canal or somewhere in there, if there's a problem with leaking cement, that the standard of care -- although you've said there's different school of thoughts -- but the standard of care, one option that's standard, reasonable and prudent is to treat with steroids and watch the patient?

A. Yes.

Q. Can you point to me any literature that cites that as the reasonable and prudent treatment?

A. No.

Q. Can you sight me to any research that says IV Decadron can reverse the effect of cement in the canal causing a neurological deficit?

A. I think Decadron is to help in

inflammation.

Q. Can you sight me any literature that says that that is a reasonable and standard treatment when the neurosurgeon suspects there may be cement in the canal or the thecal sac or wherever?

A. Are you talking generally?

Q. Any -- specifically or generally, if you know an article, if you know a global study, I'll be happy to reference it and find it.

A. I don't know.

Q. So on what do you base -- because you said intuitively you want to rush in as a neurosurgeon. What is it that you've relied on to say, I'm going to ignore my intuition and I'm just going to just watch?

MS. CLOUSE: Objection.

A. The degree of compression is very important. If the conus is just severely pressed, it's different than if there's cement around the conus. You have to decide what caused the injury. Is it pressure on the nerve that's making that foot or is it possibly maybe the needle hitting it that could have caused it

or is it the heat from the cement that caused the injury. I don't think I can sit here and say that -- what caused it, but I can think of what caused it. I mean, my opinion is the heat caused the injury and the amount of compression was not severe. The patient had one deficit and one nerve root and I think a better option was to discuss all the options with her and give her part of that decision-making process and give her family part of that decision-making process because if I had rushed her emergency to the operating room and she had become paralyzed, I couldn't have lived with myself without having discussed it with her.

Q. When you say that you thought it was heat that had caused it, is that the same as a stunned nerve? Is that the same thing that you are thinking because you told me before you thought the nerve was stunned?

A. No, I said that was one of the things it could have been.

Q. I think you said that was sort of what you were favoring at that point. Now you just told me heat, is that the same thing?

A. No. It could be a needle that hit a nerve.

Q. Right, and part of her differential diagnosis was also that it might be the heat from the cement that was causing her deficit?

A. If the cement leaks into the canal and leaks next to the conus and it heats up, that assumes that it could cause a deficit but I had no idea that cement was next to the conus at that point.

Q. But can we agree that nothing was stopping you from getting a CAT scan on the 24th?

A. No, I could have ordered a CAT scan.

Q. Can we agree that there was an operating room available to do an emergency decompression or laminectomy had you deemed it necessarily?

A. I'm sure they could have. I can't tell you for sure, but I'm sure they could have made accommodation.

Q. When you do vertebroplasties here, I assume -- and correct me if I'm wrong -- that there is sort of a standby OR suite, OR crew ready to do an emergency decompression as

necessary?

A. I wouldn't say that's always the case, but certainly I think they can scramble and put something together.

Q. Have you ever had a patient who after vertebroplasty where you have suspected that there is cement leakage -- have you ever have such a patient upon recovering have a neurological deficit like Ms. Dodd's?

A. No.

Q. Have you not since and not before Ms. Dodd?

A. No.

Q. So this was the first time?

A. Yes.

Q. When Ms. Dodd was recovering and you noticed this neurological deficit since it was the first time for you, did you discuss it with your colleagues?

A. Yes.

Q. Who did you discuss it with?

A. I talked to Dr. Hitchon.

Q. He would be?

A. He's my professor at the University of

Iowa.

Q. So you telephoned your professor?

A. Yes.

Q. About what time on the 24th did you do that, or the 25th?

A. Probably in the evening of the 24th.

Q. What did you say to him?

A. I don't recall specifically but I discussed that I had a patient who was weak after vertebroplasty and there may be some -- I don't remember if it was the 24th or 25th that I talked to him, but when I discussed it with him I said I thought there was cement maybe in the canal and there was even cement in the dura sac and I had asked him what he thought about that, has that ever happened, what to do, what's the best thing, is decompression the best thing, is waiting the best thing and his thought was the injury had been caused by the exothermic reaction, the heat, and he didn't think that taking the cement off would make things better.

Q. So you called him and his advice was just kind of watch and wait?

A. No, his advice was to give the patient

the option.

Q. But certainly he didn't recommend emergent decompression?

A. No.

Q. Did he ask you if you had gotten a CAT scan at that point?

A. I think this is after the CAT scan and the MRI.

Q. So that was the 25th and also after the MRI?

A. Yes, it may have been after the MRI. It may have been after the CAT scan. I can't tell.

Q. When you told him the results of the CAT scan, he continued to think that it may have been heat?

A. This is all one conversation. He thought the heat caused the damage.

Q. He wasn't concerned -- did you know at that point that the cement was butting up against the conus and cauda equina?

A. I'm not sure. I think I did.

Q. And he still thought that it was the heat that was causing neurological deficit as opposed to the cement?

A. He thought the damage was done.

Q. And that going in wouldn't have changed the results?

A. No, he didn't think it would.

Q. Did he think that had you gone in sooner that it would have changed the results?

A. No.

Q. Did he say he didn't think so or did you just not discuss it?

A. I think he told me he didn't think -- he didn't think that whatever I would do would make a difference at that point. He said the injury happened and subsequent to that it probably wouldn't change anything, wouldn't change her outcome.

Q. Was there any point in time on the 24th from the time you did the vertebroplasty to, let's say, 10:00 or 11:00 that night where any intervention would have changed her outcome?

A. In my opinion?

Q. In your opinion.

A. I don't think so.

Q. So once you re-adjusted that needle and make that tract -- presumably that's your theory

-- and re-inserted or inserted the cement, the damage was done?

A. I think the damage was done because of the heat, the heat of the cement on the conus.

Q. But not because of the leakage of the cement per se and that 2.2 --

A. The leakage of cement caused the heat to be there.

Q. I understand, but your testimony is that the 2.2 centimeters of cement butting against those two things, the conus and cauda equina didn't cause a neurological deficit or had very minimal impact on the neurological deficit, it was the heat that did it?

A. I didn't think that the compression was severe.

Q. Did you believe that after you went in for the second surgery on the 27th?

A. No, I don't even think there was 2.2 centimeters of cement there. I know that's what the radiologist said.

Q. So you would disagree with the radiology report?

A. Yes, I do.

Q. Before we move on to the second surgery, who else did you consult among your colleagues since you have never experienced this before?

A. I talked to Dr. Jeff Carpenter in Morgantown. He's a radiologist and he thought he had heard of one case where an anesteologist had some leakage of cement and the patient had become paralyzed. They had decompressed there but it didn't do any good. He said he didn't have extensive experience in that matter.

Q. Was there anyone that you consulted on the 24th or were all of your consultations after the CT scan on the 25th. We'll come back to those but I'd like to know if you spoke with anyone on the evening of the 24th or the afternoon when the nurses were telling you that Ms. Dodd had some neurological deficits?

A. I knew there was neurological deficits myself. I'm not sure. I don't think I discussed it with anybody on the 24th. I may have.

Q. But you don't remember?

A. No.

Q. Was there anesthesia floating around

that you might have discussed it with or a radiologist or did you go down and talk to Dr. Grocell and say, is there anything -- since you discussed the CAT scan with him on the 25th --

A. Yes.

Q. Did you consult -- so your testimony is --

A. I don't remember consulting with Dr. Grocell.

Q. So this was an independent judgment you made on yourself then, that you thought if you watched and waited and treated her with --

A. I said I don't remember talking to anybody about it. I may have.

Q. It seems like -- okay, you don't remember. Second surgery, tell me why Dr. Gold assisted you with the second surgery or was in the room for the surgery because I think you said maybe --

A. I asked him to come take a look.

Q. Why did you ask him to come take a look?

A. Because I was debating whether to take the cement off the conus or not.

Q. What was it about Dr. Gold that would help you in making that decision?

A. I think I just wanted his opinion.

Q. Because?

A. His opinion would go into my making a decision.

Q. So he was actually scrubbed and standing there and viewing what you were viewing and then did you discuss sort of back and forth what you should do as you were freeing up the ends and tacking it up and what not?

A. Yes.

Q. Did you actually see a little glob of cement?

A. Yes.

Q. That was in that area by the conus?

A. Yes.

Q. If Ms. Dodd would say that it was at her request that Dr. Gold came in because she was uncomfortable for the second procedure, do you have any recollection of her asking you to have Dr. Gold do the second surgery with you?

A. No, I told her that I would be discussing the case with Dr. Gold.

Q. When did you tell her that?

A. On the 25th.

Q. So she never said to you, I will agree to the surgery if you have Dr. Gold assist you?

A. I don't think so. I don't remember that at all.

Q. Do you recall the daughter saying that to you?

A. No.

Q. So it's your testimony that on your own decision -- it was your own decision to have Dr. Gold in and look at the cement with you or look at the spine with you?

A. It was definitely my decision.

Q. You discussed about the dura being torn. You didn't see it in the first surgery but it's the second surgery you realized it or from CAT scan you realized it?

A. I think I suspected the dura had to have a tear in it for the cement to be in there.

Q. So on this -- I'm not sure you have a copy of it. I just dug it out. If not, we'll mark it as an exhibit. You probably do. I think it's probably on the front plate where

they do the billing or whatever and there may be one that proceeds this. I don't know. We're going to find out from --

MS. TRESL: Is that the only one you have?

MS. CLOUSE: Yes.

MS. TRESL: Okay. Then maybe that's the only copy. The reason I'm confused is because it starts with the dates of the 27th, although, it admits the 25th and I would sort of think that pathological fracture, I don't know, there should be vertebroplasty or something in there, but when they are talking about here, coding, this complications of procedure, accidental puncture and accidental puncture perforation, are they referring then to the dura tear or the cement?

A. I have no idea you would have to ask them. These are a list of the diagnosis that they do for billing purposes.

Q. I understand. Do you have any reason to believe that the first surgery would be

classified as other specified complications of procedure?

MS. CLOUSE: Do you get involved with the billing?

THE WITNESS: I have no involvement with this at all.

BY MS. TRESL:

Q. If the billing person from Marietta Memorial said to you, the first surgery we classified as a secondary diagnosis, other specified complications of procedure, would you agree or disagree with that coding?

A. I have no knowledge about coding.

Q. Would you agree that during the first surgery on the 24th there were other specified complications of procedure not elsewhere classified apart from billing?

A. You are reading something that doesn't make sense to me. What does that mean?

Q. I don't know. What is the definition of, other specified complications of procedures?

A. Other specified?

Q. Cement leakage. I would say maybe other specified complications would be cement

leakage. I don't know. I'm just trying to determine.

MS. CLOUSE: I'm going to object because he doesn't know what the specified complications of the procedures are?

A. I don't know what that person is thinking when they write, specified complications.

Q. Apart from what that person is thinking, if I said to you, Dr. Ghodsi, on the first surgery there were other specified complications of the procedure not elsewhere classified and I said, can you agree with that statement, what would you say?

MS. CLOUSE: I'm going to have to object because he has to know what -- I mean, he doesn't know what the classification is to know what --

MS. TRESL: I'm not asking him -- I'm not asking him about the classification.

BY MS. TRESL:

Q. If I said to you, Dr. Ghodsi, would you

agree that on the 24th during that procedure there were other specified complications, would you agree with that or not agree with that?

MS. CLOUSE: I'm going to object because I don't know how he can answer that.

A. If you put that away and ask me a specific question about the surgery, I can answer that.

Q. Would you say, Dr. Ghodsi, on the 24th you went in to do the vertebroplasty, were there other complications from the procedure that are not classified, that you had not anticipated?

MS. CLOUSE: Objection.

A. I think a complication happened.

Q. I think we've established then the vertebroplasty needle in your opinion is what caused the dura tear. I think you said that in answer to our complaint; correct?

A. I think that's probably what caused the dura tear.

Q. If you would have done a CAT scan immediately on the 24th, would the dura tear have been picked up?

A. No.

Q. Because?

A. A CAT scan can't see a dura tear.

Q. Would an MRI?

A. No.

Q. So you have to see that with the leaking spinal fluid?

A. Yes.

Q. So there's no imaging that can tell you that the dura was torn?

A. I wouldn't say there's no imaging, maybe you can put radioisotopes into the spinal fluid and watch it in time under nuclear study, see if the water is going out of the sac.

Q. Back to the second surgery, page 2 of 2 and I think we've already discussed this, but let me just make sure. The edges of the cement were freed up, it was impossible to move the cement with any type of force because of risk of injury to the conus. That's from the op report.

A. Okay.

Q. Top of page 2, when you went in with the idea of looking at the cement and seeing about

freeing it up, were you literally going to just try to yank it out of there or were you going to try to chip away or what was your plan if you -- you know, when you talked to Dr. Gold and you said, presumably, there's 2.2 centimeters of cement or less, whatever, you go in there and you see it, you tell me.

A. I don't know if I specifically discussed that, but I thought that if there was a loose piece of cement and I could remove it easily, I would remove it.

Q. So it could have just been sort of like bouncing around in there sort of?

A. Not bouncing around, but loose.

Q. Kind of like a pebble that wasn't adhered?

A. Yes.

Q. But when you went in, was it squished that you couldn't get it out or was it --

A. I think it was adhered to the back of the dura and possibly even outside of the dura.

Q. So almost kind of like entwined into the tissue?

A. Yes.

Q. That's correct?

A. Well, it may have been. I can't visualize that because the conus is in the way. You can't see the back of the conus.

Q. So when you saw that there was plenty of room for the nerve roots, where were you seeing that?

A. Inside the sac.

Q. Inside the conus?

A. No, inside the sac.

Q. Inside the dura sac?

A. Yes.

Q. Did Dr. Gold agree with you to leave the cement alone?

A. Yes.

Q. Did you consult with anyone else about the cement? Did you have did anesthesia or interventional radiologist come by or did you discuss it with anybody beside Dr. Gold?

A. Not anyone there. I may have called Dr. Hitchon during the case. I'm not sure. I talked to Dr. Hitchon on a couple of occasions. I don't think it would have been in the operating room.

Q. Would it have been before or after?

A. It may have been before.

Q. Did you tell Dr. Hitchon what you had seen?

A. I don't remember that. I may have talked to him before that case but not after.

Q. Is it your testimony you talked to him more than one time?

A. Yes.

Q. Can you characterize the other conversations you had with him at all for me?

A. It was basically along the same line, the complication had happened, the cement had leaked and what was the best course of action at that point.

Q. Then did you at some point describe to him what you and Dr. Gold had seen in the second surgery?

A. I don't think I did.

Q. It looks like -- let's talk about two issues. First, it looked like the dura tear was at L-2 and the cement was at L-2. How is it that the cement -- or let's get the CAT scan because I don't want to mischaracterize it. How

is it that T-12 and L-1 also got involved and the psoas muscle? How is it that from that one -- what we presume is the tract leaking, you had so much involvement at T-12 and L-1 or some involvement at T-12 and L-1?

A. I'm sorry. What's your question?

Q. It sounds like the cement leaked from a tract that you made in your opinion when you adjusted the needle; correct?

A. The cement at the conus, yes.

Q. How is it that the T-12 got involved, L-1 got involved and the psoas muscle got involved?

A. I think there was some leakage into the psoas muscle also. There appeared to be some enhancement also at T-12 and L-1, but that could have come from the injection at those levels.

Q. Can we agree it also could have come from cement?

A. Cement, injections, those are cement, too.

Q. So you are saying it could have come from leakage of cement at those levels?

A. Yes.

Q. And you would not have seen those on fluoroscopy?

A. I did not see it.

Q. So theoretically there was leakage at L-1, L-2 and T-12?

A. I don't think there was any -- much leakage at L-1. I think there was some leakage at T-12 and L-2.

Q. So there was leakage on T-12 but you did not see it on fluoroscopy?

A. No.

Q. Can you explain why you didn't see it on fluoroscopy?

A. It was very small.

Q. How did the cement at T-12 and L-1 affect Ms. Dodd's neurological deficit or how has it affected it?

A. I don't think it affected it.

Q. So it's your testimony then that the neurological deficit is almost exclusively happening by what happened at L-2?

A. She only has one nerve root deficit.

Q. So that same nerve root enervates the bladder?

A. No, that's a different nerve root.

Q. What is T-12 or L-1 -- does that affect the bladder?

A. No.

Q. Which one affects the bladder?

A. The sacral one.

Q. What would the T-12 -- she has no neurological deficits relative to T-12 or L-1?

A. The only thing I have noticed is L-5, which is the dorsal flexion on the foot.

Q. Okay.

A. And the bladder dysfunction which would be the sacral or the conus. The conus itself can cause a bladder dysfunction.

Q. So the cement that's butting up against the conus at L-2 could be causing the bladder dysfunction?

A. I don't think it's the cement butting up against it necessarily.

Q. Well, whatever is going on at L-2 against the conus, that could explain the bladder as well as the dorsal flexion?

A. Yes.

Q. If I can refer you to the CAT scan of

the 25th, page 1, the discussion about T-12. How am I to understand the language, does cause mass effect upon the thecal sac?

A. I'm sorry. What paragraph are you referring to?

Q. It would be the third one down, although the second one is more like a sentence, three, there and at.

A. Well, anything that kind of pushes the sac over can cause mass effect. That's what I mean by that. Remember she had got some dye but dye can look like cement, but it doesn't necessarily have to be cement.

Q. So on page 2 where it says, abnormal areas down at the bottom under the impression no. 2. At T-12 there is moderate mass effect, abnormal areas of decreasing low intensity seen anterior to the thecal sac, posterior to T-12 and L-1.

A. Are you on page 1?

Q. Page 2, second paragraph from the bottom.

A. Is that the MRI you are reading or the CT?

Q. MRI.

A. Go ahead.

Q. So these abnormal areas of decreased signal intensity may be cement, may be dye or may just be the mass effect of the cement -- however you want to characterize it -- pressing against the conus?

A. Well, those are two different things. The abnormal area of enhancement may be cement or dye.

Q. So it is possible that there is cement at T-12 also?

A. Sure.

Q. So it's possible based on CT and MRI that there was leakage of cement at L-1, L-2 and T-12?

A. I didn't think it was at L-1, but I thought there was -- there may be some at T-12.

Q. Well, the MRI includes the same thing for T-12 and L-1, so that's why I'm suggesting that, but I don't want to put words into your mouth on the MRI.

A. You want me to comment on the radiologist or do you want me to say what my

opinion is? I thought that there was some enhancement, this increased density at T-12.

Q. How about at L-1?

A. I thought there was very minimal.

Q. Can we agree that following Ms. Dodd's surgery, she had neurological deficits?

A. Yes.

Q. Can we agree that you did not do a CAT scan on January 24?

A. Yes.

Q. You are not able to sight me to any articles to say it's okay in terms of cement leakage to wait; is that correct?

MS. CLOUSE: Objection, asked and answered.

A. I think the one article from South Korea, they wait.

Q. Do you rely on --

A. They cited a 30 percent cement leakage and I didn't see them rushing in all 30 percent of the cases and operating on them.

Q. Did you see them rushing in on the cases where there was cement leakage and neurological deficits?

A. I don't recall that.

Q. So they may have about, but you don't recall?

A. Yes.

Q. Would you be kind enough to give your counsel the name of that article and have her give it to me?

A. I'll have to find it, yes.

Q. When you reviewed Greenberg for -- I think you reviewed it for today or you have reviewed it recently -- did he discuss -- or she -- discuss neurological deficits when you know there's cement leakage in terms of what to do?

A. No.

Q. There's no discussion of that?

A. There's discussion of complications, but they don't discuss what to do.

Q. The extensive discussion you had with Ms. Dodd, I believe this was -- that would be progress note 1/26 -- actually, you know, before we do that one at 22:30, let's do the progress note at -- and I'm sure the times aren't correct, but they are both dated 1/26, one is

dictated -- transcribed at 17:53. The other one is transcribed at 22:30, so I -- presumably these notes were made like an hour or two before. I'm going to assume. You dictated them sooner than 17:53?

A. That may have been the right time. I'm not sure.

Q. Either way. What happened between the two -- I mean, it's a relatively short period of time and you say --

A. I think I may have gone around it and finished my other day's work and then gone back it seems.

Q. But it sounds in this 17:53 note as if you've given her options and you are kind of weighing and balancing what to do and so is she, then you come back -- let's just say four hours later for lack of a -- just to pin it down somewhat. What changed your mind then that you say after extensive discussion, the patient wishes to proceed with operative intervention. What caused you to come back four hours later and the decision was made between and you Ms. Dodd?

A. I think she was really not sure at all that she wanted to do anything at this point.

Q. This point being the 17:53?

A. Yes. I think she was leaning -- I guess I can't even say that for sure, but I thought she wanted -- she was considering the surgery and then later that night she made up her mind that she wanted to go ahead.

Q. It's your testimony that she discussed it with her family or not because it says here that --

A. I don't know if it was her husband or not. I thought it was her husband but later on it may not have been her husband.

Q. Do you remember that discussion when you came back and everyone in the room said, yes, we've agreed to have the surgery?

A. Is that this night?

Q. Right. Do you remember that discussion?

A. Not specifically.

Q. Were you surprised that four hours later she had made that decision?

A. It was kind of on a see-saw. At one time she was leaning towards not having it and

one time she was leaning toward it. I wouldn't say I was completely surprised.

Q. So it was really Ms. Dodd's decision to proceed with the second surgery at 22:30? You left her the options, told --

A. Yeah, we discussed the options. I told her that I was concerned that we could go back in and she could be worse, but I outlined all the benefits and risks and yes, it was her decision, but I assume she made it with her family.

Q. When you say in the second paragraph, one option -- at the 17:53 -- one option would be to proceed with surgical intervention for decompression of the canal and removal of the cement. Did you believe at that time since you told me that you had discussed with Professor Hitchon?

A. Yes.

Q. Did you still believe at that time that surgical intervention may have been helpful?

A. I thought I had a good chance -- I thought I had a chance of helping her, yes.

Q. Did you urge her to do that?

A. No, I didn't urge her either way.

Q. It was her decision?

A. Yes.

Q. I may be wrong but did Professor Hitchon not tell you that he thought the damage was already done and if you went back in for decompression it likely wouldn't have changed her outcome?

A. He didn't think it would, but he told me to present the options to the patient.

Q. But yet it says here that one option would be to proceed with surgical intervention for decompression of the canal. So you told her that and did you tell her that you thought it would likely help or not help?

A. I said I didn't know if it would help.

Q. It was just a shot, just to try it.

A. Uh-huh.

Q. That's a yes?

A. I thought it was an option.

Q. Even though Professor Hitchon didn't think it would make a difference?

A. He told me to discuss the different options and see what the patient --

Q. So he just told you that you should present an option to her that he thought really had no success of changing her outcome?

A. He thought the injury was done at the time of the heat, so he didn't think that the decompression would necessarily help but people come in with blood clots of the brain and we don't necessarily think it's going to make them any better but the family wants us to try everything we could. There are a lot of different situations where we abide by the families wishes. I really myself didn't know whether it would help or make her any better.

Q. Did it help her any? Did it make her any better?

A. I think it may have helped some of her pain, but I don't think neurologically it made a difference. But how can you tell, I mean, she's recovered some of her function and you can always guess if I hadn't done anything she would be the same now as if I had done the surgery. If I had left things alone and not gone in, she may be the same as if I had gone in. My gut feeling is that she probably would have been the

same with or without surgery, the second surgery. That's my gut feeling.

Q. And you told her that, but you told her it was her choice?

A. My gut feeling right now is -- back then I wanted to decompress, I think. If I remember, I wanted to go back in because I wanted to intuitively see if I can -- if the cement is against the conus or if there's not enough room for the conus, give it more room to see if that would help, but I was scared of potential complications with the second surgery, obviously much more than the first surgery.

Q. And you did not end up having to fuse her the second surgery; correct?

A. No.

Q. Why did you not fuse her?

A. I think it would have added a sufficient amount of time of surgery. I think I checked her during the operation, did not feel she was unstable. I thought we could get her by with a brace and if necessarily -- if we needed to fuse we could do it at a later time, a more elective time where there was less chance of something

going wrong.

Q. Is fusion an option to her even now?

A. Yes.

Q. Would that take away her --

A. I think it would help some of her pain. I believe it may help some of her pain.

Q. Would it help her foot drop?

A. No, I don't think it would help her foot drop. I think her bladder -- all I can tell is from the May 24 note she was doing very well as far as the bladder.

Q. She has to catheterize herself every day and has since January --

A. I don't know that. The last note I have is from Dr. Steiger, which is in August 2002 and then the note from me seeing her in May it says that she's hardly ever catheterizing. Why did she get worse? That needs to be figured out. Here she is telling me in May that she is doing very well and she's hardly catheterizing.

Q. May 2002?

A. In the last clinic note.

Q. I thought the Interrogatory said the last time you saw her was April 24?

A. That's what I mean, April. April 24, 2002, I saw her in clinic and -- but that bladder function was absent following surgery has returned. She is now able to urinate and have bowel movements with good control. However, she does have some difficulty at night when she has some dribbling especially between the hours of 1:00 and 4:00. This is -- I'm going from what she is telling me, that she is doing well with the bladder and she's got good control of it. If she's catheterizing now, did something get worse for some reason and I think that's something that -- a urologist needs to see her for that. I don't have any note from Dr. Steiger after April 24 so has she seen a urologist, that's the question.

Q. I think your counsel has something but it took me a long time to get everything to them.

(Break.)

BY MS. TRESL:

Q. Can we agree that the outcome in this case is not what you had planned?

A. I think we have achieved the

vertebroplasty. I think we have bolstered the bone out. I don't think she developed any kyphosis up to the time I saw her in April, so we have reached some of the goals, but we had a complication.

Q. Can we agree that the outcome of the case is not what you had planned?

A. Yes.

Q. Can we agree that Ms. Dodd experienced complications secondary to the vertebroplasty?

A. Yes.

Q. My understanding is -- just let me be sure -- you've never had this sort of neurological deficit associated with the vertebroplasty that you've done; correct?

A. Yes.

Q. So can we agree or not agree that Ms. Dodd's urinary retention is due in part from the complications from the vertebroplasty?

A. The urinary retention she had right after the procedure.

Q. And/or continuing?

A. Again, my last impression is that her urinary retention was resolved.

Q. If you take my word for the fact that the urinary retention was not resolved and she's self-cathing every day -- and I did give your counsel --

A. I would need to know why she has relapsed.

Q. So you can't agree or disagree that it's --

A. I can agree that the urinary retention right after the surgery was probably related to the --

Q. And the fact that she needed a Foley put in and remained in for quite some time -- my memory says about the middle of March -- was that a complication of the surgery or more related to the narcotics?

A. Again, I can't comment on the Foley. I usually like to get the Foley out right away and do straight cathing, but the urinary retention I think was due to complications from the surgery.

Q. If you take my word for the fact that she has been treated with a lot of urinary tract infections from January to current -- just take my word for that, please -- is that a

complication of the surgery?

A. Urinary tract infections can be avoided with a technique.

Q. So your testimony is that it is not a complication of the surgery?

A. Urinary tract infections, no.

Q. Can we agree that the foot drop is a complication from the surgery?

A. Yes.

Q. Can we agree that the lower leg extremity weakness is a complication from the surgery?

A. The left lower extremity weakness? Are you talking about the foot drop?

Q. The whole lower leg is weak and she -- can we agree that when you first saw her before her surgery she did not need a walker to walk?

A. Yes, she didn't need a walker, not in my office anyway when I saw her.

Q. Can we agree that after the surgery she did need a walker to walk?

A. What period of time are you talking about?

Q. From January 24 when she was stable

enough to get up.

A. Again, I can't comment about that because I haven't seen her since April and I only remember in April if she had a walker when she came into my office or not.

Q. If she did have a walker when she came in your office in April, can we agree that that was a change from the vertebroplasty?

A. No, I can't agree to that.

Q. Can we agree that if the cement leakage had not occurred that she would not have developed foot drop?

A. I can't 100 percent agree with that because potentially a needle can cause the same thing. Remember I said the needle tract had gone medially, could the needle have touched the conus and caused that injury, yes, it's possible. It may be that the injury wasn't from the cement, it was from the needle.

Q. Do you have an opinion as to which is more likely?

A. I think the cement is more likely.

Q. Was there anything available to you when you were doing the procedure to have minimized

that risk of that needle re-positioning in the tract and is there something you could have done differently so that it would not have happened?

A. I have been thinking about this a lot. I don't know what I could have done differently. I can't think of anything I could have done differently.

Q. Are you familiar with fenestration, prophylactic fenestration?

A. Of what?

Q. When you do the vertebroplasty?

A. Fenestration what?

Q. Almost doing an open laminectomy when you do the vertebroplasty so you can see more what you are doing.

A. I'm not familiar with fenestration. I'm familiar with doing a laminectomy. I'm familiar with opening up. I've done open vertebroplasties.

Q. When do you do open vertebroplasties?

A. When I have other goals in mind, too, with the surgery.

Q. Have you not read any of the literature then that discusses because of the risk of

cement leakage, the recommendation of open fenestration?

A. I'm not familiar with that literature.

Q. Do you remember discussing these options prior to Ms. Dodd's having the vertebroplasty with anyone but Ms. Dodd, the complications of the vertebroplasty?

A. Sorry. Do I remember discussing the complications?

Q. The surgery and the complications, the risks, the thing that you say to patients before vertebroplasty. I believe you said there was no one else in the room on the September 19 and December 19.

A. I don't think there was anybody else in the room, no. That doesn't answer your question. Your question was something else, though?

Q. You told me that you explained the risks of the vertebroplasty to Ms. Dodd on the September 19 and December 19, and I want to make sure that it's your testimony that no one else was in there when you were discussing the vertebroplasty and the risks.

A. I don't believe there was anybody in there.

Q. Are you critical of anyone else that has managed Ms. Dodd's care?

A. No.

Q. Have you discussed this case with Dr. Krupedev?

A. Dr. Krupedev consulted me on Ms. Dodd when she was hospitalized for another reason and I went and saw her and we may have talked.

Q. Was he not the referral, though, that sent Ms. Dodd to you initially?

A. I believe he was the referring physician. I think his name is on the first letter. Yes, his name is on the letter so he referred her to me.

Q. Do you remember any discussions you had with Dr. Krupedev about the cement and the foot drop and what happened during the surgery?

A. I don't think I ever discussed that with him.

Q. Did you discuss this case with Dr. Krupedev, Ms. Dodd and her care?

A. Some aspects of her care. I think he

was consulted on her afterward to take care of some of the medical problems.

Q. But in terms of the foot drop and the cement leakage, you never discussed that with him?

A. I never did.

Q. Did you explain to Ms. Dodd what you thought had happened? I mean, after the surgery, after she was stabilized, let's say when you saw her the last time in the office in April. At any point did you explain all of this to Ms. Dodd?

A. On numerous occasions I explained to her after the surgery what had gone wrong.

Q. What did she say?

A. I think she appeared to be very understanding, almost consoling at times. I mean, she understood what had gone wrong. I felt that she understood that. I felt that she made a good decision in terms of she weighed all the options and other than that, I can't comment on -- she didn't come out and say that I'm happy or sad or mad. She didn't say anything like that. I mean, obviously she was upset and she

was -- but I think she understood what had happened and I explained that to her several times.

Q. Do you recall what she said at all that you know that she understood what had happened?

A. No, but just some of the questions she would ask in terms of, what are the options, what would you do next about the fusion, whether we need to do a fusion or not, whether I should try to take the cement out or not. Those are things that we did discuss and she would ask appropriate questions.

Q. Do you have any opinion why you haven't seen her since April 24?

A. No. I thought we had a very good repoire. I thought we had a very good relationship even after the complications. We spent a lot of time together and we talked about it. I set her up an appointment in July, on July 24 and she cancelled so that means she must have called to cancel. I don't know, sometimes patients cancel for reasons and they reschedule. So no, I guess that's the last time we heard from her.

Q. No one from your office has called to follow up with her at that time?

A. Usually if a patient doesn't show up for a clinic we call or we send a letter out, please reschedule your appointment.

Q. Do you know if a letter was sent or if someone called?

A. No, I'm not sure.

Q. If you had another patient today that you did a vertebroplasty on and you suspected that there was cement leakage, a very similar scenario to Ms. Dodd and they recovered and they had foot drop or neurological deficit, would you change at all the approach in the first 24 hours post-op that you did with Ms. Dodd?

MS. CLOUSE: Objection.

A. I think my gut feeling tells me that it doesn't matter once the injury happened, it happened. Nothing I could have done after that that could have changed things.

Q. So even to this day if a patient presented with neurologic deficit following a vertebroplasty with a suspicion that cement leaked, you still would not order a CAT scan or

MRI emergently?

MS. CLOUSE: Objection. You can answer.

A. The question of getting a study is what you are going to do with it. A study doesn't do anything by itself. A CT scan is not going to cure anything. It's what you are going to do with that information. If I get that CAT scan and it shows the same thing as Ms. Dodd I would again present the options to the patient as far as what to do. Now, if there was so much cement in there that I thought the conus was just so compressed that you had no room or if the patient was getting worse neurologically, then I would urge the patient to go ahead with the surgery. I would strongly urge the patient.

Q. So is it your testimony then that you still would not do a CAT scan if you had a patient similar to Ms. Dodd tomorrow? I understand it depends on what you are going to do with the imaging.

A. If I did a vertebroplasty tomorrow and I thought cement had leaked --

Q. Correct, and the patient woke up with

neurological deficit, would you --

A. I would do a CAT scan.

Q. So your approach has changed in that now you would more likely --

A. No. No. the fact was different. Back then I didn't know there was cement leakage in the canal. You are saying if you know there was cement leakage in the canal.

Q. I didn't say cement leakage in the canal. I said cement leakage, at least that's what I intended to say. If you had a patient that you suspected had cement leakage because in your first operative note --

A. It makes a difference. If the cement leakage is in the canal, then I would get a CAT scan.

Q. But if it was cement leakage and you weren't sure where it went but you thought it went to the psoas muscle --

A. If I thought there was leakage in the psoas, no. Psoas leakage can be very painful and cause weakness and stuff, but it's pain related. See, you have to kind of determine whether it's a real weakness or it's a pain-

related weakness.

Q. So you would get a CAT scan emergently following surgery if you suspected that cement was in the canal, but if you thought it was in the psoas muscle or weren't sure that it had any suspicion of it in the canal --

A. I think we're speculating, but I think the exam would be very important. The exam of the patient would be very important.

Q. We are speculating, but I'm trying to see if your approach would be any different now than it was with Ms. Dodd.

A. I can't tell you. If it happens I'll have to evaluate that and see what her exam is, you know. If it's a conus -- if it's a cauda equina syndrome, if they are having complete paralysis in the legs, I would emergently get a CAT scan, yes.

Q. If it was the symptoms that Ms. Dodd was having and --

A. If it was just one nerve root involved and I wasn't sure if it was the needle that caused it or if it was just inflammation or something like that --

Q. Or if it was cement?

A. Or it was cement, I think if I suspected there may be cement in the canal, I may get a CT.

Q. So maybe it has changed a little bit then since Ms. Dodd?

A. Again, on Ms. Dodd I didn't know there was cement in the canal. The CT surprised me somewhat.

Q. Because?

A. Because there was cement in the conus -- by the conus. It really did surprise me.

MS. TRESL: I think we're done unless you have anything.

MR. KISH: Just real quickly, just so I make sure I'm clear on it.

EXAMINATION

BY MR. KISH:

Q. Dr. Ghodsi, I'm Bob Kish. We were introduced earlier. I'm here on behalf of Marietta Memorial Hospital. You were asked not too long ago if you were critical of anyone else's care of Ms. Dodd and you said, no. Am I correct to assume that you are not critical of

any of the care of any employees at Marietta Memorial Hospital?

A. I'm not critical.

MR. KISH: That's all I wanted to clarify. Thank you.

MS. CLOUSE: Dr. Ghodsi, you have the right to read this transcript.

THE WITNESS: Yes.

(The deposition of ABDI GHODSI, M.D., concluded at 12:43 p.m.)

STATE OF WEST VIRGINIA, To-wit:

I, Annette R. Lovejoy, a Notary Public and Certified Court Reporter within and for the State aforesaid, duly commissioned and qualified, do hereby certify that the deposition of ABDI GHODSI, M.D., was duly taken by me and before me at the time and place specified in the caption hereof.

I do further certify that said proceedings were correctly taken by me in stenotype notes, that the same were accurately transcribed out in full and true record of the testimony given by said witness. I further certify that I am neither attorney or counsel for nor related to or employed by, any of the parties to the action in which these proceedings were had, and further I am not a relative or employee of any attorney or counsel employed by the parties hereto or financially interested in the action.

My commission expires the 23rd day of September 2012. Given under my hand and seal this 12th day of August 2003.

Annette R. Lovejoy
Notary Public
Certified Court Reporter

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