IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF PENNSYLVANIA

DOUGLAS PETTYJOHN	:	CIVIL ACTION
	:	
VS.	:	
	:	
NATIONAL RAILROAD PASSENGER CORP., a/k/a AMTRAK	:	NO. 86-4115

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Videotape Deposition of SANFORD H. DAVNE, M.D., taken pursuant to notice at the doctor's offices, 1015 Chestnut Street, Philadelphia on Monday, April 6, 1987, beginning at 8:46 a.m., before Steven A. Stewart, Videotape Operator and Notary Public, there being present:

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APPEARANCES:

O'BRIEN & DAVIS, P.C.
BY: G. SANDER DAVIS, ESQUIRE
3608 Center Square West
Philadelphia, Pennsylvania 19102
Phone: 568-4343
Representing the Plaintiff

GALLAGHER, WHEELER, REILLY & LACHAT
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Representing the Defendant

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I N D E X

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THE VIDEOTAPE OPERATOR: We're on the record.

This is a videotape deposition for the United States District Court for the Eastern District of Pennsylvania.

My name is Steven A. Stewart. I'm the videotape operator and Notary Public in and for the Commonwealth of Pennsylvania.

The caption for today's case is as follows: Douglas Pettyjohn versus National Railroad Passenger Corporation, a/k/a Amtrak. Number 86-4115.

This deposition is being taken on behalf of the plaintiff at the office of Sanford H. Davne, M.D., 1015 Chestnut Street, Philadelphia, Pennsylvania.

Appearances today are G. Sander Davis, Esquire, attorney for plaintiff; Paul F. X. Gallagher, Esquire, attorney for defendant.

The deponent for today is Sanford H. Davne, M.D.

Today's date is April 6, 1987. The time is 8:46.

At this time, I will now swear the witness in. Doctor, please raise your right

hand, sir?

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SANFORD H. DAVNE, M.D., after having been first duly sworn, was examined and testified as follows:

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THE VIDEOTAPE OPERATOR: Thank you very much, Mr. Davis?

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EXAMINATION

- - -

BY MR. DAVIS:

Q. Dr. Davne, would you relate to the Jury, your educational background?

A. Yes. Following completion of college in 1970, I then obtained a masters degree in pharmacology at Hahnemann Medical College and following that I completed an M.D. degree at Temple University School of Medicine. This was completed in 1976. I then entered a surgical residency at Thomas Jefferson University Hospital from 1976 to 1977 and following that a residency in orthpedic surgery from 1977 to 1981.

I then -- following completion of my orthopedic residency, obtained a fellowship in spinal cord injury surgery at Northwestern Memorial Hospital in

Chicago, Illinois in 1981. I -- I'm on staff at Thomas Jefferson University Hospital since that time.

Q. All right. And since 1981, doctor, have you specialized in the field of orthopedic surgery?

A. Yes.

Q. Can you tell the Jury, if you would, what the specialty of orthopedic surgery entails?

A. Yes, it's a -- a specialty related to treatment in surgery regarding the musculoskeletal system, muscles, joints, ligaments, bones of the body.

Q. And are you board certified or board elligible in orthopedic surgery?

A. I'm board certified in orthopedic surgery.

Q. Can you tell the Jury what that means?

A. In order to obtain board certification, you must complete the residency which is approved by the Board which is a licensing body. Following that, you have to sit for an oral and written examination. When that is completed, you receive certification which means either you've achieved a certain level of competence in -- in orthopedic treatment.

Q. And doctor, you are licensed to practice medicine in the Commonwealth of Pennsylvania?

A. Yes, I am.

Q. You said you're on the staff of the Thomas

Jefferson University Hospital. Do you have any teaching positions there?

A. Yes. I'm an instructor in orthopedic surgery.

Q. Okay. And as such do you -- who do you teach?

A. The residents and also the medical students.

Q. How long have you been associated with Thomas Jefferson University Hospital, on the staff?

A. Five years.

Q. Okay.

MR. DAVIS: I have no further questions on qualifications. Mr. Gallagher?

MR. GALLAGHER: I have none.

BY MR. DAVIS:

Q. Dr. Davne, when did you first come in contact with Douglas Pettyjohn, the plaintiff in this case?

A. I saw him when he was hospitalized under Dr. Mandel's care at Jefferson in early July, I believe it was July the 7th, the date I saw him initially.

Q. So you actually saw him in the hospital?

A. Yes, I did.

Q. Can you tell us, you know, what history you obtained from him, what examination and findings you made?

A. He had explained to me that he had been involved in an -- an accident while at work, when he was in a track car which was -- or hit another track car and that at that

time, he injured his low back.

Q. And what -- what examination did you perform of him, what findings did you make?

A. We, myself and the resident performed a physical examination. And at that time, we found that he had tenderness in his low back as well as tenderness in the-- I'm trying to read my writing, excuse me -- in the paraspinal muscles of his low back, also. His neurologic exam showed that he had normal reflexes and normal motor strength. He did have a, what we call a straight leg raising sign which was positive on the left with only low back pain and my impression at that time was that he was having muscle spasms in his low back and obviously was having a problem with his low back and he was being treated with bedrest.

Q. Now doctor, at that time, were you aware of any tests that had been performed at the hospital, during that hospitalization?

A. I don't remember whether he had had them done, that time or he was getting them done within a few days. I can't remember the dates of those tests. But I recall that during the -- his admission, he did have a myelogram and CT scan.

Q. And do you recall the results of those?

A. The myelogram and CT scan showed a slight bulging

disc which was at the level of L5-S1. That was the principal finding.

Q. Okay. And at that time, were you aware of any x-ray evidence with regard to another vertebra at those levels --

A. Right.

Q. -- L3 and L4?

A. Yes, the -- these tests did show that there were some degenerative changes at the L5-S1 level as well as he had a congenitally fused vertebra at L3-4.

Q. Okay. All right, doctor, during the course of that hospitalization, did you offer any advice on his treatment?

A. I spoke to him on a couple of occasions and we recommended that in view of the short period of time that had elapsed since the injury that we continue to treat him conservatively to see if his back pain and his leg discomfort would not resolve on its own.

Q. And what -- what type of treatment do you refer to as conservative care?

A. I call conservative care basically just bed rest as necessary, medications to help reduce the pain. Those are the conservative methods that we generally use.

Q. Okay. Did you see this patient after he was released from the hospital?

A. Yes, I did. He came to my office on October the 9th.

Q. Can you tell the Jury, if you would, what the results of that visit were?

A. He was --

Q. What additional facts he gave you and everything?

A. Right. He was continuing to have a great deal of back pain. He felt that, which was significant, that he couldn't stand up straight, he had to stay bent foward, in order to walk. When he was able to bend forward, he was doing all right. But, that if he tried to straighten up erect, he experienced a lot of back discomfort. He was having some occasional leg pain in the posterior aspect of his left buttock and thigh. He had not made any substantial improvement. I again thought at that time, that we should continue to manage him conservatively.

Q. Okay. What, if anything, is the significance of pain in the buttock and thigh?

A. Well, that indicates generally that there may be a component of nerve irritation that's causing this pain outside of the low back. Once it starts to get into the buttocks and into the thigh, this pain may well be due to the irritation of the nerve directly.

Q. Okay. Did you see him again after October 9th?

A. Yes. He principally followed, I believe, with

Dr. Mandel. But I then saw him a couple of months later in early December, December the 8th.

Q. Could you relate to us what transpired during that visit?

A. At that time, I saw him as well as my neurosurgical associate, Dr. Myers. We both saw him and evaluated him and discussed his situation with Dr. Mandel. We felt that because he will still continuing to have the severe back pain and trouble ambulating that it would be-- plus the fact that his CAT scan and myelogram did show this bulging disc, the duration of the symptoms having now reached nearly six months, that we explained the alternatives of continued conservative care versus surgical intervention to him. And discussed the pros and cons and he felt and we felt that he would likely be benefited by surgical intervention.

Q. Had his symptoms improved at all by that December visit?

A. Not really, no. He continued to have the same difficulty getting around with severe back pain and continuing to need to stay in the flexed forward position.

Q. As a result of that meeting with Dr. Myers, who was the neurosurgeon, and the patient, what -- what transpired next?

A. We made arrangements for him to be admitted for

surgery to Jefferson.

Q. Okay. Now, according to the records that I have, he was admitted on January the 11th and discharged on January 19th of 1987?

A. Yes.

Q. Okay. Were you one of the doctors who treated him during that hospitalization and surgery?

A. Yes. I was.

Q. Okay. Could you explain to the Jury what was done for him?

A. We took him to surgery and at that time, we went into his back, we made an incision and we explored the level where he was having -- we felt he was having the problem, which was L5-S1.

Q. Let me just stop you. What was your pre-operative diagnosis? What'd you think was the problem pre-operatively?

A. We felt that he had a combination of a bulging disc as well as a, what we call a lateral recess stenosis. Where the nerve root is trapped between the disc and the joint that allows the spine to move and I -- I can demonstrate that on the model --

Q. Okay, yes.

A. -- best. If we look at the model here, and these are the -- this is the sacrum and this is L5, L4, L3, L2.

In between each one --

Q. Let me just stop for a minute. This is the back of somebody and this is the front?

A. Yes. This is -- exactly. These are the spinous processes. This is the front. The belly is out here and your back is here.

Q. And this is hip?

A. The head is up here. That's right. The pelvis is right here, the hips are right here.

Q. Okay.

A. This is the intervertebral disc space, L5-S1 and here is L4-L5. If one looks at it, I'm going to hold it like this. One can see that this is the big trunk of nerves which comes down and these are the posterior spinous process and lamina which cover it. The vertebra move by sliding. And these are the joints here which allow the motion to slide. The combination of the joints plus the discs allow the vertebrae to open. Each vertebra, two vertebrae give rise to a space called the neural foramen, where the nerve root comes out and that's signified here in yellow. At this tunnel, this hole where the nerve root is coming out, there is the disc plus the joint. So that if that if the disc bulges a little or if the joint is -- has a little arthritis or the ligament is enlarged. Anything, any combination of these things will narrow this space

where the nerve comes through. And we felt that that space was narrowed as the nerve comes around the -- the joint. And between that and the disc that he was having his problem.

Q. Doctor, the L5-S1 joint that you talked about has a nerve coming out. All right, what does that nerve serve? What part of the body?

A. That goes down into his leg, the L5 nerve goes down into the big toe. And the S1 nerve which is the next one which is the one that's principally involved at the L5-S1 level, goes to the lateral portion of the foot and works some of the muscles in the foot.

Q. Okay. All right, go ahead. What did you do at surgery?

A. At surgery, we made an incision and we removed some bone from the lamina so that we could see into the area where the disc and the nerve was. Once we saw that area, we determined that the foramen or the whole canal needed to be opened up by removing part of that joint which was impinging. After opening that up, we looked at the disc and while it was slightly bulged, felt that the disc could be maintained, that the -- by opening up the space that he had enough passageway for the nerve that it would be comfortable that we wouldn't have to remove his disc and then we went on to perform a fusion, fusing L5 to S1 and

this is done with a combination of two small plates and screws which are placed to hold the bone, solid, one bone to the other, while some bone chips are placed along the side of the plate and screws. And these bone chips will subsequently coalesce and form a solid bridge of bone over a period of several months and that is what a fusion actually is.

Q. Well, where do you actually fuse it here on the back?

A. In this area right here. The screw goes in right here and right here and the plate goes across here and the same thing on the other side and the bone chips are placed here, L5-S1 on both sides.

Q. And the effect of that is to remove this joint in here?

A. Yes. We remove this joint. What we do is there's -- the joint is covered by cartilage on the inner surface which allows it to slide. We scrape away that cartilage and put bone where the cartilage was hoping that the joint will fuse together, as well as some additional bone chips.

Q. Okay. Now what was the purpose of fusing L5-S1?

A. Well, he had some degenerative changes at that level and we felt that he best would be served in the long run being a young man that to prevent him from having this

problem recurring that it would be best if we fused this level.

Q. But what does the fusing do to prevent the problem in the future?

A. Well, by preventing the motion, at the level of L5-S1, it's un -- very unusual to -- once the motion is stabilized to have the disc cause any further problem at that level.

Q. All right, go ahead, doctor. What else did you do besides that?

A. That was what we did in the operation.

Q. Who assisted you surgically at the operation? What I meant is, whe -- did some other physician work with you?

A. Yes. One of the residents did.

Q. How about neurosurgically, did any doctor work with you?

A. Dr. Myers did.

Q. Okay.

MR. GALLAGHER: Well, I'm going to object to the form of the question.

BY MR. DAVIS:

Q. Did any other doctor, on the staff of Jefferson Hospital, work with you at that --

A. Yes. Dr. Myers did.

MR. GALLAGHER: I'm going to object. My objection is, I'm not sure -- I don't think-- I don't whether he actually worked with him or not. By reading the records, it seems to indicate Dr. Myers was there first and then left the field and then Dr. Davne came in.

MR. DAVIS: Well, let me ask -- let me ask the doctor.

MR. GALLAGHER: Yes.

BY MR. DAVIS:

Q. Were the two of you there together, doctor?

A. At parts of the operation. The way we generally do this is, Dr. Myers will start the operation, do the decompression and I will join him towards the end of the decompression, we will review the -- the neural decompression together and once that's completed, Dr. Myers will leave and I will do the fusion and sometimes I come in earlier and sometimes he comes -- stays later. But basically, we do it the same way all the time.

Q. Well, were you there during the portion of the operation where the decision was made to enlarge the lateral recess?

A. No.

Q. What -- What point did you come into the operation?

A. After that -- the lateral recess had been enlarged already. And once that was there, I came into the operation prior to -- to a decision regarding disk -- need for a diskectomy.

Q. And is that something you discussed with Dr. Myers?

A. Yes.

Q. Now, did you continue to follow him while he was in the hospital after the operation?

A. Yes, I did.

Q. And how was his progress, a few days after the operation?

A. He had a normal type of a post operative course, having some back pain, getting up and moving about, until the point that he was able to be discharged. Most patients are able to leave about a week later. I think that was his case.

Q. Doctor, it's April 6th now which is less than three months following the operation. Have you seen him since?

A. Yes. I saw him a month ago, on March the 3rd. At that point, he was about six weeks post-operative. We normally have our patients come back around six weeks and then again at three months.

Q. Do you if Dr. Myers is also following him?

A. I believe so. I don't know if Dr. Myers saw him on that day or not.

Q. Can you tell us what happened during that visit of March 3?

A. He explained to me that he was still having some discomfort but overall he definitely felt that he was doing better. And in fact, was beginning to be able to move around and walk better than he had been able to pre-operatively. He still complained of some tightness in his back and some discomfort in his thigh.

Q. Did you do any x-rays at that point, or at any time afterwards?

A. Yes. At that time, we did obtain a new set of x-rays and these were done to see how the position of the plate and screws and they -- they were continued to be in a satisfactory position.

Q. Doctor, what is the plan with regard to these plate and screws? Do you leave them in somebody's back?

A. Yes.

Q. Can you tell on these x-rays whether healing has taken place?

A. At six weeks, it's very early and you can't really tell. All you can see is that the plate and screws are in place. Generally, you can't see much in the way of healing for a minimum of three months, and closer to six

months.

Q. How long a period of time do you -- would you expect that you would follow Mr. Pettyjohn after this operation?

A. Assuming that he has a good, normal recovery period, we generally follow our patients for about two years.

Q. Now, you said you're due to see him three months after the operation which sounds like it's within a week or two?

A. I would think so.

Q. When would you see him after that?

A. If everything is going okay, we would probably see him in another two to three months after that.

Q. And how -- at what intervals after that up to the two year period?

A. The intervals keep getting longer. For the first year, they're about every three months and then the second year, twice usually at six months and then at two years, as long as the patient's doing very well. Occasionally, if the patient's doing perfect, we'll discharge them.

Q. Doctor, since you haven't seen him except for the one time in March, are you able to tell us whether his recovery at least to that point was usual, normal or different than normal?

A. I think it's about average.

Q. Doctor, let me ask you some general questions based upon the history given to you by the patient, based upon the hospital records that may have been made available to you and based upon your own treatment, findings, operations that you performed on this man, doctor, do you have an opinion that you could tell us as to the diagnosis or the condition you were treating this man from--beginning in July, including the operation in January?

A. Yes. I believe that he had a combination of a bulging disc, as well as a lateral recess stenosis.

Q. Now, you've already explained to us a little bit about the lateral recess stenosis, although, I'm not sure you used the word stenosis before. Maybe you can explain what that means?

A. Lateral recess syndrome or lateral recess stenosis. It means that we're really talking about the narrowing of the neural foramen due to the facet joint, the joint that slides and the combination of that plus the bulging disc is what seemed to be causing his problems.

Q. Fine. Can you show us on this model, what a bulging disc is?

A. Yes, I can. If we look end on at this model, you can see the shape of this disc. And the normal disc isn't at this point, use the point of the pen, if I can get it

undone. The normal disc kind of goes like this, kind of indents in. The central material of the disc is the nucleus and around it is a thick fibers called the annulus. And a bulging disc is where this wall weakens, this annular wall weakens so the disc bulges out. An analogy might be either something like a garden hose where some of the outer fibers have ruptured allowing some of the inner fibers to pouch out, or a tire with an old inner tube where the outer layers of the tire rupture and the inner tube bulges out. And that's the kind of analogy. And the disc bulges out. Where as it bulges out, it can compromise this space where the nerve is coming out. All it has to do is take up enough space between that and the -- the joint to compromise the space and pinch on the nerve.

Q. Is that what you believe occurred in this case?

A. Yes.

Q. Now, doctor, based on all those factors related before, can you give us an opinion, if you have one, as to the relationship between the injury that you treated this man for and the accident that he related to you that occurred in June of 1986, involving two rail cars?

MR. GALLAGHER: Well, objection to the form.

THE WITNESS: I believe that the injury caused a change in the disc, nerve, joint

complex, the intervertebral joint complex. Such that, the disc was altered, the nerve was under pressure and this occurred from the accident.

BY MR. DAVIS:

Q. Doctor, do you have an opinion as to the relationship, if any, between the need for the operation following this injury and the accident of June of 1986?

A. Yes. After the -- his symptoms did not subside through conservative care, then I feel as though the -- the need for the surgery was directly related to the accident in June of 1986.

Q. Now, doctor, you related to us before that this man had some, what you called degenerative changes?

A. Right.

Q. Were those degenerative changes, in your opinion, present at the time of this accident?

A. Yes.

Q. Can you explain to the Jury, what they are? What are these degenerative changes? What do you mean?

A. Well, as the joints in the back, as they continue to move and wear and tear, the cartilage will slowly be worn down. And as that occurs there are some small bone spurs which form and changes within the joint. So these-- these things were present at this -- in this area prior to the -- this injury.

Q. Based upon the patient's history given to you, doctor, did you have any opinion as to whether any of these degenerative changes were symptomatic prior to the accident?

A. He had had a couple of problems with his back previously, and I think that that goes along with some of these degenerative changes. But he never had any prolonged protracted symptoms like this. So that, I feel as though the injury from June was what was causing the symptoms that he was now having.

Q. Doctor, what is your opinion with regard to the prognosis with this man, that is, the future?

A. Most patients will continue -- the average patient will continue to have some degree of problem. Only a small percentage of people become totally symptom free. So that I think, that most likely he will continue to have some intermittent back discomfort. Hopefully, he will improve and have less and less symptoms as time go on, but at this early stage, it's impossible to predict. Nonetheless, the level, L5-S1, has been altered and it's now been fused. And in addition, he has a congenital fusion at the upper level, L3-4, which is going to put increasing stresses on the one level that's open, L4-5, that's caught in between. So that, I believe that he will probably experience some wear and tear at that level. In

addition, we still have to wait and see that he does get a solid fusion at L5-S1. It's entirely possible that if he does not get a solid fusion that he might require a refusion.

Q. Doctor, how much more time would you need normally, to be able to answer some of these questions with regard to Mr. Pettyjohn, as opposed to your experience in general?

A. About six months to a year.

Q. Doctor, would this man -- would this man be able to perform heavy labor after a recovery period from this operation?

A. I think that in this particular gentleman's situation, it would be better if he did not perform heavy labor while some people following a fusion can perform heavy labor, nonetheless, he has a fusion at L5-S1, he has a fusion at L3-4, that, I think that to do repetitive lifting of heavy weights, heavy labor would not be in his best interest and I would recommend that he not do it.

Q. Doctor, you refer to a congenital fusion at L3-4.

A. Yes.

Q. Could you explain to the Jury what that is?

A. Some small percentage of the population, probably less than one percent, although it could be slightly higher, have vertebrae which are automatically fused

together from the time of development. They fail to segment into different levels. And he just happens to have one in the lumbar spine. Most of these are entirely asymptomatic in individuals and they're only recognized by doing this x-rays that people that have these changes.

Q. I gather what you're saying is he had it from birth?

A. Yes. It was congenital.

Q. Doctor, if this man follows the normal or expected course following an operation such as this, you said that you would follow him for about two years afterwards?

A. Yes.

Q. Would he need any medical care on a continuing basis after that?

A. Not really, if he does quite well, he will not need medical care. The only reason for him to require medical care is if he does not completely resolve and continues to have symptoms.

Q. Now, doctor, you said in -- in a certain percentage of the cases, the fusion does not take?

A. Yes.

Q. Do you have any idea of what percentage we're talking about here?

A. Yes. It's between twenty and fifty percent.

Q. And if the fusion does not take, what do you do then?

A. It all depends on whether the fusion -- the patient is symptomatic or not. If the patient is symptomatic and the fusion does not take, then it may well be an indication for a refusion. It all depends on the degree of symptoms.

Q. If a patient does not have a successful fusion and continues to have symptoms, what then are the chances of eventually being able to get a successful fusion?

A. Again, on a refusion basis, I think that for the most part, we're talking in twenty to fifty percent chance of not having a successful fusion or I should say that someplace between and fifty and eighty percent chance with a reoperation that we could get a successful fusion.

Q. Now once again, you said you wouldn't know this for what, six to twelve months?

A. That's -- That's right.

MR. DAVIS: Doctor, thank you very much. Mr. Gallagher?

MR. GALLAGHER: Let's go off the record for a while.

THE VIDEOTAPE OPERATOR: Going off the record, the time is 9:16.

We're on the record, the time is 9:25.

Mr. Gallagher?

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EXAMINATION

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BY MR. GALLAGHER:

Q. Dr. Davne, let's clear up a few things right at the beginning. The disc was not removed, is that correct?

A. That's correct.

Q. Now, what you did, is you came in after Dr. Myers removed portions of the joint and destablized the man's back. And then you in turn, stabilized it, is that correct?

A. Yes.

Q. And exactly what was done? What did you -- when you came in what did you -- what was done in the surgery, the pre that was done right before yours, what did you see when you came in?

A. We -- I was able to see that the nerve roots were free of any impingement, that the -- the joints were partially removed and I inspected the disc with Dr. Myers. And we both felt that we didn't have to take out his disc.

Q. Why did you -- Why did you go to the trouble of fusing this man's L5-S1 if he can't go back to work? Why did you bother to do that?

A. Well, our treatment is not based upon whether a

gentleman works or not. It's based upon how to best give somebody relief of symptoms for the remainder of his life. And with already significant degenerative changes, or degenerative changes that were present in the joints, having removed more of the joint, that meant that the motion segment would continue to degenerate on its own over the course of time and we felt that the best way to avoid him from having further symptoms in the future, was to immobilize that joint or to fuse it.

Q. But if it only succeeds -- if there's a failure rate of twenty to fifty percent of the time, I still don't understand. Isn't that a pretty serious procedure? You're taking bone from one part of the body, putting it in another and putting in these screws and plates. Why bother to go to that trouble if the failure rate is so high?

A. Well, the failure rate of the fusion, we don't know, since we've gone to the plate and screws over the last year, I have to quote you the statistics on what the failure rate of the fusion rate is prior to that. With plate and screws, the fusion rate is probably over ninety percent. But we don't have those statistics yet to prove that. So I can't give them accurately.

Q. So then you feel -- you feel that it's a ninety percent change or better in this particular man that your surgery's going to be successful?

A. I would hope ninety percent --

Q. Okay.

A. -- would be about right.

Q. Now, exactly if you said this was related to this accident that took place on, I think, June 23rd, 1986, exactly what was the mechanism of the accident? What did it do to his body?

A. Well, these types of injuries usually occur by sudden twists, bends, that type of a motion. And I think that he experienced something, I've forgotten exactly how he related it to me, or his exact words. But something in that nature. It's a sudden twisting and turning, or bending forward, that causes these kinds of injuries.

Q. So then you're saying as of this morning, when you testified, you really don't remember exactly how that injury caused, or what problem it caused in his back, is that what you're saying?

A. I'm just --

Q. I'm trying to remember.

A. -- no, I'm just saying that he -- I don't remember his exact words, but there was a sudden twist, I have it written down and let me just refer to it.

Q. Okay.

A. I had something. Yes. He bent forward. It was written down with flexion. So, at the time of the

accident, he bent foward, that's bending the spine like this, or flexing forward like this.

Q. Now, you don't have to have an accident to bend forward, do you?

A. No. You don't.

Q. So that it's not necessar -- He could have bent forward and had the same problem without an accident, is that correct?

A. This is entirely possible.

Q. Now, I believe there was -- I think the CAT scans and I know there was an Albert medical or an Albert Einstein CAT scan, yes. A CAT scan which demonstrated a prominent bulging disc at L5-S1. That disc was bulging in the center, isn't that right?

A. Yes.

Q. And in the surgery, when you examined the disc, it was bulging centrally also, isn't that correct?

A. Yes.

Q. Now, lateral recess, where is the lateral recess?

A. If you look at this cut-away model, the lateral recess, it's very -- is the area where the nerve, unfortunately, this is not absolutely an accurate anatomical model. But it's the area where the nerve comes around in -- in this joint region, there's another joint here and the nerve gets pinched underneath it.

Q. Maybe you show it, if you actually go down to the L5-S1, where you did the work?

A. I have the -- this part does remove. But it also removes the joint. As this nerve comes around this --this joint here, okay? Right here, unfortunately it's not perfectly an anatomic model. The disc is also right underneath and it -- it pinches the nerve in this area.

Q. Now, it pinches the nerve in between bone, right?

A. The combination between the disc and the bone.

Q. All right.

A. It's between both.

Q. If you don't have -- Can you have a lateral recess syndrome without having a bulging disc?

A. Yes, you can.

Q. All right. Now, so that in effect, isn't it true that the actual definition of a lateral recess syndrome when it's defined anatomically talks about bone, it doesn't talk about disc, isn't that correct?

A. That's correct.

Q. Okay. Now, bone -- bone is different from soft tissue, isn't that right?

A. Yes. Okay.

Q. Okay. And the disc is -- the disc is more like soft tissue, isn't it?

A. It's -- Yes, it is.

Q. And when you -- when people have soft tissue injuries, don't they usually get better?

A. Most soft tissue injuries, but not all.

Q. All right, okay. And the surgery that was performed, you didn't remove any soft tissue to free up the nerve. You removed bone in the lateral recess?

A. Bone and ligament.

Q. The ligament -- that was the ligament flavum, is that right?

A. That's right.

Q. And that was hypertrophied?

A. Yes.

Q. And that's a long term change, isn't that right?

A. Well, one can't be sure how long it takes, but it takes, you know, several months, usually for this hypertrophy to occur.

Q. Several months --

A. Right.

Q. -- and that was seen shortly after the -- after June 23rd, 1986, so it would have pre-dated June 23rd, 1986, isn't that right?

A. I'm not sure who saw it.

Q. Well, did you see it, doctor?

A. Well, that was in January --

Q. Okay.

A. -- at the time of surgery, that it was noticed.

Q. Well, assume -- assume if it were seen within a month or six weeks of the date of the accident, it would be unlikely that it was caused by the accident, is that correct?

MR. DAVIS: I want to object to the form of the question. You can answer it.

THE WITNESS: No. I think that a ligament can hypertrophy and swell within a matter of -- to be accurate, within a matter of a week to two. I think that there are changes that are -- can occur in the ligament which take a longer time, but I think that you can have alterations in that ligament within one week after an injury.

BY MR. GALLAGHER:

Q. Okay. How about in the lateral recess, the part that -- the part that was freed up --

A. With --

Q. -- those changes?

A. With respect to the bone?

Q. Yes.

A. We're not sure how long it takes. Most of these changes occur over a period of time, but some of the changes in the lateral recess can easily occur over the

period of several months. So, I can't tell you how much of the changes in the lateral recess occurred between June and January and how much was pre-existing, I really can't.

Q. You -- are you aware that Dr. Mandel has testified that the -- the nerve, the EMG changes that he saw, the EMG findings that he found which he described as chronic which are reported on July 23rd, 1986. He's testified that they pre-dated the injury, by three weeks, three months, three years, maybe even longer?

A. I'd have to see that initial EMG report to refresh my memory. Is that --

MR. DAVIS: Excuse me, I'm showing the doctor the records. Here it is, page two.

THE WITNESS: Okay. That is Dr. Mandel's conclusion that he said that there were chronic partial denervation changes.

BY MR. GALLAGHER:

Q. And he's already testified in videotape. And he said that that in all likelihood, in fact, he said it did pre-date the -- it pre-dated the accident?

A. Okay.

Q. All right? And you -- you know that there was calcification of the disc that was bulging, you're aware of that? That that was found?

A. Yes. That's correct.

Q. Dr. Mandel also testified that that would take a long period of time to develop and that pre-existed the accident?

A. That's correct.

Q. You would agree with that too?

A. That's correct.

Q. There were also osteophytes present in his back. Dr. Mandel said that would take a long time to develop and that pre-existed the accident, do you agree with that?

A. Yes.

Q. There was also some spur formation in his back, that pre-dated the accident also, didn't it?

A. Yes.

Q. And you know he had prior back problems in 1969, and I think also in 1984?

A. I knew that he had in '69 and some time in the early '80's, yes.

Q. Now, with someone with all these problems with the -- all the things that I've just described, the chronic changes in the -- the thing in the EMG that was described as chronic, the I guess, arthritic changes, all those things, the calcification --

A. Yes.

Q. -- the spur formation, the osteophytes, all those things are -- are arthritic in nature, isn't that right?

A. Yes.

Q. And with your testimony that a mere -- just merely bending over could cause the problem that -- that he had, that you treated him for, isn't that correct?

A. Yes.

Q. Would it be --

A. I --

Q. It's possible that --

A. Yes, yes. That's exactly right, it's possible.

Q. I understand. All right. Now, would it just as you render percentages in terms of the success of a fusion, could you tell -- would you agree that it would be unlikely for a man with a back of this nature to be able to continue to work in heavy labor indefinitely? Since, at any point, or given point of time, if he had bent over, it was possible that he could sustain this problem?

A. There are -- There are so many, do -- you're going to have to rephrase the question if you want an answer.

Q. Given a man with the back that you know he has, which is pre-existing because of the arthritic changes in his body, coupled with the fact that he had a congenital anomaly at L3-L4, which put more stress on other joints in his body, you agree with that last statement?

A. Yes.

Q. Coupled with the fact that you've already told the Jury that just bending over could have caused the bulging disc that he had or the problem that he had, isn't it true that it would be unlikely for a man with this kind of back to continue to work, when he's fifty-nine or sixty years of age, even if this accident had never occurred?

A. No. I mean, there -- easily he could have continued along without any trouble, there's no way to know.

Q. Well, we already know he had trouble in '69 and '80. And then he had trouble in '86.

A. But some people can have intermittent bouts of this kind of problem throughout life. And I have many patients that are --

Q. And get better?

A. -- able to function.

Q. They get better. Is that because most of the changes are soft tissue and they heal?

A. No. It's because of the nature of the problem is that it's episodic. And a lot of these symptoms usually will quiet down within a period of a couple of weeks to sometimes within a month or two or three months.

Q. Okay.

A. That's the difference. So, people have these episodic periods that go throughout their life and their

able to tolerate it and get along with it. But they don't have a prolonged period of disability for six months like he had.

Q. Now, doctor, these people who have these episodic problems and get better and go back and don't have these prolonged periods of problems, have you noticed that those people often aren't involved in litigation?

MR. DAVIS: Objection.

THE WITNESS: I have a lot of patients who are not involved in litigation, who require surgery, who have similar kinds of problems to him. What has been -- I guess that's -- I can't answer that it's definitely related to litigation, it's not.

BY MR. GALLAGHER:

Q. Of -- I understand. But is -- is it true that when you're deciding whether to do surgery or not on a patient, you're supposed to take in the fact that he's involved in a litigation or industrial accident? Are you supposed to take that in consideration?

A. It alters -- it's in some people's opinion, it alters their prognosis and their ability to get back to work. But I think that there's a lot of disagreement among the medical profession as to how much of a part it does or doesn't play. It's important as a physician to take all

aspects whether it be litigation that's involved or marital problems, or things like that, into con -- into play, that could influence your ability to get a good result with a patient.

Q. Who's the head of your department?

A. Dr. Rothman.

Q. Does Dr. Rothman throughout -- you're aware that Dr. Rothman has written a book with Dr. Simeone?

A. Yes, I'm quite aware of that.

Q. In that book, isn't it true that there's ample discussion about the -- about the fact that people that are involved in litigation or industrial accidents are poor candidates for successful surgery?

MR. DAVIS: Objection.

THE WITNESS: What that --

BY MR. GALLAGHER:

Q. Just -- answer yes or no.

A. Not that they're -- they're not poor candidates.

Q. The prognosis, the result?

MR. DAVIS: Objection.

THE WITNESS: That you will not-- their point is that the result is not as good as you would obtain in a group of patients that was as self employed, highly motivated without any benefit to be gained by litigation. But not that

they're poor candidates. Just that they, the results have not been as good with that group of patients as it has been with the self-employed patient. That's their point.

BY MR. GALLAGHER:

Q. And their point -- you said that the point is, is that people who are involved in litigation, the chances of having a good result by doing the type of surgery that you did is less than people who are not involved in litigation?

MR. DAVIS: Objection.

THE WITNESS: That is their contention, yes.

BY MR. GALLAGHER:

Q. All right. Do you agree with that?

A. In some respects.

Q. Now, the -- but you did surgery in this case, anyway, didn't you?

A. Yes.

Q. Okay. Now, this -- the nerve was trapped over in the lateral recess, correct?

A. Yes.

Q. The disc was bulging centrally, isn't that correct?

A. Well, the disc bulge that comes centrally, it's a diffuse central bulge, so that some of it comes out towards

lateral. It all depends on how the nerve root -- the nerve disc lateral recess is and it's different from person to person. Not in everyone is the disc in exactly the same place in relationship to the nerve root as in relationship to the lateral recess, so it's a combination of all three.

Q. In this particu -- well, strike that. It's a combination. It doesn't have to be a bulging disc though does it?

A. You don't have to have a bulging disc --

Q. To have -- To necessitate a surgical intervention for lateral recess syndrome, you do not have to have a bulging disc, isn't that correct?

A. That's correct.

Q. And it's also correct that you can have a bulging disc, have a lateral recess syndrome, the bulging disc will have to do with the other, isn't that correct?

A. Um --

Q. Anatomically?

A. It's anatomically possible, that's correct.

Q. And the part of the nerve that was, or the part the bones and the nerve that -- where you thought it was trapped and where Dr. Myers thought it was trapped or impinged upon, is over in this area, am I correct?

A. Yes. Unfortunately, this model is not anatomically correct.

Q. But it's over in this area?

A. Yes.

Q. And centrally means over here?

A. No. Central bulge of the disc means that it's bulged centrally, but it's a diffuse central bulge. There's a difference between if it was just a central bulge versus what we normally call a central bulge, is something that bulges up highest in its center part, but may also be bulging throughout its course.

Q. Okay.

A. That's -- it's just -- the disc can either be-- you speak of it where it's bulged the most, okay? If it's bulged more to the left, more to the right, but you could have a left-sided bulge which is also bulged centrally and also to the right, too.

Q. Well, he didn't have a left-sided bulge in this case, did we?

A. He had a central bulge.

Q. He didn't have a right-sided bulge, did we?

A. It was bulged throughout its -- it wasn't principally the left. It wasn't principally the right. It was principally more to the center. But a central bulge by nature has an area where it's -- you're coming down off the slope. And as you're coming down off the slope, I mean, it doesn't, it's not sticking up like this, okay? It's

bulging like this. And by virtue of that, there's some increasing bulge on the left and on the right side.

Q. Okay. Now, there are people who have herniated discs that stick out and they don't have lateral recess syndrome or they don't have bone changes, isn't that correct?

A. That's correct.

Q. And without the bone changes and without the lateral recess syndrome, the neurosurgeon, or more often--often times the orthopedic surgeon will remove the disc that's bulging because the disc itself, is impinging on the nerve?

A. That's correct.

Q. You didn't remove any portion of this disc, did you?

A. No.

Q. Doctor, how many -- how many times a week are you doing fusions?

A. I have a large spine practice. We do it any place from one to five.

Q. And how many of those involve Dr. Myers?

A. The great majority of those.

Q. And how many of those involve Dr. Mandel?

A. A significant majority.

Q. And how many of those are involved in litigation?

A. I would say that I don't know accurately. But, unfortunately in orthopedic surgery, almost every patient has sustained whether it's a broken leg or a back injury, has acquired an attorney. And unfortunately, I would say it's over fifty percent of the patients that I -- I treat in my office.

Q. Are involved in litigation?

A. Have some form of, you know, litigation involvement.

Q. And does the way it work is that in terms of when Dr. Mandel and Dr. Myers are involved with you; Dr. Mandel refers the patient into your offices, either to Dr. Myers or to yourself?

A. Sometimes he does, sometimes we refer the patients to him. So, I mean it's --

Q. But the three of you are involved in -- in cases that the majority of the surgeries that you're doing on a weekly basis and the majority of those are involved in litigation, is that correct?

A. I would guess that it's -- I'm not sure that it's a majority, but it's in or around fifty percent of the patients that I treat are probably involved with litigation.

Q. And every time you perform surgery on a patient, you get paid a fee just like I'm paid when I represent a

client?

A. That's correct.

Q. Is that right?

A. That's correct.

Q. Okay.

MR. GALLAGHER: Thank you, doctor. No further questions.

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EXAMINATION

- - -

BY MR. DAVIS:

Q. Doctor, just a few questions. The fact that you're paid a fee for your surgery, has that influenced your opinion here at all?

A. No, none whatsoever.

Q. And doctor, when you operate on a man such as this, do you operate on him, or make a decision to operate on him because he's in litigation versus not in litigation?

A. No. I make a decision based upon medical--what's medically best for the patient.

Q. Doctor, has any of your decisions with regard to Douglas Pettyjohn, during your treatment of him, been based upon a fact that there's litigation, or there's not litigation pending here?

A. Never.

Q. Mr. Gallagher mentioned -- asked you about certain possibilities. He says, is it possible for a man to have this kind of symptoms on simply bending forward. And you said it was possible.

Doctor, are there a lot things that are possible causes of things?

A. Yes, there are.

Q. What are probable causes of things? Is it probable that a man bending forward, one single time, with no other symptomatology would produce this type of symptom?

MR. GALLAGHER: Well, I'm going to object to that --

MR. DAVIS: Well, fine.

MR. GALLAGHER: -- because that's not -- that's not the case. The case is whether a man bending forward --

MR. DAVIS: You -- wait --

MR. GALLAGHER: -- with this symptomatology as this man had.

MR. DAVIS: -- wait a minute. Save your argument for the Judge. You objected.

MR. GALLAGHER: Well, I object, I object --

MR. DAVIS: Fine.

MR. GALLAGHER: -- to the question.

I'm going to move to strike the response.

MR. DAVIS: Okay, fine.

THE WITNESS: Let me just answer, that what happens is while it's entirely possible that someone could simply just bend forward and have this occur, overwhelming majority in the high ninetieth percentile of patients can relate a single traumatic episode, whether it's a sudden bend, a sudden twist, whether they've been involved in a fall, a motor vehicle accident, a train accident, a swing of a golf club. But they can usually relate a single sudden event that precipitates the problem.

BY MR. DAVIS:

Q. Doctor, in this particular case, did Douglas Pettyjohn relate to you a single event which precipitated his problem?

A. Yes, he did.

Q. And what was that single event?

A. That was the accident where he was in the train and he was flexed forward suddenly.

Q. Did Douglas Pettyjohn give you any indication that he simply bent over and had these symptoms?

A. No, he never explained that to me.

Q. Doctor, you've already testified, I believe, as

to your opinion as to the relationship between this accident and the -- and the injuries that you sustained-- that this man sustained.

Did you have any indication from Mr. Pettyjohn that at any time within the few months before this accident that he bent over for whatever reason and sustained any pain?

A. To my knowledge, from talking to him, he was working, doing every day activities without any trouble whatsoever --

Q. Okay.

A. -- for several months or longer.

Q. Doctor, you were also asked on cross examination, is it possible for a man to have a lateral recess syndrome and not have a bulging disc, and you said yes. And is it possible for a man to have a bulging disc and not a lateral recess syndrome and you said yes.

Is it also possible for a man to have both?

A. Yes, it is. It's most likely the case --

Q. Okay.

A. -- more often.

Q. Can you explain why that -- why that's true?

A. Well, it's a continuing of a problem. It's a spectrum problem. On one hand, we see a pure, isolated

herniated disc and on the other hand, pure degenerative changes. And usually there's some combination of both, especially, in the middle age group of thirty to fifty. In the twenty year olds, it's almost pure disc. In the sixty year olds, it's almost pure bone. But in the middle group, it's a little bit of both.

Q. Now, doctor, you were also asked, isn't it true this man had spur formation before this accident, and you said yes?

A. Yes.

Q. Can you tell, doctor, can you tell us now, based on what you saw at the operation, during the operation, how much of that spur formation occurred before the accident and how much occurred between June date of the accident and the date of the operation?

A. It's impossible to say for certain. But I would believe that most of the spur was there before the injury. But how much would have occurred since the accident, I really can't say. I would say that probably some small amount additionally.

Q. How about the osteophytes --

A. Well --

Q. -- is that also true?

A. -- they're identical. They're semantics. Spur and osteophytes are the same thing.

Q. Okay, all right. And, doctor, would that not be true for any of these so-called arthritic changes that we're talking about?

A. Yes.

Q. Fine. And that for all of those, it would be impossible to tell exactly what was there at the time of the accident, versus what developed between the accident and the operation?

A. It is impossible, but again, most of it was there before.

Q. Okay.

MR. DAVIS: All right. I have nothing further. Thank you, doctor.

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EXAMINATION

- - -

BY MR. GALLAGHER:

Q. Just two questions, doctor. Isn't it true, that someone can have a lateral recess syndrome and a bulging disc without having an accident?

A. Yes.

Q. Okay. And one last question. You're being paid today for your time by the attorney for the plaintiff?

A. Yes, I am.

MR. GALLAGHER: Thank you.

THE VIDEOTAPE OPERATOR: This concludes the deposition, time is 9:52.

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C E R T I F I C A T E

COMMONWEALTH OF PENNSYLVANIA :

: SS

COUNTY OF PHILADELPHIA :

I, ROBERT C. COHEN, Registered Professiodnal Reporter and Notary Public in and for the County of Philadelphia, Pennsylvania, do hereby state that I have reported stenographically from the videotape recording of the deposition of DOCTOR SANFORD H. DAVNE, taken on Monday, April 6, 1987, beginning at 8:46 a.m., before Steven A. Stewart, Videotape Operator and reduced into typing, pages 1 to 51, under my direction, to the best of my ability, and are a true and correct record of the videotape recording in this matter.

ROBERT C. COHEN

ROBERT COHEN
Notary Public, Phila., Phila. Co.
My Commission Expires Oct. 17, 1987