2004 WL 5039930 (N.Y.Sup.) (Expert Trial Transcript)
Supreme Court of New York.
New York County

Blake KIRBY, Plaintiff,
v.
COLUMBUS CIRCLE LLC, Bovis Lease, LMB, Inc. and Sorbara Construction, Defendants.

No. 107570/02.
March 17, 2004.

Testimony of Dr. Merola.

Name of Expert: Andrew A. **Merola**, M.D.
Area of Expertise: Medical & Surgical >> Orthopedics
Area of Expertise: Medical & Surgical >> Surgery -- General
Representing: Unknown
Jurisdiction: New York County, New York

Appearances.

Messrs. Sacks and Sacks, Attorneys for Plaintiff, 150 Broadway, New York, New York 10038, by: Howard Borowick, Esq., of Counsel.

Messrs. Wilson Elser Moskowitz Edelman & Dicker, LLP, Attorneys for Defendants, 150 East 42nd Street, New York, New York 10017, by: Mathew P. Ross, Esq., of Counsel.

Before: the Honorable Emily Jane Goodman, Justice. (And a jury.).

MR. BOROWICK: Plaintiff calls Dr. Merola ANDREW MEROLA, called as a witness, having been first duly sworn, testified as follows:

THE CLERK: Have a seat.

Please state your name and county of residence.

THE WITNESS: Andrew Merola, M-E-R-O-L-A, Manhattan, New York.

Q. Dr. Merola, I'm going to ask you to keep your voice up as you need to project as far as you can to the back of the room.

What is your specialty?

A. Orthopedic spinal surgery.

Q. And what background, education and training do you have that allows you to be a medical doctor who does that?

A. I have attended medical school, attained a license in the State of New York, did my residency in training program at SUNY Downstate in Brooklyn, did a spinal surgical fellowship at University of Colorado in Denver.

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Q. Have you been Board certified?

A. Yes.

Q. And what is the process to become Board certified?

A. To become Board certified, you need to complete a credited U.S. residency program. You need two parts. You need to take an examination which is a written exam based on your training, and then after you have practiced for two years, you take a clinically based oral examination and after you pass both parts of that exam, you are Board certified.

Q. And are you in private practice presently?

A. Yes, I am.

Q. What is your practice focused on, what is your principal area of specialization?

A. Spinal surgery.

Q. And is it any part of the spine or all of the parts of the spine?

A. All parts of the spine, from the neck down to the sacrum and coccyx.

Q. Would you tell the jury, we have already heard from Dr. Touliopoulos. Is your practice associated with his?

A. Yes, it is.

Q. And would you tell us in taking the time to be here this afternoon, instead of being in the or, are you charging a fee for your file?

A. Yes.

Q. What is your hourly rate?

A. About five hundred dollars per hour.

Q. And would you tell the jury when one of your patients is injured, as -- comes to you for that injury or treatment or surgery, is it your practice when and if there's a lawsuit that you will make yourself available at your hourly rate to describe for the jury what your treatment has been?

A. Yes.

Q. Now, when did you first meet Blake Kirby?

A. May 6th, 2002.

Q. What was the circumstance -- did you enter into some relationship with him?

A. Mr. Kirby came in as a referral, I believe, from one of my other patients, with the complaint of neck pain.

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Q. And did you become his treating doctor?

A. Yes, I did.

Q. When was the last time that you saw him?

A. The beginning of this month.

Q. So that would it be fair to say over the past almost two years, you have been his treating doctor with regard to a particular part of his body?

A. Yes.

Q. What part?

A. His neck.

Q. We have heard from Dr. Touliopoulos about his shoulder, have you treated him at all with regard to the shoulder?

A. No, I have not.

Q. Are you aware of his treatments for his shoulder in a general way?

A. Yes.

Q. During the course of your being his treating Doctor, have you had occasion to obtain from him a history?

A. Yes.

Q. I want you to assume so that we can shortcut it, I want you to assume the testimony has been that he was an ironworker working full time that he was in the process of manipulating a truss, which was just about head level or a little above head level, he was wearing a hard hat, without any warning or any prior indication, something was going to happen, he was struck from above, first on his head, which was covered by the hard head and then on his shoulder by a 15-foot steel rod. Were you aware of this history?

A. Yes.

Q. And is that clinically significant to you as an orthopedic surgeon evaluating neck pain?

A. Yes, it is.

Q. Why is that significant?

A. It tells us a lot about his mechanism of injury and potential damage that he can have from that mechanism.

Q. And I want you to assume that the -- well, let me ask. I'm going to show you Exhibit 4 in evidence, and I have covered up a part of it. I am going to uncover that, and just show it to you first. Have you seen this diagram?

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A. Yes.

Q. And can you tell us whether or not it is a fair and accurate depiction of the mechanism of the injury to his neck?

MR. ROSS: Just note my objection to that.

THE COURT: To what?

MR. ROSS: Whether he's capable of saying that that is a fair and accurate mechanism of the injury.

THE COURT: Mechanism?

MR. ROSS: Yes.

With respect to that picture.

THE COURT: Well, come up for a second.

(Bench conference.)

THE COURT: Objection is withdrawn.

Q. Is that a fair and accurate depiction of the mechanics of the injury?

A. Yes.

Q. And based upon your treatment and your analysis of his cervical condition, did you operate?

A. Yes.

Q. So in addition to receiving his history and soliciting from him his complaint, you actually were able to visualize directly his cervical spine?

A. Yes.

Q. And in addition to that, your own visualization his subjective reports, the mechanism, did you have any tests to review either that you commissioned or that anyone else commissioned relating to the function and anatomical structure of his neck?

A. Yes, I did.

Q. Would you tell the jury after he came to you and reported this history, and after you initially examined him, before you sent him out for any tests, what was your impression, based upon your exam and the history?

A. My impression at the time I saw him was that he had sustained disk injuries secondary to the trauma that he suffered, and that those disk injuries were producing a significant amount of neck pain for him.

Q. Now, are you familiar with the term clinical correlation?

A. Yes.

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Q. Now, he makes complaints of significant pain. Were you able to do anything in your office without x-rays, MRI, CAT scans, EMGs were you able to clinically correlate his subjective complaints to validate in your own mind that they existed, because there was an organic reason?

A. Yes, yes, absolutely.

Q. What did you do?

A. He had decreased cervical range of motion, and he had positive objective provocative signs in the neck, those being compression and Sperling maneuver.

Q. Can you be a little more descriptive as to what those objective provocative tests are?

A. A compression maneuver is basically axial, loading or pushing, that compresses the bones in the disks to see whether or not they are reproductive of pain and Sperlings maneuver is the same maneuver but we add a twisting, to see whether or not there is a neurological component to that pain as well.

Q. And based upon your provocative tests, he did evince a pathology, or abnormal finding?

A. A pathological finding.

Q. And after you did these tests, and after you received his history and his complaints and are arrived at the diagnosis, did you send him out for any tests to confirm it even further objectively?

A. Yes.

Q. He ultimately underwent cervical discography. What is that?

A. That is a test whereby an opaque dye is injected into the disk spaces and then those spaces are visualized on a x-ray and CAT scan and patient's pain response to that injection maneuver is also recorded during the test.

Q. And when you had this procedure performed, what were the results?

A. The results demonstrated that he had three injured disks within his neck. Those disks demonstrated tears and herniations. They were provocative of pain, and one disk was particularly pain provocative and disruptive.

Q. Okay. Let me -- before we go into your treatment and further analysis, did you become aware in treating him that he had a low back injury 1991?

A. Yes.

Q. And would that injury 11 years before you even saw him, did you -- I want you to assume for a moment subject to connection that he was struck on the low back under the lower end of the scapula by a beam and he had some low back pain, some spasm back in ‘91 and he received treatment. He had testing done, and he had some therapy and then by ‘92, or the beginning of ‘93, he was cleared by his doctors at a local hospital as well as The Spine Institute to return to work as an ironworker or anything else, carpenter or anything. That's in ‘93.

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Over the next eight years -- through the next nine years, I want you to assume that he engaged in physical labor and physical hobbies, canooing, Lacrosse, hiking, fishing, and had no symptoms relating to the neck, let alone the shoulder that occurred in this case.

I want you to assume further that he wasn't under the care of any doctor or chiropractor or wasn't taking any medication.

During those nine years, leading up to the accident, where he was working as a ironworker, putting in above average hours, doing the rigorous job of an ironworker, do you have an opinion, sir, as his treating surgeon as to whether or not that '91 accident involving his low back had anything, anything at all, to do with his condition relating to his shoulder and neck?

A. It had no relevance to his shoulder or neck.

Q. Now, after you did the examination and you sent him for the discogram, was there an MRI done of his neck?

A. Yes.

Q. And do you have that with you?

A. Yes.

MR. BOROWICK: And do we have a shadow box?

THE COURT: Yes.

MR. BOROWICK: While they are setting up the shadow box, can we mark that with a tab, please as he sets it up.

(MRI marked as Plaintiff Exhibit 22.)

Q. If you would present that MRI and describe -- first of all, identify it as far as the name and date that it was taken?

A. This is Blake Kirby, 2/10/04.

Q. Okay, so that would be this year, now. Who directed that the MRI be taken?

A. I did.

Q. And why did you do that? Let's jump a head. Why did you do that in February of that year?

A. This is after he had undergone the discectomy and reconstruction that I did. He had been coming back to the office. He did pretty well initially post surgically, decreased pain level and improved function in the neck and then over the last couple of months, starting in about December or January or so, he started to have some more neck pain.

My reconstruction had centered itself around the most severely injured disk which was at the lower end of his injuries, so the question arises at to whether or not he's having a breakdown above the area of the surgical reconstruction.

Q. Okay. Now before we go any further into the present, I would like to ask you to step down. You are down already, of course, and would you look at Exhibit 20 and 21 and can you tell the Court and jury whether or not they are fair and accurate depictions of what they purport to depict?

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A. Yes, they are.

MR. BOROWICK: And I would offer first Exhibit 20 in evidence, as shown to counsel.

MR. ROSS: No objection.

THE COURT: We will mark it later.

(Plaintiff's Exhibit 20 received in evidence.)

BY MR. BOROWICK

Q. I am going to ask you to describe what -- give us a little anatomy lesson, if you would, about the anatomy of the vertebrae?

A. Sure. There is a good depiction to take a look at the neck and contents. The squares are essentially the vertebrae body, the spaces in between the vertebral body occupied in the disks which function not unlike shock absorbers. The spinal canal and spinal cord are behind the vertebral body in the spinal canal itself, and then this is the back side of the neck, here. These represent spinous processes attached to the bones.

Q. What is it that you feel when you rub the back of your neck and feel those points?

A. You feel these points here, the spinous processes.

Q. Now, is that natural curvature to the cervical spine?

A. Yes, in general the cervical spine has a slight backward curve to it, kind of like a C.

Q. What is that called?

A. We called that the lordotic curvature, neck.

Q. When you saw Mr. Kirby for the first time, what did you visualize about him?

A. He had lost that curvature, that stands to his neck.

Q. What causes -- what anatomical response to an injury causes the loss of the lordotic curve?

A. Muscle spasm, as well as disk injury.

Q. Were you able to palpate or touch his neck in way to identify any spasm?

A. Yes.

Q. Did he have that?

A. Yes.

Q. In touching his neck to elicit any response or feeling spasm, did that elicit any painful response?

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A. Yes.

Q. And what did that tell you?

A. That he has internal derangement of the neck anatomy causing pain.

Q. Now, tell us a little bit about the disk anatomy?

A. The disk itself is best visualized like a jelly donut, it has an inner soft gelatinous core that surrounded by an outer more fibrous or pastry-like, if you will, external area, and this combination of elements within the disk itself allows that disk to act like a very specific shock absorber to resist not only up and down motion, but side to side motion and twisting motion.

Q. What are the terms for the center of the gelatinous center?

A. That's called the nucleus pulposus.

Q. And what about the cartilaginous area around it?

A. That's the external fibrous layer, anulus.

Q. Would you tell us, can disks become herniated or bulged?

,By the way what is a bulge or herniation of disk?

A. Bulge simply means that that disk is under a compressive load and that we notice that the disk itself flattens out at the edges, not unlike a tire, it has a little bit of air.

Q. What is a herniation?

A. Herniation indicates that the gelatinous inner core or nucleus itself has leaked outside the outer shell. And --

Q. Is herniation productive of pain?

A. A herniation is productive of pain.

Q. Is that a pathological condition?

A. Yes.

Q. Is a bulge necessarily productive of pain?

A. No.

Q. Describe what a bulge is and what significance a bulge is to orthopedic surgeon specializing in pain?

A. Sure, a bulge, if a disk can happen, basically as a response to how that disk is being compressed. As I said before, it's not unlike a tire that has loads on it. If you look a tire for a car and that car uploaded, when you put a load in there, that tire seems to compress a little bit and you might notice a bulging out of the tire walls and that's not unlike what would happen to a disk, so it's a normal physiological response to loading.

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Q. And does it have anything to do with age?

A. As you age, your disks bulge, more or less, depending upon how spongy they are at any given time.

Q. Would you assume that anyone into that 30, 40 or 50 age range would have some bulges, whether they were in an accident or injured?

A. Yes.

Q. Would you tell us, are you able given the history and given an examination and given actually eyeballing a cervical spine, are you able to tell whether someone's herniation or tear in the anulus component of the disk has been -- has occurred as a result of trauma or the aging process?

A. Yes.

Q. Okay.

In Mr. Kirby's case, I want you to assume that for his lifetime, he never had a problem with his neck or his cervical vertebrae, and never had any ongoing symptoms, never received any treatment for it, never was under the care of any doctor for any recurrent pain in the neck or anything like that, wasn't taking medication, et cetera. Following an impact with a steel rod, had the onset of symptoms that you saw in your office and objectified with the tests that you did. When you ultimately operated, were you able for confirm, based on what you saw, whether or not his herniations and tears were a result of trauma -- trauma from this accident with the steel rod coming down on his head or was it as a result of something else?

A. This was traumatic disruption of the cervical spine.

MR. BOROWICK: With the Court's permission, I was able to secure a rod of dimension of the -- dimensions. I want to use it for the witness for one or two questions.

Is that okay?

THE COURT: In other words, it's not the one in the case but a representation of one?

MR. BOROWICK: We have learned from the defendants that they took possession of it and lost it, so I have to make due with what I have.

MR. ROSS: I object to that comment.

MR. BOROWICK: That's not a secret. Would you put it on the jury back bar, please.

Q. Doctor, would you take a look at this, this bar, which is represented to be 15 feet, approximately a half-inch in diameter, and would you feel it, would you touch it, lift it, or whatever, without dropping it, okay.

If that were to fall a distance of approximately a hundred feet, and strike in whatever angle is unbeknownst, but if it was to strike somebody on the helmet on the top of his head and then bounce into their shoulder and then flex and actually bend over their shoulder, would that be -- let's talk about the neck itself -- would that be the type of impact that could cause traumatic herniations, tearing, and bulging?

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A. Yes.

Q. And given the history, the preaccident history of no complaints, no treatment, no limitations, no disability related to the neck, a history of this facsimile landing on his helmet and shoulder, is there any doubt in your mind that what you were treating him for were traumatically induced cervical disk injuries?

A. No doubt at all, no.

Q. Would you tell the jury, using the diagram at best you can, would you show the injury how the mechanics of this accident fully occurred anatomically?

A. Sure.

First, it's important to understand that this piece of material develops a certain amount of potential at a height.

So, if this is a hundred feet above us, that's a certain amount of energy that that material contains. When it falls, that potential energy that it has because of the height at which it rests, plus the effect of gravity, plus the speed and mass, give it an amount of -- it becomes a projectile, a bullet or cannon shell that becomes acutely transferred to the physiological tissues we have here and what happens, every physiological tissue in the body has a stress response curve and that response curve at the upper limit, it has a section where failure occurs, or the tissue itself can no longer accommodate the energy transfer, so what happens in this instance, we take a piece of steel, it falls, potential energy is transferring to the body, physiological tissues of the body, muscles, tendons and ligaments, bones and disks now absorb that energy to their maximum capacity beyond that maximum capacity. They tear and fail, and that is basically what happens to these disks because the disks are responsible for energy absorption and damaging the surface of the spine, and like a shock absorber, they take this load on themselves, distributes that load throughout their internal pieces and then those internal pieces start to rip, tear or fail when they can no longer accommodate that energy.

Q. In your opinion, Dr. Merola, which disks reached their failure point and actually failed as a result of this impact?

A. The 4-5 disk, 5-6 and 6-7. Also important to note that the disk at the bottom of the cervical spine, C7- T1 is where the neck attaches to the thorax. The thorax is fixed, doesn't move, ribs and sternum hold it together. There's no motion down here, so when you think about your head and neck moving, this is pivot point, C6-C7, and we see a distribution --

Q. Mr. Kirby?

A. Mr. Kirby.

-- a distribution of load from -- proceeds from 4-5 to 6-7, where 6-7 completely disrupted, totally almost sheared off, which is the surgical and thoracic spine and that was the disk that was most severely injured where I concentrated my reconstruction efforts.

Q. When you did your reconstruction and were inside his -- inside his neck, were you able to observe the other injuries to the other disks? I think you said 4-5 and 5-6?

A. Right, you can see these disks because during the exposure, you kind of unroof the muscles that overlie them so you can get closer to C6-C7, but I did not take those disks apart in any way, shape or form to harm them. I left that alone.

Q. You said that you tried to conservative approach to the injuries before you resigned yourself to surgery. Tell us what conservative approach you tried?

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A. The standard things, which include physical therapy, anti-inflammatory medication pain, medicine indication. That not being successful, bringing him up to the next level, pain management, consultation and subsequent epidural steroid injections and injection therapy to the neck.

Q. What kind of physical therapy?

A. Physical therapy for his head and neck basically cool off his muscular complaints, restrengthen him and restrain the neck muscles to try to alleviate some of the painful symptoms.

Q. Were you able to eliminate the pain that way?

A. No.

Q. You said that you tried pain medication. What particular medication did you use?

A. Anti-inflammatories things like Naprosyn, Vioxx, Celebrex, those type of things.

Q. And what about pain medication?

A. Yes,.

Q. Those are them?

A. Yes.

Q. And any particular pain medications?

A. Pain, including Vicodin and Norcet, with a combination of a acetaphetamine and Tylenol and codeine.

Q. And did those medications eliminate his symptoms?

A. No.

Q. Now, when you tried physical therapy, and tried the medications and they didn't eliminate the symptoms or problems, what was the purpose of going to the epidural injection, how do those work?

A. Epidurals, when you take medicine by mouth, you get a systemic effect, so that comes in the GI direct, passes through the liver and organs and absorbs into your body the benefit of epidural steroids or putting medication directly to the neck with a needle means you get potent anti-inflammatory responses from the medication delivered directly to your injury so there's a high percentage of success with that kind of treatment.

Q. And that didn't work?

A. Correct.

Q. Did he obtain any temporary relief?

A. He had some mild relief with the epidurals, but nothing long lasting.

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Q. Did they my provide any temporary relief?

A. Yes. Nothing that lasted for any time.

Q. As the year progressed and you got more objective findings and more testing, what did you decide to do?

A. Well, at that point, you start to consider surgical alternatives, and that's when I decided to send him for the discopathy of the neck.

Q. When that came back, it confirmed that the tears and herniation -- would you tell us, was there any other approach that you could have taken besides surgery that would have had a better outlook?

A. At that time, after you try just about everything that you have, short of doing reconstruction, really there isn't anything else.

Q. What did you do?

A. At that time, we sat down, talked about options, different types of reconstructions that we could do, the number of levels that we include in the reconstruction, and what we decided to do was for concentrate our efforts on the most severely disrupted disk with the hope that the other disks would eventually be able to accommodate at the time.

Q. Tell us what surgery you performed, where did you perform it?

A. In the neck, in the cervical spine.

Q. What hospital?

A. St. Vincent.

Q. And tell us what the procedure involved?

A. Sure. The procedure is known as anterior cervical discectomy and fusion, which basically means we come in through the front, move the organs out of the way of bones and disks, identify the appropriate level with intraoperative x-ray, then utilize the microscope and some small instruments, remove the injured disk, down to the level of the spinal canal,.

Q. How do you dig a disk out?

A. There are some small little tools and then we try to get all the way back to the spinal column area. We shave down the bone adjacent to the disk so that we can prepare an area that is acceptable for whatever implant we choose to put in there and I close to put in a machine bone dowel implant. That's done with a bur, so that that those areas of bone can be smoothed out and really basically kind of do a carpenter cabinet making thing so that you can fit in your bone graft.

Q. Is it a real bone or artificial?

A. No, real piece of bone.

Q. Where do they get the bones from?

A. Donated.

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Q. Somebody donates bones?

A. Yes.

Q. A live person?

A. No, they are usually -- they are not alive, when we do need them. They are not unlike organ transplants, heart, lung, kidney, organ donors. Societies collect and harvest body parts and organs and then are distributed to patients who need them.

Q. And what did you do with that dowel?

A. That dowel which is placed in the C6-, C7 disk space, you make sure you get a good fit in there and compress the bones across that dowel implant and then lock it in place with a tie and then implant and small screws that hold the plate down to the bone to keep everything in place.

Q. Does he have that plate in the throat?

A. Yes.

Q. And in your opinion, will he need to have that plate or some other type of plate in his throat for the rest of his life?

A. Yes.

Q. And what happens over time when that dowel is in, on shaved surfaces and held together with that instrument?

A. What we are trying to achieve is that this area will then transfuse and this bone dowel will incorporate itself into these two vertebral bodies to make this C6-C7 level like one large piece of bone to have a stable base for the rest of the spine to sit.

Q. Removal of the disk, a fusion, is that a permanent injury with a permanent change in the geometry?

A. Yes.

Q. And that change in the geometry is what I want to ask. When you take two vertebrae and disk between them, remove the disk and fuse those vertebrae, do you affect the mechanics of the neck at all?

A. Yes.

Q. In any material way?

A. Yes.

Q. In what way?

A. What happens now is that you have really stiffened up this area of the neck and you have now changed it from being a physiological structure to a mechanical structure. And as such the load distribution through the neck now changes as well.

Q. Let me ask you, aside from the -- I want you to assume that he went to the hospital, there were some tests done, he was examined and discharged that he came under the care of a Dr. Hearns, who did some -- physiatrist -- and he did some testing and some examinations of him. He came to your office, you treated him, as you have described, and Dr. Touliopoulos, who treated

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him for a short time and operated on him and treated him since, the operations the surgical procedures the discography, the MRIs, the x-rays, medication, physical therapy, I want few assume that all of that has cost some money and has been associated with medical expense of approximately $48,000.

Would you have an opinion with a reasonable degree of medical certainty as to whether that expenditure to date has been reasonable and necessary to address the injuries that he sustained in this accident?

A. Yes.

Q. What is your opinion?

A. My opinion is that is a reasonable and necessary amount.

Q. And now, how did he tolerate this procedure?

A. He tolerated the procedure well. We had no complication.

Q. Successful surgery?

A. Yes.

Q. And you fused those two bones?

A. Yes.

Q. Over the last year or so, have you had occasion to see him over the course of followup visits?

A. Yes.

Q. Is there any doubt in your mind that surgery resulted the fusion of C6-C7?

A. No.

Q. So that would it be fair to say that he's all better?

A. No.

Q. Describe for the jury why that's not fair to say?

A. Well, since we changed the mechanics of the neck by fusing C6-C7 we still have a couple of other bad disks to deal with. Those are the disk above C6-C7, C4-C5, and C4-C6. Unfortunately, he is at this point in time starting to develop some collapse of those areas, and as such, he is, I think, he's headed towards having additional surgery in his neck.

Q. When you say they are starting to collapse, is the collapse of C4-C5 and C5-C6, those disks, are they collapsing secondary to the aging process or is it secondary to the residuals of the trauma, traumatic residual. When you fuse C6-C7 as you have, what does that do with regard to the load?

You mentioned the axial load of the cervical spine, what does that do when you remove one of shock absorbers?

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A. It now transfers that load to the adjacent segments.

Q. And is there a term in medicine for that transfer?

A. Known as adding on phenomenon.

Q. And when you add on to the adjacent disk space in a situation where the disks have been damaged as a result of a trauma, does that adding on have any particular effect upon those damaged disks?

A. That adding on phenomenon causes more wear and tear of tHe disk levels.

Q. And does it accelerate, decelerate or have an affect on the rapidity of degeneration of his neck?

A. Accelerate.

Q. What about activity, if he were to try to go back to playing golf or Lacrosse, or even canooing, with whatever strains that puts on his neck, if he want back to the things that gave him joy, what effect would that have on the acceleration of his incapacitation?

A. Significantly accelerates the rate process.

Q. If he were to ask you, Doctor, I would like to do those activities again, I am going crazy here and I have no fun. Can I do those? What could you tell him?

A. I would say you can do them if you want, but you are going to have some problems down the road.

Q. Do you have an opinion as to whether or not he's going to be need any future surgery?

A. I think that he will need future surgery in the future.

Q. And do you think that with a reasonable degree of medical certainty he's going to need any addition fusions?

A. Yes.

Q. And how much?

A. Two.

Q. And would they be done at the same time or would they be done seriatim?

A. If we had two very bad disks at same time, we opt to do two disks. If we had one real bad one, and then we do one and give us hope for the other one.

Q. Would you take your position by MRIs and describe as of February of this year whether there's one or two bad or very bad disks?

A. So this is basically the same representation we see there, that side view of the neck. This gray line represents the spinal cord. Adjacent to the gray line this is cerebrospinal fluid, the white stripes next to the gray line. Bones are the areas in front. The disks are these little string bean shaped things in between the bones. Reconstruction is here at C6-C7. What we see is that above the

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C6-C7 level, the neck is pitching forward. Not unlike the Leaning Tower of Pisa, its lost its normal cervical curvature, so we like to see these bones in a C-shaped coming backward. Following this line right here.

At the very least we would like to see it straight up and down but we are a little bit past that straight up and down point and that's happened maximally at the levels directly above the fusion area.

Q. What does that tell you?

A. That tells us that he's got an accelerated degenerative process at C4-C5 and C4-C6,.

Q. How does that bode for him in the future?

A. Not well.

Q. Is there a condition or are these conditions such that they repair themselves?

A. It is not going for repair itself.

Q. And when would you address these disks with additional fusions?

A. Several indications for additional fusions.

Number one, should we encounter a neurological finding, if he were to develop a pathological reflex, or were to develop any signs of spinal cord irritation, that is an indication to address those levels, so neurologically.

Number two, mechanical. On followup MRIs and x-rays, we notice that these bones continue to slip out of place and alignment continues to progress in an unacceptable fashion. We need to address the mechanical reconstruction; and number 3, if his pain level increases back up to a nine or a ten out of ten, then we also need to address reconstructing those levels.

Q. And based upon your recent visit wit Mr. Kirby, can you tell us whether or not any of those criteria have been met, such that you are desirous of going in and doing another fusion?

A. We have -- we are meeting one-and-a-half of those criteria. Number one is that he's having increase in pain, and other one is that we have increasing, what we call, sagittal imbalance in the cervical spine.

Q. Is it your opinion with a reasonable degree of medical certainty that he should be scheduled for fusion?

A. Yes.

Q. And when?

A. Probably five to seven years.

Q. And in five to seven years, understanding the medical costs go up, let's talk the present value or present day costs of medical care.. What is a fusion that would address one of those disks, what would that fusion cost in today's dollars, soup to nut?

,What I mean, pre-op, op and anesthesia, post-operative, hospital, and just cost, your cost, your fees and rehab?

A. $50,000 per level.

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Q. And is it your opinion or prognosis that after you do one, if there's more adding on, you would likely need to do another thereafter?

A. Yes.

Q. And how far -- I mean, based upon your experience with spinal surgery, do you have an opinion as to how far down the line that would be?

A. It's difficult to say, but probably the same amount the time, looking at those five to seven years in values.

Q. Would that be -- those surgeries, the one that you did and two that you would do in the future, would those ever return him to normal function?

A. No.

Q. Normal geometry?

A. No.

Q. Normal mechanics?

A. No.

Q. Pain-free existence?

A. No.

Q. You can resume your seat, if you would. Before you do. This exhibit, Exhibit 21, would you tell us, please --

MR. BOROWICK: That would be 21 in evidence.

(Plaintiff's Exhibit 21 received in evidence.)

Q. Would you tell the jury what those procedures would look like and what they would accomplish?

A. This is a representation of the additional level, so that the original surgery is down here, the additional levels added on C5-C6, C4-C5, so we see two more implants, and a longer plate to extend the fusion up to the C4 level.

Q. Yes you say two more implants. You mean the prosthetic spacers.?

A. Yes.

Q. Instrumentation, would that be a single or multiple plate?

A. Single plate, so we take off the original plate, at the 6-7, remove that, explore that area, to see if it's healed up and stable, and then clear of the 5-6 level and 4-5 level, put the implant in and a longer plate.

Q. Would those surgeries involved the surgical removal of disk material?

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A. Yes.

Q. Okay. You can resume your seat now.

Thank you.

And I have a few more questions.

When first saw -- is there anything that you needed to point out in the MRI other than what you have?

A. No.

MR. BOROWICK: I offer the MRI in evidence.

MR. ROSS: No objection.

MR. BOROWICK: We have deemed marked the next exhibit after the MRI the rebar.

(Rebar marked Plaintiff's Exhibit 23 for identification.)

Q. Sir, let me ask you just a few more questions. Is there, what with a reasonable degree of medical certainty, the diagrams that you made which were the herniation and tears, were they -- what were they, the approximate -- what were they proximally caused by?

A. Rebar falling on his head and neck.

Q. Sir, would you tell the jury --

MR. ROSS: Objection.

Q. Sir, would you tell the jury if Mr. Kirby wanted to return to ironwork and an ironworker includes lifting, climbing, using tools over head, considering his shoulder injury and his cervical injury and the surgeries that have gone in both -- in both areas, is there any doubt in your mind as to whether or not he has the capacity, physically, whatever he wants to do, to physically do the work of an ironworker?

A. He can't do the work of an ironworker.

Q. What about based on the injuries to the parts of his body, the neck and shoulder, could he do any form of manual labor over the course of a 40-hour week with any reliability and painlessly?

MR. ROSS: Objection to the form of the question.

A. No.

MR. BOROWICK: Nothing further.

MR. ROSS: If I could just take two minutes.

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(A recess was taken.)

(After the recess the following occurred:)

CROSS-EXAMINATION

BY MR. ROSS:

MR. ROSS: Thank you.

Q. Good afternoon, Dr. Merola. I am just going to have a few followup questions, and we have know each other, correct.

We actually went to high school together.

A. Yes.

Q Good to see you.

Now, Dr. Merola, have you examined patients on behalf -- patients who have been represented by firm of sacks & Sacks in addition to Mr. Kirby?

A. Yes.

Q. And have you testified for them in court prior to today?

A. Yes.

Q. And about how many times?

A. Once. once or twice.

Q. And now, I think you indicated that the first time that you saw Mr. Kirby was some time in May, let's say four or five weeks after the accident, correct?

A. Yes.

Q. Were you aware of the fact that Mr. Kirby had instituted a lawsuit prior to him seeing you for the first time?

A. Yes.

Q. Now, you had mentioned that there were three levels, if I understood you correctly, there were three levels of the cervical spine that were of concern to you, C4-C5?

A. Yes.

Q. C5-C6?

A. Yes.

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Q. And C6-C7?

A. Yes.

Q. The surgery that you performed was at the C6-C7 level?

A. Yes.

Q. And now, you did this, I think you said discogram of Mr. Kirby?

A. Yes.

Q. And that showed disk bulging C4-C5, C5-C6 level?

A. Yes, here is the discogram. So, yes, which level.

Q. Yes, the C4-C5 level?

A. Yes.

Q. Was there any indication of disk bulge?

Q. Now, in this MRI that was done on what was the date again?

A. I believe May 1st, 2002.

Q. So this would have been about a four weeks after the accident?

A. Yes.

Q. And on this MRI, there was an indication of posterior bulging disk at the C4-C5 level, is that right?

A. Yes.

Q. Let as you say posterior bulging disk what does that mean?

A. There is a bulge behind the disk. In the rear portion of that disk.

Q. And so, would that be like, that's in the back or behind, the back part?

A. Yes.

Q. And now, there was also a finding of a bulging disk at C5-C6 level as well?

A. Yes.

Q. You testified, Doctor, that bulging disks are, well, I will ask you that, bulging disks can be found in individuals that are in their 35- 36- 37-year old range?

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A. Sure, yes.

Q. There's a term that's used and sometimes referred to a degenerative condition, degenerative in nature?

A. Yes.

Q. Is that right?

A. Yes.

Q. And a bulging disk you would agree would be one aspects after degenerative condition, is that right?

A. Can be.

Q. Can be?

A. Yes.

Q. Now, is it your testimony to a reasonable degree of medical certainty that the bulging disk that shows up on the MRI have four weeks after his accident at the C4-C5 level resulted from this traumatic injury? Is that what you are saying?

A. That's not the whole MRI finding, though.

Q. Okay. So what is the rest of it then?

A. He has -- he has bulging disk in C4-C5, C5-C6 and herniation at C6-C7.

Q. Right. I apologize. We are going to go to each one at a time.

A. Okay.

Q. What I'm saying to you is with respect to the bulging disk, we will take the two bulging disks, C4-C5, and C5-C6, can you say, Dr. Merola, to a reasonable degree of medical certainty that those bulges at those two levels did not exist prior to Mr. Kirby's accident on April 1st, 2002?

A. Well, since the MRI is only reading bulging, it doesn't give us results of the discogram. Knowing what we know, I have to say that the results of that MRI are secondary to the accident.

Q. So prior to April 1, 2002, based on your testimony, Mr. Kirby was a 36-year old ironworker, did not have any bulging disks at C4-C5 and C5-C6 level, is that right.

A. We don't know because we don't have an MR at that time.

Q. So you don't know if he had any bulges at that point in time, is that fair?

A. Yes.

Q. Would it be fair to say that individuals that do manual labor, bending, lifting climbing, lifting heavy objects, things of that nature, would be more prone to disk bulging and/or disk herniation?

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A. Yes.

Q. When you first met Mr. Kirby, you took a history of him?

A. Yes.

Q. Did you ask him about the prior injuries or prior accidents?

A. Yes.

Q. And what did he tell you?

A. I don't have anything in my chart.

Q. And having told you that he had sustained any type of injury, he would have -- you would have marked that down in your chart, correct?

A. I could have, yes.

Q. If he told that you he had sustained an injury to his back where he was hit with a steel beam just below the left shoulder blade, you would have noted that?

A. If it were significant, yes.

Q. Did he tell you that as a result of that accident, he had brought a lawsuit?

A. No.

Q. Did he tell you as a result of that accident, he had missed work for roughly a year?

A. No.

Q. And did he ever indicate to you whether or not as a result of that accident he had difficulty bending, pushing, and doing things of far nature, he did ever bring that to your attention?

A. No.

Q. Did Mr. Kirby ever indicate to you that he had received treatment to his neck, albeit as was brought out on direct examination, you know -- withdrawn.

Did Mr. Kirby ever tell that you he received treatment to his next any time prior to April 1, 2002?

A. No.

Q. Can you tell me what is -- what is the lumbar traction, L-traction that you might see on records?

A. Lumbar traction, traction placed on to the lower back or lumbar spine.

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Q. That's what for?

A. Low back pain.

Q. What does it try to do?

A. It stretches out muscles and tissues in the low back.

Q. That would be a form of treatment if someone has low back pain?

A. Yes.

Q. And it would be fair to say that if someone was receiving cervical traction that would be because of a person having pain in the neck or cervical area, literally a pain in the neck?

A. Yes.

Q. Would you agree with that?

A. Yes.

Q. Now, did Mr. Kirby ever show you or did you ever receive any records from Kateri Hospital in Canada concerning Mr. Kirby's accident in 1991?

A. I have seen the reports.

Q. Did you make note of the fact that he was receiving cervical traction?

A. I did not see the cervical traction.

Q. If I may just refer you to you page -- look at page 7 of Plaintiff's Exhibit Number 6, Kateri Memorial Hospital Center and dated March 19, looks like ‘92. Over here, It says that he was first getting some treatment and heat to back and neck and we have cervical traction, with --

A. With traction. I think that's a W sign, not C.

Q. You say that's a W sign?

A. Right.

Q. But would you agree that he was receiving treatment for his neck, correct?

A. Low back.

Q. You saw the reference to the neck kin there as well?

A. I didn't see neck. I think they said heat treatment to the neck and back, correct?

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Q. Yes. Heat treatment to back and neck. That's what I am asking now. The herniation that you referred to, at the C6-C7, I guess it is?

A. Yes.

Q. The herniation shows up in the MRI that was done fours weeks after the accident, correct?

A. Yes.

Q. And you have no prior films to review or to look at to indicate to you whether or not Mr. Kirby had any condition at that level, is that right?

A. What we do have an EMG, but no films.

Q. Now, is it your testimony, to a reasonable degree of medical certainty, that everybody, that any time someone has a herniation, they will experience pain?

A. If they have a traumatic herniation, they will experience pain, yes.

Q. My question though, Doctor, not whether they have traumatic herniation. I am asking you, if somebody had a herniation, is it your testimony to a reasonable degree of medical certainty that anybody that has a herniation, whether traumatic or otherwise, is going to experience pain?

A. You can have asymptomatic herniations.

Q. So it is possible, then, given Mr. Kirby's prior accident to the low back, he was treating because of some neck pain, he was a construction worker, that he could have had a herniation prior to April 1, 2002 albeit asymptomatic?

A. Yes.

Q. Now, you reviewed the hospital reports from St. Luke's Roosevelt hospital?

A. Yes.

Q. Where he was treated on the day of accident?

A. Yes.

Q. And the major complaint or chief complaint from Mr. Kirby was pain to his left shoulder, is that right?

A. Yes.

Q. There's one note in there that he had, Was also experiencing neck pain. Do you recall that?

A. Yes.

Q. They did an x-ray of the left shoulder.

A. Yes.

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Q. Based on his complaints?

A. Yes.

Q. And there was no x-ray of the cervical spine done in the hospital, correct?

A. I believe they ordered a cervical spine x-ray.

Q. Do you know if it was done?

A. I do not know if it was done.

Q. No MRI of cervical spine was done at that hospital?

A. Yes.

Q. And he did not -- by the way -- sustain any fracture or dislocation to any part of has his body as a result of that 15-foot rod that was put in front of jury that supposedly fell a hundred feet?

A. I think some of the notes in the emergency treatment named an acromial clavicular dislocation. I think there's a notation about an AC separation in the shoulder.

Q. Just to refresh, is it possible that that may have been a possible diagnosis given by an EMT person in the call report?

A. I'm not sure.

Q. The x-ray of the left shoulder indicated no dislocation?

A. Yes.

Q. No fracture or dislocation of clavicle, shoulder or any other part of the body, is that right?

A. Yes.

Q. Indication of no loss of consciousness and no head injury, is that right?

A. No loss of consciousness, correct.

Q. If you looked at the hospital record, you wouldn't find any indication that there was injury to the head, correct?

A. Correct.

MR. ROSS: I have nothing further.

THE COURT: Redirect.

MR. BOROWICK: Yes.

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REDIRECT EXAMINATION

BY MR. BOROWICK:

Q. Let's go to what's reasonably likely within a reasonable medical certainty, not what's possible.

MR. ROSS: Objection.

Q. Counsel asked you if it's possible that he had a pre-existing herniated disk in the neck. I want you to assume factually he never had any symptoms -- I am sorry, he had some heat treatment ten years before the accident. He had some heating pads on his neck on one occasion in the Kateri records before the accident, but besides that, he worked for the next ten years in heavy construction, extreme laborious work, bull dozers and backhoes and truck driving, ironwork for the last two years, no complaints no symptoms, no treatments, no doctors, lawyers and Indian chiefs, but it's the wrong case for that. Just nothing going on with the neck for ten years after that heat treatment on his neck. Do you have any reason to believe that he had a herniated disk in his neck before this accident?

A. None whatsoever.

Q. Let's go a step further. There was EMGs done by Dr. Hearns, right?

A. Yes.

Q. And does that clarify it, if not for Mr. Ross or me --

MR. ROSS: Objection.

Q. -- for the jury, does that not clarify whether or not there was a pre-existing herniated disk?

A. It shows no evidence of pre-existing cervical condition.

Q. And EMG, they monitor the nerve root, electrotransmittal, and that would pick up herniated disks, right?

A. Yes.

Q. And according to the EMG that was taken right after the accident, there was no nerve damage that pre-existed at these levels, right?

A. Correct.

Q. And over the course of time, after the accident, which was precipitated by this rebar, he developed symptoms, that he didn't have before the accident, the kind of symptoms that he had which I say were clinically correlated to the diagnosis that he made, whether or not it may be possible in some scenario with somebody, in this case, with this person with this patient that you have treated for two years, looked at all of the films, looked inside his body, touched, felt, probed, did he have any of these problems before the accident?

A. No.

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Q. In that regard, whether or not he -- counsel asked you whether or not the bulges were -- that were found on the MRI were secondary to trauma, and you said taken together with the discogram, we know that they are associated tearing. Why is that significant?

A. The radial tears that may be seen in the discogram can only be caused by torsion and flexion distraction injury to the disk, so that's important, so we have to take the discogram findings and what that shows us and put that together with the MRI and then come up with a clear picture of injury.

The MRI is only a picture in time using one modality, which is magnetic resonance.

The discogram is an injection of dye directly into the disk to look for leakage of dye, and it gives us another layer of anatomy, another layer of pathology to look at.

Q. And when you take the tearing that shows in the discogram and the bulging that's shown in the MRI, together with the herniated disk that you observed and removed, is there any question in your mind that his disk injuries to the three disks were not pre-existing degenerative disk disease but secondary to the trauma?

A. Secondary to the trauma.

RECROSS-EXAMINATION

MR. ROSS:

Q. Dr. Merola, the tearing that you spoke about C4-C5, C5-C6 level, that tearing can be from a degenerative condition, correct?

A. It's more difficult to get tearing from a degenerative condition. Usually what happens, you get a discrete crack or fissure. A degenerative disk you will see a crack in one aspect of that disk, so separation of disk wall, and then you will see a leakage of dye coming out of the that crack. With a tear, the radial tear is like a little piece of paper. You rip that piece of paper, it comes around and around and then you get more leakage. When the radiologist reads a radial tear, it's more indicative of a torsional injury or flexion distraction injury of the disk rather than a degeneration over time.

Q. When you say torsional injury, from what?

A. From a twisting of the neck itself.

Q. Which could have taken place prior to the day of the accident, correct? In other words, it is something that could take place in the type of occupation that Mr. Kirby is involved with a ironwork, torsion activity?

A. If you have an acute transfer of energy.

MR. ROSS: I have nothing further.

RE-REDIRECT EXAMINATION

BY MR. BOROWICK:

Q. I want you to assume that this individual worked 40, 50, 60 hours in the weeks before the accident, no treatment, no complaints, no reports of any quick turning of the head or torsional loads or axial loads, but lo' and behold on a fixed day in

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April of 2002, this thing or something that looks like it, a little cousin falls on his head and then he has the onset of symptoms. Is there any doubt in your mind that this wasn't a pre-existing issue for him?

A. No doubt in my mind.

MR. BOROWICK: Nothing further.

THE COURT: Dr. Merola, you are excused.

End of Document

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