CIRCUIT COURT OF THE COUNTY OF ST. LOUIS

STATE OF MISSOURI

AYDEN VERHEECKE, Plaintiff, vs. ST. JOHN'S MERCY HEALTH SYSTEM, Defendant.	)	No. CIC C-004067

DEPOSITION OF MARVIN D. NELSON, JR., M.D.

Los Angeles, California

Monday, September 29, 2003

Reported by:
VIRGINIA PETERATTIS
CSR No. 6205
Job No. 889106

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Deposition of MARVIN D. NELSON, JR., M.D., taken on behalf of Defendant, at 4650 Sunset Boulevard, Radiology Department, Los Angeles, California, beginning at 1:30 p.m. and ending at 3:00 p.m. on Monday, September 29, 2003, before VIRGINIA PETERAITIS, Certified Shorthand Reporter No. 6205.

APPEARANCES:

For Plaintiff:

WALTHER/GLENN LAW ASSOCIATES
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For Defendant:

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EXHIBITS

Los Angeles, California, Monday, September 29, 2003

1:30 p.m. - 3:00 p.m.

MARVIN D. NELSON, JR., M.D.,

having been first duly sworn, was examined and testified as follows:

EXAMINATION

BY MR. ZWIBELMAN:

Q Tell me your name, please.

A Marvin D. Nelson, Jr.

Q And you have been listed as an expert by defendant St. John's in this case.

You're aware of that?

A Yes.

Q When did they first contact you?

A I believe several months ago. I don't remember the exact date.

Q Who contacted you?

A Ken Bean's office.

Q Have you ever worked for Ken Bean before?

A Yes.

Q How many times?

A Three or four.

Q Do you remember the names of the cases?

A No.

Q Have you ever testified on behalf of defendant St. John's before?

A I don't recall.

Q Other than Mr. Bean, have you been hired by any other lawyers in St. Louis?

A Yes. I believe one or two others, but I don't recall their names.

Q When you were contacted several months ago by -- was it Mr. Bean or someone from his office?

A It was someone from his office.

Q Do you remember the substance of the conversation?

A Just asked me if I'd be interested in reviewing a case for them, and I said yes.

Q What did they send you?

A They sent me a set of CTs and MRIs and medical records from St. John's.

Q Did they send you depositions?

A And the deposition of Mary Kay Edwards Brown.

Q How much time have you spent on this case up to the time you -- I take it you talked to Mr. Bean this morning or this afternoon?

A Yes.

Q How much time did you spend with him this

morning?

A About 15, 20 minutes.

Q Up until the time of your conversation with Mr. Bean, how much time have you spent on the case?

A About two hours.

Q And can you break down how the two hours was spent?

A An hour reviewing the films and an hour reading the deposition.

Q And I assume you spent no time whatsoever looking at medical records?

A Yes. Essentially, I didn't spent much time looking at the medical records.

Q When you say essentially, did you spend any time looking at them?

A I leafed through them quickly.

Q Less than a minute?

A A couple of minutes.

Q When you say you spent about an hour looking at the CTs and MRIs, does that include the reports?

A Yes.

Q Were you supplied with any materials or any information that either was not on the films or was not in the records or was not in the deposition of Dr. Edwards Brown?

A No.

Q Were you told who the other experts are for the plaintiff?

A No.

Q Were you told who the other experts were for defendants?

A No.

Q Did you do any research on this case?

A No.

Q Do you intend to do any research on this case?

A None was needed.

Q Did you ask him for any additional information?

A No.

Q We'll get into the details of the films but, basically, there was a diagnosis, at least on one of the films, of a subdural hematoma.

Are there any textbooks that you consider to be authoritative about subdural hematoma in neonates?

A No.

Q Are there any authors you consider to be authoritative?

A None.

Q Did you write a report?

A No.

Q Did you make any notes?

A I did not.
Q Did you do any markings on the films?
A No marks.
Q No marks on the films, no marks on the records. Any marks on the depositions?
A I just highlighted a few things.
Q In the deposition?
A Yes.
Q Can you tell me what you highlighted?
A On deposition page 11, I highlighted from lines 11 through 14 and then from 18 and 19 and then from --
Q Page 11, line -- sorry.
A 11 through 14, 18 and 19, 24 and 25. Then on the next page 12, from 1 through 14, and then I highlighted on page 13 lines 23 to 25.
Q Anything else?
A That's it.
Q Can I make any assumptions based on what you didn't mark, did you find those to be of any interest to you or you just weren't -- I guess the question is why did you mark some and not others?
A I got a new marker and I was trying it out.
Q Well, can you tell me why you happened to try it out on page 11, 12 and 13 but not on the other 85?
A These were the most interesting things I

thought I would comment on if I were reviewing her deposition.

Q You have no comments on any of the other parts of her deposition?

A That depends on what questions you have for me.

Q Do you know any of the individuals who have rendered opinions about the X rays and these films at the hospital?

There was a Dr. Grunz, Dr. Rosenthal, Dr. Martin and Dr. Lovern. Do you know any of them?

A No, I don't think so.

Q Do you know Dr. Edwards Brown?

A I met her but other than that -- I just met her at radiology meetings.

Q Do you know anything about her reputation one way or the other?

A No.

Q You don't know who -- I think I asked this -- do you know any of the defense experts other than yourself?

A That's correct.

Q Are you going to render any opinions about the standard of care by the defendant obstetricians?

A No.

Q You are going to render opinions about the

interpretation of the films?

A Correct.

Q Are you going to render any opinions about the cause of any of the findings of the films?

A Possibly.

Q What about the timing of when they occurred?

A Probably.

Q Anything about the damages in this case?

A No.

Q Are you able to equate what the plaintiff's damages are to what appears on the films?

A I don't know what you mean by plaintiff's damages.

Q Well, do you agree with the interpretation of the MRI?

A No.

Q Was the MRI perfectly normal?

A No.

Q What were your findings on the MRI?

A That there were several small areas of focal necrosis in the white matter, but, other than that, I thought it was normal.

Q Several small areas of focal necrosis in the white matter. Okay.

Are you going to render any opinions as to how

those small areas of focal necrosis in the white matter would manifest themselves in terms of clinical findings?

A Yes. It's probably not manifesting themselves as showing any clinical problems, as these can be seen in normal populations and normal control groups.

Q If I were to look for research on that, where would I find the proposition that several small areas of focal necrosis in the white matter can be found in normal children?

A You can find it in my CV in of my publications.

Q Which one?

A If you hang on -- do you have my CV there?

Q I have one that was published on 6/3/03.

A Good. Then you'll see as one of the -- within the last 10 papers I published, there was an article about focal white matter lesions seen in a population of -- from the hemophiliac growth and development study?

Q Well, let's see. Is it 61?

A Hang on one minute. Let me get my CV and I'll give you the exact title. It's No. 62 on the one I'm holding right here, which is either -- it's one of those. It's Nelson, Wilson, Kisker, CT, Evatt, BL, Fenstermacher, "Incidence of focal white matter lesions in a population of hemophiliac children and their normal siblings."

Q Were the findings of these focal white matter lesions in both hemophiliac children and their siblings?

A Yes.

Q Are there any other authors other than Nelson, Wilson, Kisker and the other group, who have written about small areas of focal necrosis in white matter and their effects and their clinical findings?

A No. I think that's exactly why this paper is so significant because people don't study normal populations of children. This is the first time a group of normal children have been studied with MR and were these little incidental findings were noted.

Q Other than that's article -- could we mark your CV Plaintiff's Exhibit 1?

A Done.

(Plaintiff Exhibit 1 marked for identification by the court reporter.)

BY MR. ZWIBELMAN:

Q And is that No. 61?

A It's 62 on this one.

Q Other than article 62, are there any other articles you believe are relevant to this case?

A No.

Q You have the films in front of you, sir?

A Yes.

Q Can you look at the CAT scan that is marked as -- well, that was taken 6/1/98 at 1520 hours?

A Okay.

Q Is there any particular view that is the most significant?

MR. BEAN: Object to the form.

MR. ZWIBELMAN: That's fine.

THE WITNESS: They're all significant. There are multiple levels where you can see the right temporal parietal subdural hematoma.

BY MR. ZWIBELMAN:

Q How big is the right parietal subdural hematoma?

A Well, it looks like it measures up to about one centimeter in thickness.

Q Okay. What time was this child born?

A Just a second, I have to check in the records. He was born on 5/31/98.

Q At round 0052?

A Hold on. I'll find it. Well, if that's the current understanding, I wouldn't debate that.

Q So if that's true then this CT was taken at about 39 hours of life. Does that sound about right?

A Okay.

Q Would you agree with that?

MR. BEAN: You're saying born about 1:00 A.M. on --

MR. ZWIBELMAN: Sorry. 24 hours of life.

MR. BEAN: You've got the math wrong. Let's start it again.

BY MR. ZWIBELMAN:

Q If the child is born roughly at 1:00 A.M. and this was taken at 12:52 A.M. -- no, I think my math is right. It's about 39 hours, isn't it, sir? You tell me.

A This was done on June 1 at 3:00 P.M.

Q Right.

A So he was born just after midnight -- no.

MR. BEAN: Yes.

THE WITNESS: 12:52 A.M. -- no. It would be 24 plus, roughly, 2 hours, so 26 hours.

BY MR. ZWIBELMAN:

Q Wouldn't 26 hours be 61 at 0352?

A No, 12:52 A.M. is just after midnight. That's correct. So then 24, plus 12, plus 2.

Q So about 38 hours?

A That's correct.

Q Let me ask you this. If you were to read that study on 6/1/98, would you dictate aloud how you would dictate the report.

A Okay. Well, I would say that there is a right temporal parietal subdural hematoma measuring up to one centimeter in thickness, causing mild mass effect on the underlying gyri.

There is a scalp hematoma present over the right parietal bone and, after examination of bone windows, it shows no CT evidence of skull fracture. I would say the brain parenchyma otherwise appears to be of normal attenuation for a child of this age. There is minor mass effect on the right lateral ventricle, and that's all.

Q If you would look at the report of that study that I think is on page 35 of the records, do you have that, sir?

A Yes.

Q If you'd read through that report and tell me if you agree with it.

A The only thing I would change is I would say that it's a right temporal parietal subdural hematoma and not just right parietal.

Q Anything else, sir?

A Again, I wouldn't use the adjective moderate. I would just say it's a centimeter thick.

Q In your opinion, mild, moderate or severe, how would you describe it, sir?

A I think it's a small subdural myself.
Q Small? You see these all the time, do you?
A Yes.
Q What's the cause of them usually in a neonate?
MR. BEAN: In general?
BY MR. ZWIBELMAN:
Q Yes.
A In general it's from a torn vein.
Q What usually causes the torn vein?
MR. BEAN: Again in general?
BY MR. ZWIBELMAN:
Q Yes.
A In general, trauma.
Q And in your opinion what was the cause of the up to one centimeter subdural hematoma in this case?
A Well, I don't know that I have direct evidence but I can imply that from the presence of this, that there was probably a torn cortical vein.
Q Can you render any opinions as to when that torn cortical vein occurred?
A No, not particularly.
Q If you'd start jumping ahead and look at the 6/2/98 report, on page 36, do you see that, sir?
A Yes.
Q It says, "Clinical history, trauma at

delivery."

In your opinion was the subdural hematoma caused by trauma at delivery?

MR. BEAN: Object to form.

BY MR. ZWIBELMAN:

Q You can answer.

A I have no way of knowing that.

Q Can you give me any window as to when this torn vessel occurred causing the subdural hematoma?

A This can be up to several days old.

Q Several days up to when?

A Given the attenuation of it, it could be up to probably around a week or two weeks old just based on the attenuation, but then I don't know the particular hemoglobin of the child. I don't think it was -- you have to correlate the density with the hemoglobin in the child.

Q So it's your thought that the latest it could have occurred was several days before the delivery?

A It could have occurred prenatally but that's not usually the case.

Q Could it have occurred around the time of birth?

A Yes, it could have occurred around the time of birth.

Q So you're saying, and you'll testify, that it could have occurred anywhere from a week to two weeks before delivery, up until the time of birth; is that right?

A Sure. Just based on the imaging appearance, that's correct.

Q Can you be more specific than that?

A No.

Q When you say just based on the imaging appearance, what else would you as a radiologist look to?

A That's all I'll testify about.

Q So that I'm clear, you're saying that in terms of the timing of it, you could be no more specific than it was a week to two weeks, all the way up to the time of birth; right?

A Up to several hours before the scan was taken.

Q Up to several hours before the scan was taken?

A Right.

Q And you're saying, again, the cause was a torn vessel?

A I think the cause was trauma but birth is a traumatic process.

Q Are you saying this trauma could have occurred with a normal birth?

A Yes.
Q Have you written anything that would indicate to you at all that you can see a subdural hematoma of approximately one centimeter in thickness that occurs as a part of the normal birth process?
A I haven't written anything as such.
Q Can you refer me to any book that would say that?
A I have seen literature that talks about subarachnoid and subdural hemorrhages being present as a part of the birth process.
Q Can you tell me the names of those books?
A Not offhand, but I'm not relying on them.
Q I'm not asking if you're relying. Can you tell me the names of some books that say that?
A Not off the top of my head.
Q Do you see in the 6/1/98 study, there was abasement of the right lateral ventricle atrium and occipital horn?
MR. BEAN: Are you asking if that is in the report --
BY MR. ZWIBELMAN:
Q Did you see it on the film?
A I said there was a mild mass effect on the ventricle. That's the same thing.

Q What was the cause of that mass effect on the ventricle?

A The subdural hematoma.

Q There were spread sutures, did you see that in the report?

A I don't recall that. That was not in the report.

Q Maybe I'm mistaken.

A I'm afraid so.

Q Do you see in there spread sutures or can you tell that?

A I don't believe the sutures are spread.

Q Can you see any layering of blood on the tentorium?

A The subdural extends along the tentorium.

Q Is there a Y-shaped area of brightness along the tentorium?

A Well, that's where -- that's either where you're talking about where the tentorium splits to become the incisura or it as it splits posteriorly around the torcular herophili. Either way, those are normal structures.

Q Was there any increased intracranial pressure that you can see?

A There's no imaging evidence of such.

Q What kind of imaging evidence would you look for?

A I would look to see that the gray white differentiation was absent so that the brain parenchyma had a ground glass appearance.

I would look to see if there was evidence that the cisterns around the brain were gone, the sulci being gone, the fontanel bulging, none of which is present in this case.

Q Can you see that the fontanel is not bulging?

A It is not bulging. It is clearly evident on the CT.

Q You read Dr. Edwards Brown's deposition?

A I did.

Q She made those findings, did she not?

A Yes, she did.

Q And I'm just curious, is that just a difference in interpretation or would you say she is just wrong?

MR. BEAN: Let me get a clarification. I don't think she talked about ground glass or a great white differentiation. I think she did talk about a bulging fontanel, so I think you misstated her testimony.

MR. ZWIBELMAN: Okay.

Q She talked about a bulging fontanel, did she not, sir?

A Yes, she did.

Q And she talked about her findings were spread sutures?

A That's correct.

Q And she talked about a bulging fontanel, did she not?

A Yes.

Q Let me ask the question again. Are her findings in that regard just a different interpretation or is she just wrong?

A She is just wrong.

Q Would you attribute any motive to her errors?

A I don't attribute any motives at all.

Q In looking at her what you describe as just plain wrong interpretation, is there anything on the films that would suggest what she finds or you're just not seeing anything that she sees?

A I don't understand your question.

Q Well, what I'm saying is if you look at the films, is it something that you can say: Well, I can understand how she comes to that conclusion. I disagree with her, but I can see how she comes to it.

Or do you not see anything on the films that leads any radiologist to conclude what she did?

MR. BEAN: About the bulging fontanel?

MR. ZWIBELMAN: About the things she testified to that he didn't agree to.

MR. BEAN: Well, there are a lot of things he testified to that he doesn't agree to.

MR. ZWIBELMAN: On this film, Ken.

MR. BEAN: And he said there are a lot of things he disagrees with on this film.

MR. ZWIBELMAN: I understand.

Q With all the things you disagree with, is there anything on there that you see that could lead her to those findings?

A Well, I really think you need to talk to her and ask her how she came to those conclusions. I don't understand how she came to those conclusions.

Q Is there anything on the film that could in your opinion lead a radiologist to come to those conclusions?

MR. BEAN: Object to form.

BY MR. ZWIBELMAN:

Q You can answer.

A Not in my opinion.

Q Was there a midline shift at all on this film?

A Not significant. It's hard to tell because the child's head is tilted slightly that can throw that off, but I don't think I would have considered this to be a

significant midline shift.

I didn't put it in my report so I don't think it's worth mentioning.

Q And then will you look at the study that was one on 6/2.

A Okay.

Q Will you dictate what your findings would be in your report had you been the radiologist there?

A I would say that this noncontrast CT, as compared to the one of 6/1, there has been no significant change from the prior examination.

Q It says that there is no significant midline shift currently.

A I agree. There is no midline shift. This is a better lined up head CT and there's no midline shift on this one.

Q And did the third ventricle show any signs of a midline shift at all?

A Not in my opinion.

Q Is the ventricular system normal in size?

A Normal in size for a child of this age.

Q On the previous study, it was effaced was it not?

A Part of the lateral ventricular system showed mass effect or was slightly effaced, yes.

Q That's changed now?

A No, it stayed the same.

Q The third study, would you interpret that for me, sir?

MR. BEAN: And just for clarification, what date are we on?

BY MR. ZWIBELMAN:

Q 6/5?

A June 5, 1998. And on this study -- so we're comparing this with the previous study of the 2nd of June and, again, there are some changes in the subdural hematoma in that the blood is separating and layering out, which is consistent with an evolving subdural hematoma.

There's no evidence of the growth of subdural and, in fact, it looks like it may be just slightly smaller than on the previous exam. The effacement in the ventricle appears to be completely resolved and the scalp hematomas are still present over the right parietal region.

Q Okay. The hematoma is still present, sir?

A The scalp hematoma, yes.

Q And the subdural hematoma has what, resolved completely?

A No. It's still present, maybe just slightly

smaller, and the blood within the subdural is clotting and layering out. It's consistent with an evolving subdural hematoma.

Q Can you tell from the three films looked at as a whole on 6/1, 6/2 and 6/5, can you give us any more direction as to when the subdural hematoma occurred?

A No.

Q Can you tell by looking at all the studies taken together when the subdural hematoma occurred?

A No.

Q If you look at the study of 8/12/98, do you have that, sir?

A 8/12/98?

Q Yes.

A Just a second. I'm running it down. Okay.

Q Do you have that, sir?

A Yes.

Q What's your interpretation of that film?

A Well, since the previous study of 6/5, the right temporal parietal subdural hematoma has completely resolved, and on this film there is a -- let me just look at this. Just a second. I'm looking at all of the different films here.

There are small fluid collections around both cerebral hemispheres over the frontal lobes and the

ventricles are normal in size and configuration and the parenchyma is normal.

Q Anything else in your report?

A No.

Q Do you see a flattening of the frontal bones?

A There is slight flattening of the frontal bones.

Q What, in your opinion, would be the cause of flattening of the frontal bones in a child that is roughly 2 and a half months old?

A Probably genetic.

Q Genetic?

A That's correct.

Q I mean, if I were to look at the mom, I'd see a flattening of her frontal bones or the dad?

A That's the first place I'd look.

Q Is there anything else that would cause the flattening of the frontal bones?

A That's usually related to the genetic makeup of the child.

Q Did you see the flattening of the frontal bones on the other studies?

A No.

Q Is it normal that they don't show up right away, the flattening?

A Yes.
Q Did you write anything on that?
A No.
Q Is there any literature on that anywhere?
A None that I can point you to.
Q So when you see a flattening of the frontal bones, you conclude that it's genetic in your practice?
A Yes.
Q Based on what?
A My 17 years of experience.
Q I understand but I guess what I'm saying is that the first time that you saw the frontal bones, you concluded it was genetic and, based upon your experience in genetics, you think the frontal bones are a genetic disposition?
MR. BEAM: Object to the form.
BY MR. ZWIBELMAN:
Q You can answer.
A I see lots of children with abnormal head shapes here and they're usually caused by two things. One is on the basis of genetics where their heads are basically forming often like their parents' head shapes are formed.
Second, there are those kids that have abnormal premature closure of sutures for reasons nobody really

understands but probably on a genetic basis.

Third, because the brain is not growing and, if the brain doesn't grow, then the head size stays small and the skull bones prematurely close because the brain is not giving it a driving force to grow outward.

Q In this particular case is the brain growing?

A Yes. This is a normal appearing brain.

Q It says in the report: Prominent frontal and frontal parietal sulci are observed.

Do you agree with that?

A No.

Q Let me ask you this. Do you see anything on the films, the study of 8/12/96, which on review of a radiologist or neuroradiologist to conclude there was prominent frontal and frontal parietal sulci?

A No.

Q Would you say that the physician who interpreted these films is just plain wrong?

MR. BEAN: Object to the form.

BY MR. ZWIBELMAN:

Q You can answer.

A I would say that he doesn't see that many children's films.

Q What percentage of your practice deals with neonates?

A I deal 100 percent with pediatrics, which at this institution is age 21 or less. And I would say that 10 to 15 percent deals with children within the first 30 days of life, which I define as the neonatal period.

Q And what percent in the first two and a half months of life, including the neonatal period?

A About 20 percent.

Q Do you have any idea what Dr. David Martin's experience is?

A No.

Q In your opinion, if you see prominent frontal and frontal parietal sulci, what can be the cause of that?

A Most of the time it's normal in a child this age.

Q So most of the time prominent frontal and frontal parietal sulci are just normal; right?

A Correct.

Q Again, can you tell me any literature, any book or articles, any anything, that stands for the proposition or talks about the proposition that prominent frontal and frontal parietal sulci are usually normal?

A No, I can't point to any particular place.

Q You have not written anything on that, have you, sir?

A No, and I have no desire to.

Q Did you see on this study of 8/12/98 that there were prominent sylvian fissures?

A Which study are we talking about?

Q 8/12/98.

A I would not say that those were prominent sylvian fissures.

Q Again, Dr. Martin, the individual who read this film is just plain wrong?

MR. BEAN: Object to the form.

BY MR. ZWIBELMAN:

Q You can answer.

A That's his opinion and not mine.

Q But do you see anything on that film that causes a reasonable doctor to conclude there were prominent sylvian fissures?

A There are fluid spaces there that some people may call that, but I don't -- I don't consider those to be abnormal and would not include that in my report.

Q What generally is the cause of prominent sylvian fissures?

A Well, they're just part of normal development.

Q Okay. Anything else other than additional

normal development?

A Well, any time if you have a big destructive process in the brain, then you can get the fluid spaces enlarged to compensate for that, but I don't see any evidence of that in this case.

Q Repeat the answer, please.

A When you lose brain tissue, the fluid spaces around the brain can increase in size to compensate for that, but I don't see any evidence of lost brain tissue on this study.

Q Can you turn, sir, to the 5/28/2000.

MR. BEAN: May 28, 2000 CT?

BY MR. ZWIBELMAN:

Q Yes.

A Okay.

Q Will you interpret that for me and dictate a report as if you're dictating it.

A So this study is compared to the last one from -- what was it August -- August 12, 1998, and now there is an acute small subdural hematoma over the left posterior temporal regions, no effacement of the brain tissue, the ventricles are normal in size and configuration, and the brain tissue is of normal attenuation without focal abnormality.

So apparently this kid resolved the previous

subdural and now has a small fresh one over on the opposite side of the brain, on the left side.

Q Is there any atrophy at all?

A Atrophy meaning that you have lost something that you had once before, my answer is no.

Q What is brachycephali?

A That refers to a head shape in which the forehead is prominent and flat.

Q Is that present?

A Would I have read this as a brachycephalic shaped head, no.

Q Was there flattening of the frontal bones on the film?

A It appears to be round to me.

Q Just out of curiosity, does this genetic problem of flattening of the frontal bones come and go?

A It can change over time with growth of the brain.

Q So somewhere there is some literature that talks about a genetic cause of flattening of the frontal bones which clears over time?

A I'm sure there is but I can't point you directly to it.

Q Finally, would you look at the CAT scan, please.

A The MRI you mean?

Q MRI, yes.

A Okay.

MR. BEAN: So now we're on the MRI of February 18, 2003.

BY MR. ZWIBELMAN:

Q Yes.

A Okay. Well, I would read this showing as ventricles normal in size and configuration. I would say there is one small 2 to 3 millimeter focal area of necrosis in the white matter adjacent to the atria of the right lateral ventricle and a similar size and shape lesion adjacent to the atria on the left, and that on the T2 weighted images -- the T2 weighted sequence there is a slightly increased signal in the terminal myelination zone adjacent to the atria of both lateral ventricles.

Q And the cause of that, sir?

A So my impression would read incidental finding of two small focal necroses in the white matter. Otherwise a normal MRI of the brain.

Q And the area of T2 signal, is that related to this two to three-millimeter necrosis?

A Part of it is and part of it is just a normal lack of myelination in the last areas where the brain

myelinates.

Q If there is a normal lack of myelination, does that cause any clinical findings?

A No.

Q It's your impression that this T2 slightly increased signal causes no problem. Do you write on that?

Have you written anything on that one, sir?

A No. But I have had an MRI on my brain, and I have that and, as far as I know, I don't have any problems.

Q Well, we'll let the jury decide that.

A All right. Fair enough.

Q So that is normal and the areas of necrosis are normal; is that right?

A Well, no. Having these little focal necroses is not absolutely normal, but they're frequently seen in asymptomatic people.

Q Are they ever seen in symptomatic people?

A You can see them in symptomatic people, too.

Q If you see them in symptomatic people, what are the symptoms?

A Depends where the little focal necroses are.

Q In this case where you see the focal necroses, if there is going to be clinical findings, what do you

see?

A I can't pick out a specific thing that these would cause.

Q Would you defer on that to a pediatric neurologist?

A Probably not.

Q In this article that you wrote, this No. 62, on your CV, you talk about incidence of focal white matter in normal siblings and hemophiliac children.

Do the hemophiliac children have this focal necrosis?

A The interesting thing about this study is we looked at HIV positive hemophiliac kids, those that got infected from the blood transfusion they got, and HIV negative hemophiliac kids, and a group of normal siblings of their siblings who didn't have hemophilia, and the interesting thing is we found these little focal white matter things in about an incidence of about 6 percent in every group, all three groups.

So, in other words, it has nothing to do with hemophilia and nothing to do with HIV infection.

Q Does it have anything to do with any other finding these areas of necrosis?

A No. They were asymptomatic incidental findings.

Q In that research that you did, did you do any medical research into any other studies where physicians found areas of focal necrosis?

A Well, there have been lots of studies that have not included control groups that made lots of conclusions about these things that are incorrect because they didn't include a control group.

Q So you're telling me other articles by other physicians have concluded that areas of focal necrosis can and does cause clinical findings; is that right?

A I'm sure you'll be able to find that in the medical literature.

Q Let me ask you this. Your article is kind of against the mainstream of medical literature, isn't it?

A Well, I think that the mainstream of medicine would like to include a control group.

Q I appreciate that. That was not the question. My question was your findings and your conclusions, as far as focal white matter lesions, is contrary to the mainstream of medical literature, is it not, sir?

A Well, I don't know how to answer your question.

Q Well, try.

A You're talking about literature in general?

Q Well, I mean all other individuals who have written on areas of -- small areas of white matter

necrosis come to conclusions different than yours, do they not?

MR. BEAN: Object to the form.

BY MR. ZWIBELMAN:

Q You can answer?

A They may or may not. But I would not consider an article that made conclusions about these that did not include a control group to be of significance or any value whatsoever.

Q And in those other articles -- you say it can be a normal variant with no clinical findings.

In those situations were there are clinical findings, what's the cause of it?

A Most of the research that I have seen relate these focal necroses in the white matter to infections and primarily to chorioamnionitis.

Q Do any of them relate to trauma?

A No.

Q If we could go back to your -- you indicated in reading Dr. Edwards Brown's deposition that there was on page 11, lines 11 through 14 --

A Yes.

Q That this was something significant enough for you to flag. What was it about that was contained in page 11 to 14 that was significant enough for you to

flag.

You said you had a new marker?

A Yes.

Q Why did you want to use your new marker on page 11, line 11 through 14.

A I was highlighting the fact that she said that the child suffered a fairly good-sized intracranial hemorrhage. It was predominantly a right parietal subdural hematoma that caused mass effect and midline shift.

Q And you don't think it was good-sized?

A I think it was a small subdural hematoma and caused some mass effect but I don't think it caused a midline shift.

Q Again, are there any -- you said there is no textbook you considered to be authoritative?

A Yes.

Q Are there any standard textbooks?

A What's the difference?

Q I don't know. Let me ask you this. If you turn to your right, you have the Barkovich book in your library, don't you?

A I'm facing straight ahead and I have that.

Q Do you have any other textbooks of neonatal or pediatric neuroradiology in your little library in your

office?

A For the residents I keep a lot of textbooks in my office.

Q Tell me what other textbooks you keep in your office for the benefit of those residents?

MR. BEAN: In what subject area?

BY MR. ZWIBELMAN:

Q Pediatric neuroradiology.

A Well, I have Randy Jenkins' book. I have the Newton and Potts series of neuroradiology books. I have the Taveras and Woods neuroradiology books.

Q Do you look at any of those books?

A I occasionally look things up, yes.

Q Are those books standard text used by practitioners to keep them abreast of modern techniques of diagnosis?

MR. BEAN: Object to the form.

BY MR. ZWIBELMAN:

Q You can answer.

A No, they're reference books.

Q Reference books, okay. If I were to look in some of those reference books, would it say anywhere that a subdural hematoma almost a centimeter in size is, what's the word you used, trivial, small?

MR. BEAN: Object to the form.

THE WITNESS: I said small, not trivial.

BY MR. ZWIBELMAN:

Q Small, okay. Are there any of those reference books that would describe a subdural hematoma in a neonate as large as a centimeter in size to be small or is that the Nelson system of grading?

MR. BEAN: Object to the form.

BY MR. ZWIBELMAN:

Q You can answer.

A I'm not sure anybody put down -- I've never seen a grid that says zero to 1 small; 1 to 2 medium; greater than 2 large, if that's what you mean.

Q Tell me what the Nelson system of grading is? How large would a subdural hematoma in a neonate be and still be considered small?

A Well, it depends on the kid, depends on where it is and it depends on what it is doing.

Q Well, in this kid.

A In this kid I said it's small.

Q If it were 2 centimeters in size in this kid, would you consider it small?

A No.

Q One and a half centimeters, would that be small?

A I'd say that is getting a little bigger.

Q Anything else between page 11 and 14 that caused that new highlighter to become active?

A Yes, in the next paragraph on line 18 and 19.

Q We're still on line 11 through 14.

A Well, no.

Q On 18, 19, what was it about 18 and 19 you found significant enough to highlight it?

A Then I saw evolution from those hematomas to a pattern in August of some atrophy.

Q And you saw no atrophy?

A There is evolution of hematoma but no atrophy.

Q Anything else in 18 and 19 that you felt was significant?

A No.

Q And finally on page 24 and 25, what was it about those two lines?

MR. BEAN: You said page --

BY MR. ZWIBELMAN:

Q Line 24 and 25 on page 11.

A Let's continue it over since it's all the same thought.

"I saw widening of the extra-axial fluid spaces and sulci, so I thought the ventricles were a little bit prominent. That's a sign that there has been some volume loss of the brain."

Q Now, you disagree that there were any extra-axial fluid spaces and sulci; correct?

A I thought there were some extra-axial fluid spaces, but I didn't think they were abnormal and I don't think that is a sign of parenchymal volume loss.

Q What are sulci?

A The valleys between the gyri.

Q Did you see some widening of those?

A No.

Q Was that what Dr. Martin found on August 12?

MR. BEAN: Object to the form. I'm not sure what you mean.

BY MR. ZWIBELMAN:

Q You said you disagreed with some of the things he found.

A I think that was on August 12, that's correct.

Q Have we covered your comments on lines 24 and 25, on page 11?

A Yes.

Q Then you also went all the way down to line 14 on page 12, so tell me what it is about that that caused you to flag it?

A Well, then we'll keep on. "Then I noticed a little bit less than 2 years later he had another fall, he had a much smaller hemorrhage." Well, I agree with

that.

"Again I thought he had some prominence of his extra-axial spaces and some atrophy."

Q And you disagree with that?

A Yes. "And then I noticed in February of this year that he had white matter volume loss." I disagree.

"Periventricular gliosis consistent with, I said, hypoxic-ischemic encephalopathy." And I completely disagree.

Q Do you agree with the periventricular gliosis?

A No.

Q That's different from what you described them as --

A Focal white matter necrosis.

Q That's a different entity?

A I don't know what she means by that. Periventricular means the white matter around the ventricles.

Q Is that where you found the small areas of necrosis?

A In a very specific place within the periventricular white matter.

Then it goes on, "I think the basis of hypoxic-ischemic encephalopathy was the hypoperfusion

that resulted from the increased intracranial pressure at the time of birth."

Q You disagree with all that?

A I disagree with all that, yes.

Q Was there any indication on any of the films or on any of the records that there was increased intracranial pressure at birth?

A Not to my knowledge.

Q If, in fact, clinically a physician would diagnose increased intracranial pressure, what would you see?

MR. BEAN: Object to form and foundation.

BY MR. ZWIBELMAN:

Q Let me ask you this. Do you feel qualified to render any opinions as to what a clinician would see in a neonate to cause him to diagnose increased intracranial pressure?

A No, I'd defer that to the appropriate treating physician.

Q Can you have increased intracranial pressure that doesn't show up on radiographic studies?

A Generally you see changes on the imaging studies.

Q What changes do you see, sir?

A Again, you would see bulging fontanel, and you

would see effacement of the gyri and sulci generally. You would see small ventricular systems. You would see absent cisterns, herniating brain tissue, a ground glass appearance of the brain tissue.

Q Anything else about lines 1 through 14 on page 12?

A No.

Q And then on page 13, lines 23 to 25.

A Yes, it says, "I think it's obvious that there was a birth injury. He was born with a huge hematoma, large scalp hematoma."

Q Do you disagree that this is a birth injury?

A Well, I think he had the hematoma, if you want to call that a birth injury. But I don't think there is any evidence of brain injury.

Q Okay. And, again, we can go through it line by line, but would you agree there was nothing about Dr. Edwards Brown's deposition that sticks out, other than the lines you mentioned, as being clearly erroneous?

A Well, I don't know about that. Those are the ones I highlighted.

Q Tell me what else you think was wrong with her deposition -- that you disagree with her in her deposition?

A I think in sum and substance, other than the

fact the hematomas were present, I pretty much disagree with everything she has to say.

Q Is she a pediatric neuroradiologist?

A I'm not quite sure what her practice is. I know she practices in Indiana. That's about it.

Q If you would see a hypoperfusion injury, what would you be seeing on an MRI?

A hypoperfusion injury that occurred in birth, what would you see on an MRI about five years later?

A You'd be looking for signs of necrosis in the vascular border zone territories.

Q Were these areas of necrosis in the vascular borderline territories?

A No.

Q How many weeks of gestation was this child, do you know?

A I don't recall offhand. I'd have to check the notes.

Q Would you call them vascular borderline areas?

A Border zones.

Q Do the vascular border zones change as the gestational age increases?

A Yes, they change with development.

Q Development in utero?

A Yes.

Q But, as of right now, you can't tell me how far along the child was when he was delivered?

A If you hang on a moment, I'll tell you.

Q I'm sure you can look at it but, in forming your opinion that there was nothing in these areas of border zones, you didn't bother to find out how far along the gestation of the child was?

MR. BEAN: Objection; you asked about what would be seen at 5 years of age, Myron.

BY MR. ZWIBELMAN:

Q I appreciate that. What I'm saying is that you said at 5 years of age you would see areas of damage in certain border zones, right, is that what you said?

A The border zones change during embryonic development. When you get into the fetal period, the border zones are fairly well set, and from the last half of gestation the border zones don't change. So this child was term or close to term, just looking on the gyro pattern on the CT.

Q Is it your testimony that the border zones are the same for a 30-weeker as for a 40-weeker?

A Yes.

Q It doesn't change at 33 or 34 weeks?

A No.

Q And you've never testified to something like

that?

A Not that I can recall. I've testified that they didn't change. If you look in my CV on the paper that is talking about the search for ventricular fugael arteries, that is directly related to this issue.

Q Can you tell the type of machine that was used on the 6/1 CAT scan?

A It's a high-speed Advantage, so that's a GE scanner.

Q Was that state of the art in the year 1998?

MR. BEAN: Object to form.

THE WITNESS: I don't know that for a fact.

BY MR. ZWIBELMAN:

Q What kind of machine did you have in your institution in 1998?

A GE CT scanner. I don't remember which model it was. There is nothing wrong with the CT scan. It's fine. I have no problem with the quality for the CT scan.

Q Would you agree it's not within the scope of your practice to render opinions about the physical limitations or lack of physical limitations in findings that a film would produce?

MR. BEAN: Object to form.

BY MR. ZWIBELMAN:

Q You can answer.
A No, I don't think you can correlate findings on a CT or MRI directly with the clinical status of the patient.
Q Do you know what this child's clinical status is?
A Roughly from what it says in the records.
Q What records did you look at to determine what the child's status is.
A I didn't have anything new.
Q Did you just look at the birth hospitalization?
A Not just.
Q Tell me all the records you looked at.
A Isn't that repetitive.
Q It may be, but Mr. Bean will let me ask it.
A Okay. I have the St. John's Mercy Health Care System records.
Q What date?
A The newborn chart.
Q When you do a newborn study or roughly 39 or 40 hours of life, do you know or inquire if there was instrumentation in the delivery?
A I don't usually get that history, per se.
Q If you see a subdural hematoma, would you inquire of the physicians whether there was

instrumentation used in the delivery?

A Well, if there was a large scalp hematoma, I'd ask if they used a vacuum extractor or not.

Q Was there a large scalp hematoma in this case?

A Yes.

Q Did you assume they used a vacuum?

A I don't know. I mean they could have or might not. You can still get big hematomas with just a normal vaginal delivery.

Q How about with forceps, have you seen a scalp hematoma with forceps?

A Yes.

Q Is the number one cause of a subdural hematoma in a neonate the use of instrumentation in a delivery?

A I don't know the answer to that.

Q Would any of those books in your little library reflect at all on that?

A Not that I know of.

Q Is there a book by Volpe?

A Yes, I have Volpe's textbook, third edition.

Q And did that talk about the causes of subdural hematomas in neonates?

A Probably.

Q I don't have anything else.

MR. BEAN: He has other opinions.

BY MR. ZWIBELMAN:

Q What other opinions do you have?

THE WITNESS: Can we go off the record for a second?

BY MR. ZWIBELMAN:

Q I want to stay on the record.

MR. BEAN: I object to the form of the question, then.

BY MR. ZWIBELMAN:

Q What other opinions do you have other than what you testified to here today?

A I think we covered all of those. I can't think of any more at this time. I don't think there is white matter hypoplasia or atrophy in the brain --

Q We've talked about that, haven't we?

A Yes, we have.

Q What is Mr. Bean talking about? Babble.

MR. BEAN: You didn't want me to tell him, Myron, so you'll have to wait to hear it at trial. I'm just telling you I think he's got more opinions.

BY MR. ZWIBELMAN:

Q Do you think you have more opinions than we talked about here today, sir?

A I think I pretty much covered it.

MR. ZWIBELMAN: Okay.

EXAMINATION

BY MR. BEAN:

Q Is there normal corpuscolosum (phonetic)?

A Yes, there's a normal-sized corpuscolosum on the MRI.

Q Is there any cortical atrophy?

A There's no cortical atrophy on the MRI.

Q Is there any evidence on any of these films that suggests increased intracranial pressure causing injury to this child's brain?

A No.

MR. ZWIBELMAN: Didn't we talk about that, sir?

THE WITNESS: Yes, we did.

MR. ZWIBELMAN: Was Mr. Bean not listening?

THE WITNESS: I think he's just being his lawyerly self.

BY MR. BEAN:

Q Is there any evidence of gliosis on the MRI?

A Not in my opinion.

Q Any evidence of encephalomalacia on the MRI?

A Not in my opinion.

MR. BEAN: I think that's probably it.

MR. ZWIBELMAN: I get the original and a miniscript and ASCII.

MR. BEAN: I'll get a copy and mini.

MR. ZWIBELMAN: Can we make some arrangements for the doctor to read it?

MR. BEAN: Sure.

I, MARVIN D. NELSON, JR., M.D., do hereby declare under penalty of perjury that I have read the foregoing transcript of my deposition; that I have made such corrections as noted herein, in ink, initialed by me, or attached hereto; that my testimony as contained herein, as corrected, is true and correct.

EXECUTED this _____ day of _____, 2003, at _____, _____.

(City) (State)

_____
MARVIN D. NELSON, JR., M.D.

I, the undersigned, a Certified Shorthand Reporter of the State of California, do hereby certify:

That the foregoing proceedings were taken before me at the time and place herein set forth; that any witnesses in the foregoing proceedings, prior to testifying, were placed under oath; that a verbatim record of the proceedings was made by me using machine shorthand which was thereafter transcribed under my direction; further, that the foregoing is an accurate transcription thereof.

I further certify that I am neither financially interested in the action nor a relative or employee of any attorney of any of the parties.

IN WITNESS WHEREOF, I have this date subscribed my name.

Dated: _____

_____
VIRGINIA PETERAITIS
CSR No. 6205