IN THE EIGHTEENTH JUDICIAL DISTRICT
DISTRICT COURT, SEDGWICK COUNTY, KANSAS
CIVIL DEPARTMENT

Doc. 12

KATHLEEN HOYT, a minor; by and through her natural mother and natural guardian, ANGELA HOYT, and KENNETH HOYT, and ANGELA HOYT, individually,

Plaintiff,

vs.

CARL M. CHRISTMAN, M.D.,

Defendant.

COPY

NO. 91 C 1116

* *

DEPOSITION OF GEOFFREY P. ALTSHULER, M.D.

taken on behalf of the

Plaintiffs

on May 29, 1992

in Oklahoma City, Oklahoma

* *

APPEARANCES:

For the Plaintiffs:

MR. BRADLEY J. PROCHASKA
Eastside Financial Center
7701 East Kellogg, Suite 415
Wichita, Kansas 67207

For the Defendant:

MR. PAYNE H. RATNER, JR.
Ratner, Mattox, Ratner, Brimer & Elam
444 North Market Street
Wichita, Kansas 67201

REPORTED BY: ANNETTE L. BEAN, CSR

I N D E X

STIPULATIONS

It is stipulated and agreed by and between the parties hereto, through their respective attorneys, that the Deposition of GEOFFREY P. ALTSHULER, M.D., may be taken on behalf of the Plaintiffs, on this, the 29th day of May, 1992, in the City of Oklahoma City, State of Oklahoma, by Annette L. Bean, Certified Shorthand Reporter within and for the State of Oklahoma, notice of time and place of taking said Deposition is hereby expressly waived.

It is further stipulated and agreed by and between the parties hereto, through their respective attorneys, that all objections to questions propounded and answers thereto made, except as to the form of the question or the responsiveness of the witness' answer, may be made at the time of the trial when said Deposition is offered into evidence, with the same force and effect as if said objections were made at the time of the taking of this Deposition.

It is further stipulated and agreed by and between the parties hereto, through their respective attorneys, that the time of filing is waived.

And thereupon the following Witness was produced by the Plaintiffs:

GEOFFREY P. ALTSHULER, M.D.,

the Witness hereinbefore named, being first duly cautioned and sworn the truth, the whole truth, and nothing but the truth, testified on his oath as follows:

DIRECT EXAMINATION

BY MR. PROCHASKA:

Q. Can you state your name and business address?

A. Geoffrey Altshuler, M.D., Children's Hospital, 940 Northeast 13th, Oklahoma City, zip code 73104.

Q. You live in Oklahoma City?

A. Yes.

a. Okay. And we're at the Waterford Hotel for your deposition today?

A. Yes.

Q. All right. And you have on the table many documents from your file, which we're going to go through right now. Is that okay with you?

A. Yes.

Q. All right. At a point in time, you received Dr. Schiffrin's report of 8-21-90; Dr. Paul's report of July 2 of '90 -- excuse me, that was Dr. Bascom Anthony's report of July 2 of '90; Dr. Richard Paul's report of 1-22-92; Dr. Benirschke, B-e-n-i-r-s-c-h-k-e's, report of 9-18-91; Dr. Shaefer's -- excuse me, Dr. Hill's report of 10-26-90; and you also received the Wesley Medical Center pathology report of 9-5-82. And what's been deleted from it?

A. At my request, the clinical history. I insisted that the clinical history be deleted.

Q. Okay. We're also going to have marked as Deposition Exhibit No. 1 a file marked General Correspondence with 11 pages in it that refer to your fee and correspondence from Wesley and Mr. Ratner's office. We'll have that No. 1. Okay. I'm going to put it on the chair here.

(Whereupon, Deposition Exhibit No. 1 was marked for identification.)

(Whereupon, an off-the-record discussion was had.)

BY MR. PROCRASKA:

Q. We will have marked as No. 2 a 12-page document entitled Hoyt V. Christman. Doctor, what will we entitle these 12 pages?

A. Well, you could call it follow-up report of April 29, 1991.

Q. All right. Now, you issued two reports. Is this one after those two?

A. You have them in the other stack.

Q. I don't remember the dates. You don't know offhand the chronology?

A. Well, the first report was dated March 24, 1991, and --

MR. RATNER: I think what I understand that to be that you're asking about, Brad, is his notes and -- that he used in developing his reports.

MR. PROCHASKA: Okay.

BY MR. PROCHASKA:

Q. So what we have marked as Deposition Exhibit No. 2 dated April 29, 1991, precedes by one day your second expert report dated April 30th, 1991?

A. Yes.

Q. Okay.

(Whereupon, Deposition Exhibit No. 2 was marked for identification.)

(Whereupon, an off-the-record discussion was had.)

BY MR. PROCHASKA:

Q. We'll have marked as Deposition Exhibit No. 3 three more documents. One's the alleged gestational age document; one has on the top of it Fields, B: Virology, 2nd Edition.

MR. RATNER: Why don't you let her mark it so you can say which document is which.

MR. PROCHASKA: These are all No. 3.

MR. RATNER: Oh, I'm sorry.

BY MR. PROCHASKA:

Q. Dr. Fields B: Virology, 2nd Edition, Raven, New York, is that a textbook?

A. Yes.

Q. All right. Is that in your office or something?

A. It's not in my office, but it's a standard book obtainable from the library.

Q. All right. Did you review or consult that book in the process of reviewing this case?

A. Yes.

Q. Okay. And then the third page of Deposition Exhibit No. 3 is a growth chart that has stuff on the front and the back. And do I see that you have three horizontal lines on the front page which you put there?

A. I did.

Q. Okay. And that -- those do correspond to the measurements of Katie Hoyt in terms of weight, length, and head circumference?

A. Yes, those items being at the top right of the page.

Q. Okay. And we'll have all those three pages marked as No. 3.

(Whereupon, Deposition Exhibit No. 3 was marked for identification.)

MR. RATNER: Off the record.

(Whereupon, an off-the-record discussion was had.)

BY MR. PROCHASKA:

Q. And Deposition Exhibit No. 4 is four articles. I'm going to give you the title, you correct me if I'm wrong, Doctor.

A. "Infectious Disease of the Fetus and Newborn," by Remington and Klein; the ACOG Committee Opinion, No. 91 of February of '91; an article entitled "Prevention of Early-Onset Neonatal Group B Streptococcal Disease with Selective Intrapartum Chemoprophylaxis"; another article entitled "Cerebral Palsy: MR Findings in 40 Patients"; and a fifth article, "Commentary," by Joe Volpe. And so I'm wrong. Deposition Exhibit 4 is actually five articles. Wave those marked.

(Whereupon, Deposition Exhibit No. 4 was marked for identification.)

(Whereupon, an off-the-record discussion was had,)

BY MR. PROCHASKA:

Q. Deposition Exhibit No. 5 is 16 pages. The first two contain questions, as you understand it, Doctor, from Maggie Roberts?

A. Yes.

Q. The next two pages concern the dating as to whether this is post term or not?

A. Right.

Q. Okay. And we have the page from Dr. Christman's chart dealing with -- oh, it contains the

MR. PROCHASKA: And I'm going to ask the Court Reporter, on everything that I give you, if there's any portion that's highlighted, as on this four-page chronology, I'm going to ask you to highlight it as it is highlighted as it is handed to you. Okay?

MR. RATNER: Or just have it copied by someplace where they can do it in color.

MR. PROCHASKA: Either way.

BY MR. PROCHASKA:

Q. And then we have, at the end of this deposition exhibit, the discharge summary of 9-20-82 of Katie Hoyt. We have a November 2, 1982, all the way to 10-3-90, four-page -- four pages of copies of Dr. Svoboda's office chart. Okay?

A. Sure.

(Whereupon, Deposition Exhibit No. 5 was marked for identification.)

(Whereupon, an off-the-record discussion was had.)

BY MR. PROCHASKA:

Q. And then you also reviewed the deposition of Dr. Kurt Benirschke?

a. I did.

Q. And you highlighted many pages of it and yellow tabbed many pages of it?

A. Yes.

a. Okay. What I would like to find out is what material you had before you did your first report. Okay? And as I would understand it, you had the pathology slides. Did you also have the recuts?

A. I had what I photocopied with a Xerox machine and appended as being page six of my March 24, 1991, report. And I had the Wesley Medical Center surgical pathology report of accession No. 82-9953 from which clinical information had been erased, according to my requirement.

Q. Okay. Did I ask you, did you have the recut slides also?

A. I doubt it. If they're not photostated -- I beg your pardon. On my photostatic copy, it clearly states on the label "recut."

Q. Okay.

A. So that -- that is all that I would have had, four slides that were recuts.

Q. Other than a didacted pathology report, you had no medical records whatsoever?

A. That is true.

Q. And that's the way you prefer to review the slides so that you're not influenced by the clinical findings and the medical records?

A. True.

Q. All right. And who first contacted you, very first contact of all?

A. I believe that it would have been Maggie Roberts, but I couldn't swear to that.

Q. Okay. And as I refer to your first report, it says you got a letter from Mr. Ratner raising questions that the patient's placenta had CMV or other reasons for the adverse outcome. You got that letter before you reviewed the slides?

A. Probably. I suspect, but couldn't swear to it, that there would have been a phone call from Ms. Roberts And then when I would have made it clear to her that I would. not want detailed clinical information, I assumed that they would have sent the slides --

(Whereupon, an off-the-record discussion was had.)

MR. PROCHASKA: I'm at the end of the table, Doctor, because of the glare.

(Whereupon, an off-the-record discussion was had.)

BY MR. PROCHASKA:

Q. Okay. You had the letter, you had at least a phone call from Marge Roberts, and you think you may have had one from Mr. Ratner before you issued the first report?

A. No, no. I believe that the phone conversation would have been with Maggie Roberts and that, essentially, that at the time that I did the first report under the date of March 24, 1991, that inadvertently Mr. Ratner had slipped in some information in his letter, I believe, if you double check the letter. But knowing me, I doubt that I would have even paid any attention to that letter at the time. I would have looked at the slides and the report.

Q. All right. Would you assume that you would have read the letter?

A. I may have read the letter. It might have said that it was -- whether a post term or whatever was in the letter. If you just could go to the letter now because it's obviously been marked as an exhibit. My point of emphasis is that the first report was done without any meaningful clinical information.

Q. All right. All I'm getting at is, your routine is you read your mail?

A. That's right. But I don't commit it to memory.

Q. Okay. And Maggie Roberts, can you tell me essentially what she told you over the phone in your first contact with her?

A. I would firmly believe that she would have asked me to review a case and that I would have made it crystal clear that I wouldn't have wanted the details and that she could send it on the understanding that she would erase the clinical information from the original pathologist's report.

And I would have to assume that it can be easily checked that somewhere in the middle Mr. Ratner, unaware of what I would require, would have sent that letter, that I would have read it because I do read my mail then quickly set it aside and, at the time that the review would have been done, not reread his letter.

a. Do you know Maggie Roberts?

A. I do. I'm embarrassed to say that if -- if she walked in the door, I may not recognize her as being Maggie Roberts. But I do believe that she was at a College of American Pathologists presentation at which I spoke and that we may have met one on one very, very briefly. But aside from that, that's the extent to which I know her.

Q. Did that meeting occur before your initial contact by her in this case?

A. I would have to look in my files. I gave a presentation in Atlanta probably in 1990. Again, I don't apologize for my absent mindedness. Any meeting that I would have had with her would have been exceedingly brief.

Her husband was on that program. I do not particularly know her husband, other than as a very marginal acquaintance having been on the same program. I guess I've spoken to him for a matter of some very few minutes, in other words, at such a meeting.

Q. Did you know her husband before this first report was issued?

A. I think marginally acquainted. I had given at least one presentation in Wichita. It's one of those situations wherein I probably met him and would not have remembered him, but I assume that, since he's very active in the obstetric community, that he was probably at my talk. And I'm sure you've had exactly the same experiences in your profession.

Q. Can you tell me what Marge Roberts told you during the first conversation?

A. I can't. All I can tell you is that most attorneys, you know, would tell you that I make it very clear that I don't want to have information at the time that I review the case. And I would have to believe, being an intelligent lady, that she respected that and essentially told me nothing.

Q. Do you recall if she told you this was a brain-damaged baby case?

A. To be quite honest with you, I pretty much assume that as -- as expected. That in other words --

Q. Okay.

A. -- that's a presumption on my part that 99 times out of 100 that's why I'm being asked to review a case.

Q. How about that she was working for a lawyer representing the doctor? Did you glean that from the conversation?

A. Oh, I'm sure I did.

Q. All right.

A. In fact, I do believe I would have known that. I think, in fact, that I had consulted for the firm prior to this.

Q. Okay.

A. So that, I did know.

Q. All right. You think you've worked -- have you worked for Mr. Ratner before?

A. I believe specifically that I have, but I can't recall the case, and I'm sure that he could provide that information.

THE WITNESS: I think it's true that I had worked for you before.

MR. RATNER: Honestly, I can't recall. I think there might have been one case several years ago, but I'm not really --

THE WITNESS: See, I don't know. In truth, I don't know.

BY MR. PROCHASKA:

Q. We have a lot of bad memory going on around here, Doc.

A. Well, you know, I'm not embarrassed to tell you that I don't remember. This case goes back quite a while. I've done a couple of cases, and I don't remember whether I've done a third for sure.

Q. So you would have gleaned then that Marge Roberts was working for the defense?

MR. RATNER: That's Maggie Roberts.

MR. PROCHASKA: Maggie Roberts, I'm sorry.

THE WITNESS: Absolutely, yes. I mean, I'm sure that I knew that.

BY MR. PROCHASKA:

Q. Okay.

A. May I just say that, on the occasions that I don't know that, which is frequently the case, because frequently if I'm lucky, you know, I know nothing about it, then I put in the report, it's my habit to say, I'm making the report without any knowledge of the clinical and without knowing which side they're representing.

Q. Okay. Now, you would have told Maggie Roberts you don't want to know any of the details because you like to remain objective and uninfluenced by what's on the chart?

A. Absolutely, yes.

Q. All right. You made that clear to her?

A. Absolutely, yes.

Q. All right. And now, before you were able to say that though, did you also glean from your conversation with her that there was allegations of perinatal asphyxia or similar term causing brain damage?

a. Let me just say that I assume that, again, because 99 times out of 100 it's a matter of basically -- I don't mean to use the term common sense. I guess a better word would be experience.

Q. Okay.

A. Ninety-nine times out of 100 or nine out of ten times, that's why people ask me to look at placentas.

Q. Okay. And I guess would it also be your assumption from experience that you would assume there'd be an allegation the doctor was negligent in failure to deliver the baby in a timely manner and that resulted in fetal -- or perinatal asphyxia causing brain damage?

A. Yes.

Q. Okay. Now, when you reviewed the slides and you know you're going to be issuing your first report and reporting the significant findings of your slides review?

A. Yes.

Q. Okay. Is it fair to say then that the significant findings demonstrating an abnormal placenta -- let me rephrase that. Would it be fair to say all significant abnormal findings of your review of the placenta are in the first report?

A. That's true.

Q. All right. If I were to summarize the major significant findings you noted in your first report, short umbilical cord -- is that one?

A. It's certainly by no means the most important, but -- so I don't want to assign any priority of importance.

Q. That's fine.

A. But that was an observation that I made.

Q. All right. All I'm getting at is we don't have 100 significant findings, we have four or five or whatever. I want to go through them with you --

A. Okay.

Q. -- and we'll do just the significant findings.

A. Okay.

Q. A short umbilical cord, chorangiosis, chronic villitis, and avascular villi. That's the four I deduced. Is there another one?

A. No. I think the best way to answer this, because it's certainly the most honest way, is to mark as an exhibit an item that represents the photographs that I took because I chose to photograph those out of an opinion that they were significant.

Q. Okay. How did this one slip by me?

A. It was there. Trust me.

(Whereupon, an off-the-record discussion was had.)

MR. PROCHASKA: We'll mark this as No. --

(Whereupon, Deposition Exhibit No. 6 was marked for identification.)

(Whereupon, an off-the-record discussion was had.)

BY MR. PROCHASKA:

Q. All right. I appreciate that answer. Would I be correct though to summarize the significant findings contained in report No. 1 would be short umbilical cord, chorangiosis, chronic villitis, and avascular villi?

A. They were there, and there were other items there.

a. All right. Now -- and I'm not meaning to tie you in, but are those the four that you find are of major significance in terms of abnormalities that cause you to have the opinions you have?

A. Well, I've prefaced my comment by saying I don't think the shortness of the cord is a major factor.

Q. Okay.

A. It's meaningful information, in my opinion.

Q. Okay.

A. And I think that there are additionally meaningful items that were photographed which I'm delighted for you to have.

Q. All right. But is the basis of your conclusions then, on the chorangiosis, chronic villitis, vascular villi, with less support from the short umbilical cord and a few other things?

A. Well, meconium was present and clearly was important.

Q. Okay.

A. And that would be part of what I was talking about. There was fibrin deposition indicating an ongoing thrombotic clot-like phenomenon in the fetal placenta. And I must emphasize that, in addition to the avascular villi, there were clear-cut features of end-stage, e-n-d, end-stage thrombotic phenomenon.

Q. All right. So if I again ask you the major significant abnormal findings, they would be short umbilical cord, chorangiosis, chronic villitis, avascular villi, meconium, fibrin deposition, and end-stage thrombo --

A. Thrombotic, you know, like, t-h-r-o-m-b-o-t-i-c, changes.

Q. Thrombotic changes.

A. Yeah, in the vessels of the fetal villi.

Q. Right.

A. And there were some basal inflammatory features. Dr. Benirschke correctly pointed out that some plasma cells were present there.

There were bacteria at the center of the membrane roll that I elected not to call streptococci; but in terms of common things are common in the context of the case, I'm not surprised that they were proven to be streptococci. **And** I believe that that represents what, in my opinion, are meaningful pathological changes.

Q. All right. Now, after the first report -- well, let me rephrase that. After **you** reviewed the slides, you concluded in your report that it was reasonable to conclude fetal disease was responsible for the **bad** outcome of the pregnancy; correct?

A. Yes.

a. That's your opinion today?

a. The first report of March 24 is -- that's verbatim what I said.

Q. All right. That's your opinion still **today?**

A. Yes.

Q. All right. Now, you also said that your final opinion must depend on a comprehensive review of the clinical facts. Why must your final opinion depend on a comprehensive review of the clinical facts?

A. I think it would be totally irresponsible, in any part of a pathologist's discipline, to make a final opinion without a clinical history.

Q. Why is that?

A. Because particularly in diseases of the developing fetus and child, clinical information will strongly influence the bottom line.

Q. Okay.

A. From my experience, which is -- particularly now, we're talking about fetoplacental pathology and patient outcome, the range of experience that I have had allows me to talk about likelihoods or probabilities, which is what we're discussing today, probabilities, but it does not entitle me to give a final opinion in the absence of clinical information.

Q. Okay. All you're recognizing, if I can partially quote you, is that clinical information strongly influences your final conclusion?

A. Exactly. In other words, prior to that, I can talk about degrees of probability, but I can't talk about absolute conclusion.

Q. And you're recognizing that, when you finally go to the clinical chart, it may provide important new evidence for you to consider?

A. None the least of which it will either reinforce my own credibility, which is important to me more so than what other people think of me, or it will cast doubt upon me if it turns out that the clinical facts are severely discordant from what I had reported.

And in the present case, there was, in my opinion, complete concordance between what I had stated without history, whether it would be the actual bacteria that I saw or the meconium that was present or the number of nucleated red blood cells, that it was concordant.

MR.PROCHASKA: Can you read my question back?

(Whereupon, the Court Reporter read back the material requested by counsel.)

BY MR. PRQCHASKA:

Q. Correct?

A. Yes.

Q. Okay. It may support your conclusion or it may not support your conclusion?

A. Yes.

Q. Okay. And it's your opinion that the

clinical chart supports your conclusion in this case?

A. That is my opinion.

Q. All right. And with that in mind then, your second report is essentially the same as your first report in terms of the conclusion?

A. In essence, yes.

Q. Okay. And have there been times when, after reviewing the pathology slides, you expected to see a different indication in the chart on your clinical review?

A. I honestly can't remember those. I don't think anybody is perfect, and I don't mean to imply that I am. But let me just say that I -- I think it would have to be very rare because I honestly can't remember.

Q. Okay. Can you ever recall a time when you reviewed the slides, reached a tentative conclusion, looked at the chart, and decided your tentative conclusion was wrong and completely change your conclusion?

A. No, I can't recall that. I think that, as much as possible, I try not to go beyond what my experience allows. Again, I would emphasize that I recognize I'm not perfect, and I must have made mistakes in my career. But if we're talking in terms of intent and probabilities, I think that the record would show, you know, if you pump into the American Trial Lawyers Association, that I'm pretty much on target.

Q. All right. All I'm get at is, as we sit here today, you can't recall an instance where you reviewed the slides, reached a conclusion, looked at the clinical chart, decided your conclusion was wrong, and changed it?

A. If we're talking about, you know, the intent being the prospective of the case as opposed to, you know, less important, you know, impact considerations, then obviously I'm not right on target with everything. But in terms of the prospective and the overview, I can't recall.

Q. All right. Now, when you completed your review of the slides, what was your expectation of what you would see in the clinical chart in terms of the cause of this baby's brain damage?

A. Well, the first thing that I expected to see was confirmation of what I had literally photographed, that clearly that there would have had to have been meconium discharge and that clearly it must have happened, you know, quite a few hours as opposed to minutes before delivery.

Q. Okay.

A. Okay? I mean, in other words, that it was clear to me that the meconium discharge had not occurred 30 minutes beforehand, but rather, you know, hours beforehand.

That clearly some bacteria were present, and I put in there, in fact, the caveat in the third paragraph of the initial report in block letters there, that I would be very interested to know about whether Group B strep would be present because clearly I had photographed organisms that could be Group B strep.

So I was looking for these kinds of correlations. I was clearly concerned about issues of chronic intrauterine infection, and the commonest that we know about as a known cause would be cytomegalovirus. I was clearly interested to know whether there would be confirmation of my allegation that the nucleated red cells would have to be numerically increased and abnormal. And I think that that conveys the essence of what I was seeking.

Q. Now, when you wrote in your first report that it was reasonable to conclude fetal disease was responsible for the bad outcome, I'm not sure I know what you mean by "fetal diseases." I've looked through some of your literature here. Is it your opinion that the fetal disease you are talking about is a congenital infection?

A. If you mean "congenital" as being present at birth, yes.

Q. I mean "congenital" as being present in uterus and at birth.

A. Yes. In other words, it was my opinion that there was long-standing fetal infection present.

Q. Okay.

A. It was present for a long time before birth, and it was present at birth, in terms of, you know, it's effect. It may not be active viremia at birth, but the significance of it was present at birth.

And most particularly, I have published placental findings which strongly associate it with neonatal asphyxia; and those findings were present in this case. So without any clinical history, I would have expected that there would have been neonatal asphyxia, playing the percentages.

Q. Okay. Now, if I understand you then, is it your opinion that the fetal disease responsible for the bad outcome is a congenital infection present in the fetus and in the newborn at the time of birth?

A. That's one of the factors.
Q. Okay. Is there another one?
A. Oh, yes. Hypoxia that would clearly be independent of the fetal infection.
Q. All right.
A. I am not -- I am not by any means saying that this fetus and newborn had suffered congenital cytomegalovirus infection. I am not saying that. But if we would use that as an important example of a major common known such chronic infection, let me emphasize that those babes do not necessarily have the chronic fetal hypoxia which this particular baby had suffered.
Q. So all I want to find out is, when you say there was fetal disease, we're talking about congenital infection, chronic hypoxia -- anything else?
A. Well, I don't know what causes the chorangiosis other than an hypothesis of mine which is supported by experimental pathology. Okay? Experimental pathology supports that chorangiosis is caused by very, very low-grade and very prolonged lack of oxygen to the tissue.
Q. Okay.
A. I mean, I can't pretend to know

everything. So what I'm saying is, so many of the items that we've discussed, you know, are chronic, they've been there for quite a time, whether or not one knows what causes them.

Q. All right. All I'm getting at then is, when Dr. Altshuler says a fetal disease was responsible for the bad outcome, you're talking about congenital infection and chronic hypoxia and nothing else?

A. Essentially, that would be true. But one would have to recognize that complications of those events could well be important to be specific, to be specific. When a fetus has hypoxia, one of the complications is coagulation disorder or thrombosis. One of the complications of that can be embolism or a clot being thrown off. That may well have been present in this case inasmuch as I have photographed thrombotic material.

Q. So it would be your opinion then that, when you say, "Fetal disease was responsible for the bad outcome," you mean that congenital infection and chronic hypoxia was responsible for the bad outcome, and you found confirmation of that in the clinical chart?

A. Yes. And I think, in terms of semantics, that we need to go beyond the word "congenital." "Congenital" simply means "at birth."

Q. Okay.

A. And I'm saying that the problems were there for a long time prior to birth, as well as being there at birth.

Q. Okay. And for the record, when I use the word "congenital," I did mean in utero and at the moment of birth.

A. Yeah. And I'm not criticizing you, believe me. I just needed to be sure that we're talking the same language,

Q. We are.

Now, when we're talking about congenital. infection and chronic hypoxia, is Dr. Altshuler able to tell me how long this occurred before delivery? Days? Weeks? Months?

A. The chronic infection, in my opinion, would have been many days, based upon the appearance under the microscope.

Q. All right.

A. The nucleated red blood cells, from my empirical knowledge, that's just to say my own personal knowledge, would be at the least 24 hours of a meaningful degree of fetal hypoxia and, from experimental data of colleagues, at the least, three days before delivery; the meconium, at the least, 12 hours; and for other things, I'm dependent upon anthropometric data, for example, of the newborn babe.

Q. Okay. Without tying you down more than you care to be, "many days" is a little bit loose for me. I'm going to ask the question again. Give me the range of weeks or months or days for the length of time that this fetus was suffering from chronic hypoxia and congenital infection.

A. Based upon the histology alone, it would be difficult for even the greatest expert to answer the question based upon the histology alone. You can talk about the risk factor of the outcome. I mean, to be specific, I think there could be a consensus that it takes many, many days to produce the avascular villi; that it could be, for example, a month or six weeks.

But in terms of saying, "Could it have been eight weeks or nine weeks that there could have been significant compromise?" then you'd have to look at target effects, like, whether the head might be slightly small relative to the length. And that's what I meant by anthropometric data. Once you go beyond a few weeks, it gets to be a deal where you

depend upon anthropometric data.
Q. Well, Doctor, do you think that the chronic hypoxia and congenital infection were present in the fetus for more than six weeks prior to birth?
A. I have no doubt that they were present. There's not the shadow of a doubt that they were present for longer.
Q. Okay.
A. The question that I think you're really asking me, if you'll forg ve that I'm trying to read your mind, is, "Okay, so it was there, but was it clinically significant?" And that's what I was addressing.
Q. No. If I -- we agree that the chronic hypoxia and congenital infection are there longer than a month. If we put a time range on your opinion, would it be fair to say that, in your opinion, you think the chronic hypoxia and congenital infection were present from about two to three months before birth up until the moment of birth?
A. Well, let me be specific. Number one, I can't possibly be absolute. I don't know everything.
Q. More probable than not?
A. More probable than not. I think there's no question that the chorangiosis, specifically the

increased number of capillaries, were there for numerous weeks.

Q. All I want is the chronic hypoxia, congenital infection.

A. But let me just say that it's impossible for a person to judge the time at which a, quote, unquote, significant degree of hypoxia resultant from the chorangiosis would have occurred. Do you see what I'm getting at?

Q. But I just want a simple answer so we can get done before three o'clock.

A. Okay. So the simple answer is that there was hypoxia there for weeks beforehand associated with the chorangiosis.

Q. All right.

A. No ifs, no buts, no maybes. It was there for weeks. In terms of the --

Q. Congenital infection?

A. -- the congenital infection, for a lesser number of weeks, but also weeks. Neither of which, too, from my experience, are what I would call clinically symptomatic. In other words, I don't expect that the -- that the fetus is going to be kicking or struggling or doing things or that the mother would have a particular sign of that.

Q. If I summarize your opinion, you think the chronic hypoxia was there approximately two, three months before delivery, the congenital infection was there approximately one to two months before delivery?

A. Yes. I think infected chorangiosis was there for even longer than two to three months,

Q. All right. So if I understand you right, it is your opinion that the congenital infection was present in the fetus approximately one to two months before delivery, and the chronic hypoxia was present in the fetus approximately two to three months before delivery?

A. Probably. With enormous emphasis that, you know, I am -- I'm not so knowledgeable that I can guarantee whether it's, you know, ten weeks or is eleven or seven --

Q. Right.

a. -- but quite a while. And emphatically that this is not the sort of thing that is symptomatic, that the mother would have a particular sign of it.

Q. When we talk about "chronic," synonymous with that would be the word "long-standing"?

A. Yes.

Q. Would we use that term? Okay.

A. Except I need to qualify that. I did refer to a publication where I used the word, for example, "chronic"; and in that I defined chronic as -- for the purpose of that specific study, as being in excess of 24 hours.

Q. All right. For the purposes of this case, unless you correct me in a deposition, "chronic" and "long-standing" mean the same thing in the context of this case?

A. No, because -- because I earlier mentioned a few minutes ago that, just from the meconium and the nucleated red blood cells and the fibrin in there, I would have thought this babe would have had neonatal asphyxia because of the epidemiologic study in which I participated. And in that study, we defined chronic as being more than 24 hours.

Q. All right. I mean apart from that. I'm not trying to trip you up.

A. Okay. No, I understand. I'm just being fair to you

Q. Yes.

A. You know, because these are very difficult words as to what does one mean.

Q. That's why I want to define them for you.

a. Right.
Q. SO --
A. So I would prefer if you would allow for us to separate those words. "Chronic" to me would mean more than 24 hours; "long-standing" would be many days.
Q. All right. That would be different than "perinatal." So if we're talking about chronic asphyxia versus perinatal asphyxia, perinatal, can we agree in the context of this case, around the time of birth, say, maybe three or four hours before and after? Is that acceptable with you?
A. Well, I'm delighted that you even raise this because it reaffirms my concern about semantics and words. You know, because I think that it's true that many people, when they use the word "perinatal," include the first 28 to 30 days after delivery. So that's where I need to know, what you mean by "perinata1?"
Q. Right. Why don't we do this. You're a doctor, you've talked with OB's before, you've talked with neonatologists before; correct?
A. Yes. And that's why I seek clarification because often colleagues use it in a different sense, you know.

Q. You work around a hospital and with medical people all the time?

A. I sure do, and I have found that what one person says is "perinatal" is different from another. That's why I seek clarification.

Q. In the context of this case, is your understanding of "perinatal" within a few hours before and after birth, approximately?

A, I prefer to think of it as being -- no, as being maybe one or two days before the intrapartum experience and as much as a month after delivery.

Q. Birth. All right. Now, you've read the chart in this case, the discharge summary by the neonatologist?

A. Yes.

Q. Is it your understanding that, when they talk about perinatal asphyxia, they're referring to 24 hours before birth and 30 days after, when the babe was only in the hospital 15?

A. I think that's a fair statement. Quite candidly, I think the more experienced the neonatologist, the more likely the person in communicating with another person would want to be assured of the same definition being used by each party.

Q. All right. So when you read the discharge summary from the neonatologist and you saw on it the diagnosis of perinatal asphyxia, in your understanding of the term, you felt that to mean 24 hours before birth, up to 30 days after birth?

A. No. Earlier in this testimony, I believe, I said the opposite. That, you know, to me, even two or three days. In other words, putting the emphasis on prior to the intrapartum experience.

I 'chink most people, when they use the word "perinatal," I think most people do not mean just the intrapartum delivery experience and a day or so afterwards. They mean a longer window of opportunity there, so to speak.

Q. Okay. All I want to get is your understanding.

A. And that is my understanding.

Q. All right. It's kind of a long answer, so I'm not quite sure I followed it. Dr. Altshuler's understanding of the perinatal asphyxia noted in the discharge summary is that that asphyxia occurred two to three days before birth or up to 30 days after birth?

A. The window would be anywhere from a few days before delivery to the several days after.

Q. All right.

A. And if the babe, of course, was diagnosed at the second day or the first day or the third day, whatever, but traditionally it means within the first month.

Q. All right. Now, you read the neonatal discharge summary. Okay?

A. Uh-huh.

Q. Is it your understanding that, when they diagnosed perinatal asphyxia, they meant that that asphyxia occurred approximately four, five, six hours before delivery, in that time period?

A. Absolutely not. I would never -- that's why I've gone to such length in my answer.

Q. All right.

A. I would never assume anything without asking them, "What do you guys mean?" or, "What do you ladies mean?"

Q. All right. But I've got to find out what you're assuming they mean.

A. That's why I gave you a long answer because the long answer, when you reread it, will be to explain to you I think it's extremely important to ask people exactly what they mean because there is this conflict of definition from one person to another.

Q. So Dr. Altshuler's understanding of what they were talking about when they said perinatal asphyxia was they were referring to a time period a few days before delivery and up to 30 days or more after delivery; correct?

A. For all practical purposes, yes.

Q. All right. Now, I want you to assume that they were talking about a time period three to four to five hours before delivery is when the perinatal asphyxia occurred. In other words, three to four hours before delivery and up to the moment of delivery. If that is the time period they are talking about, do your conclusions about fetal disease being responsible for the outcome of the pregnancy, are they supported by that discharge summary?

A. Sure they are, because, you know, we've spent a long time thus far explaining terms, and I believe that it is totally supported.

Q. All right. So that I understand you right, when you say that your final conclusions in your two expert reports are supported by the chart, you mean that, even if the chart is taken to mean perinatal asphyxia occurred during a five-hour or so period before birth, that supports your two opinions and your two expert reports?

a. Yeah, because I need to be sure of semantics, that there's no misunderstanding here. The point that I have made has been that there has been long-standing hypoxia. At no time did I say that the babe three hours beforehand or during the intrapartum experience had a completely normal oxygen level.

MR. PROCHASKA: He said -- and I don't know if you got a yes down or not. Did you get a yes at the beginning of his answer?

(Whereupon, the Court Reporter read hack the material requested by counsel.)

BY MR. PROCHASKA:

Q. All right. Now, you -- do you have an opinion as to how long the brain damage was present in the fetus before birth? And give me one to two months, two to three. You don't have to tie yourself down with a date, but give me a range. If you have no opinion, that's fine too.

A. In my opinion, it would have been many days.

Q. All right. It is your opinion that the brain damage happened many days before birth; correct?

A. Yes.

Q. All right. Now, does that mean that the brain damage, in your opinion, happened two to three months before birth?

A. Well, depends upon what you mean by "damage." Are you talking symptomatic clinically overt damage or subclinical damage? What do you mean?

Q. When the brain cells suffered injury, permanent injury, did that occur beginning two to three months before delivery?

A. I doubt that.

Q. Okay. One to two months before delivery?

A. I doubt that.

Q. All right. Two to four weeks before delivery?

A. Possible.

Q. All right. And it's probable that it happened three to four to five days before delivery?

A. Oh, I think that definitely it would have been there for four or five days before delivery, definitely.

Q. So it's in your opinion more probable than not that the brain damage began to occur four to five or six days before delivery but not two to four weeks before delivery, more probable than not?

MR. RATHER: I'm going to object to the form of the question. It's misinterpreting his answer.

THE WITNESS: The prospective that I'm trying to convey is that I'm convinced that there was significant brain damage several days before the actual intrapartum delivery.

Q. All right.

A. And I have insisted that I can't -- I can't claim that there would have been serious, major damage three months before, but I can claim that the pathologic processes that were evolving were present at that time.

Q. So it's your opinion that, between three to five days before birth, the brain damage began, and that that was a result of what was set in motion by congenital infection and chronic hypoxia?

A. No. You have inadvertently misquoted me. The clinically significant brain damage occurred. The brain damage was there a lot earlier than that, but I believe that three to five days beforehand it would have been clinically significant to the point that, if there would have been a cesarean section, for example, the damage would have been done, or in the Oklahoma expression, the horse was already out of the stable.

Q. Well then, in the Oklahoma expression, Doctor, when was the horse already out of the stable, meaning when was the damage done so that, if delivery was affected one, two, four, five six, seven weeks before delivery, we would have had a brain damaged baby?

A. But you see, I said that already by inserting the word clinically significant brain damage three to five days beforehand.

Q. Okay.

A. At least that's my opinion.

Q. I think you're going back and forth on me, Doctor. That's why I'm having trouble with you, okay. All I want to know is then when was clinically significant brain damage done in this baby? Three to four to five days before delivery, is that your testimony?

A. What I'm saying is that, if this babe would have been delivered three to five days beforehand, that I believe that the babe would have had substantial neuro-developmental disease. What I'm saying is that 13 to 15 days earlier there was significant brain disease, but I doubt that it necessarily would have been as devastating in the clinical sense.

a. Okay. Let's take it back two to four weeks before delivery. Would this babe, if delivered then, have had brain damage?

A. I believe I've already answered that I can't possibly give you a truthful opinion there.

Q. All right. So all we know is it's your opinion the brain damage was significant three to five days before birth, there may have been some there up to two weeks before birth, and beyond that you're unable to express an opinion?

A. No. This is the third time that I've requested you to insert the word, you know, clinically significant symptomatic overt. In other words, the damage two months earlier was significant, quote, unquote. The question is, would it have been manifested as a later cerebral palsy or mental retardation or other neuro-developmental disease.

Q. And what's your answer to that?

A. And what I've told you already, that I don't know whether there would have been obvious clinically diagnosable damage in the babe had the babe been delivered three or four weeks earlier.

Q. All right. So if I understand your answer, if we're talking about clinical brain damage, as indicated by eventual cerebral palsy and mental retardation, it's your opinion that that type of brain damage would have occurred within three to four to five days before delivery, perhaps up to two weeks before delivery, but beyond that, you don't think so?

A. That's right. And I want to change the word "occur." I mean, would have been symptomatically obvious. I mean, what I've been emphasizing is you have an ongoing evolution here.

Q. All right. Let me rephrase it so I'm fair to you. Maybe I just didn't understand you, but I'm not trying to argue with you. It's Dr. Altshuler's testimony that clinical brain damage, as indicated by eventual CP and mental retardation, was present three to five days before birth more probable than not, may have been present up to two weeks before birth, but you are unable to express an opinion if it was present more than two weeks before birth?

A. That is true.

Q. All right. So in terms of what's based on a reasonable medical certainty or more probable than not, your opinion would have to be that, based on a reasonable medical certainty, you think clinical brain damage was present three to five days before birth?

A. Anywhere from three to five days to three weeks or five weeks, you know, that sort of thing.

Q. You just changed your answer on me from previously.

A. Well, what I'm getting at is -- and this is why it's so difficult in the areas that we're discussing -- having told you that, in my opinion, the chorangiosis was there for, you know, three or four months -- okay? -- let's get the prospective. Having told you that, in my opinion, there was a chronic lack of oxygen that caused the chorangiosis at least three to four months earlier --

Q. Uh-huh.

A. -- the prospective that I'm trying to give you is that I can't possibly tell you when the clinically critical damage was overtly out in the open.

My sense is it was anywhere from three to five days. I'd give it maximum five weeks. And I told you earlier that I'm very much dependent on anthropometric data. And, you know, to get right to it, based upon the anthropometric data, I'd go as much as five weeks, but I couldn't go beyond that.

Q. It is Dr. Altshuler's opinion that, if a cesarean section was done five hours earlier, there would have already been present clinical brain damage, as defined by eventual CP and severe mental retardation?

A. That is my opinion.

Q. All right. And it is also your opinion therefore that the asphyxial episode causing the brain damage did not occur in the approximate five hour period before delivery, but it occurred for many days and weeks before that and up until the moment of birth?

A. That is my opinion.

Q. All right. So that, for example, if the neonatologists testified that the asphyxial episode causing the brain damage occurred in an approximate five-hour period or so before delivery, then you would be -- you would be at difference with their opinions?

A. That is true.

Q. If the pediatric neurologists testified that the brain damage occurred in an approximate five-hour period before delivery, you would be at difference with their opinions?

A. That is true.

Q. And if the treating pediatricians, the treating neonatologists, and treating pediatric neurologists all opined that the brain damage and damaging asphyxial episode occurred in the approximate five hours before delivery, you would be at difference with all of their opinions?

A. That also is true.

a. Okay. Now, you did your first report, you looked at the chart, you made your second report. It's fair to say that in no way did the chart cause you to think your first report was in error?

A. Yes.

Q. All right. Now, if the treating neonatologists and pediatric neurologists felt that the damaging asphyxial episode and brain damage did occur only in the five or so hour period before delivery, then would that understanding be different than the final conclusions on your two expert reports?

A. No. I think that we're talking at cross purposes. There's nothing that I read in the chart, you know, from the so-called treating physicians or neurologist consultant -- I think his name was Dr. Svoboda was the neurologist -- that makes me in any way feel that my initial opinion was wrong or that my present opinion is wrong.

Q. Okay. So all I'm getting at then is, if the proper understanding of the chart is that the damaging asphyxial episode and brain damage occurred in the approximate five hours before delivery, if those are the proper understandings of the chart, they would differ from your final conclusion in your two expert reports?

A. No. I mean, the point is, the information in the chart was there. Whether or not Dr. Svoboda interpreted it in terms of the clinico-pathological meaning in what I would consider to be the correct way is what we're here discussing.

In other words, my understanding of what I read in the chart, in terms of the laboratory results, is completely in accord with my initial opinion and my final opinion. And clearly, Dr. Svoboda and I have a departure from what we consider to be the ultimate truth.

Q. Okay. If the treating neonatologists and pediatric neurologists meant by their statements in the records that the brain damage occurred in the five hours before delivery and the damaging asphyxial episode occurred in the five hours or so before delivery, then their conclusions that the damaging asphyxial episode and brain damage occurred in the approximate five hours before delivery would be different than the conclusions you have reached in your two expert reports?

A. That is assuming -- that is assuming that they could swear in a court of law that they felt that there was absolutely no evidence whatsoever of a compromised fetus prior to five hours before delivery. And there's nothing in what I read there that makes me convinced that they could back that up with scientific or other information.

Q. Okay.

A. Please read my question back again.

(Whereupon, the Court Reporter read back the material requested by counsel.)

BY MR. PROCEIASKA:

Q. Okay. Now, is your answer yes?

A. It can't possibly be because I don't know whether you mean that they are claiming that the damage occurred exclusively within that time frame. What I'm saying is, when I read the chart, I couldn't see anything there that -- that I felt excluded the considerations that I was saying that there had been damage earlier.

Q. All right. Well, Doctor, you and me can argue about what the chart means all day long, right?

A. Right, right, right.

Q. So let's get away from all that and let me give you a hypothetical as to what it means and see if you agree with it. Okay?

A. Okay.

Q. If what the treating neonatologists and pediatric neurologists mean is that the damaging asphyxial episode occurred in the approximate five hours before delivery and that that's the same time period when the brain damage occurred, then would their conclusions, under that hypothetical, be different than the conclusions you've expressed in your two expert reports?

A. They would be different.

Q. Okay.

A. Now, you have testified that you thin there was a fetal disease in the form of chronic hypoxia and congenital infection. Can I ask you why, in either of your two expert reports, you never mentioned in your conclusion that you felt it was chronic hypoxia or congenital infection? Why don't you use those two phrases anywhere in your conclusions?

A. Well, I think it's obvious. I mean, it's all in the report. If you look at -- if you look in the report, you'll see that I've described the abnormalities. We're talking now, the first report, I've described the abnormalities, I've taken photographs of them, I've literally discussed chorangiosis, the signs of chronic intrauterine infection, the chronic meconium effects, fetal nucleated red cells, I've provided to you a slew of publications under my pen.

I mean, it ought to be obvious that -- that I don't think that these things are good things to have, but rather I think they're very bad things to have and that they represent long-standing and/or chronic disease.

Q. Would you agree with me that fetal disease is a very generic term that can encompass many different types of diseases, including infections and hypoxic problems?

A. I agree. That's exactly why I gave you my reprint so you'll know exactly what I mean when I use these terms.

Q. Would you agree with me that you used that general term instead of specifically using the term "congenital infection," quote, unquote, or "chronic hypoxia," quote, unquote, in the conclusion portion of your reports?

MR. RATNER: I'm going to object to the form of the question. You're quibbling about words, and you're the one that brought up congenital and defined it.

THE WITNESS: I think that we're game playing. You know, sort of two folks pulling on the tail of an elephant.

BY MR. PROCNASKA:

Q. Just answer that question. Let me have a readback to you.

MR. PRQCHASKA: Go ahead and read it back.

(Whereupon, the Court Reporter read back the material requested by counsel.)

BY MR. PRQCHASKA:

Q. . Agreed?

A. I would strongly disagree because I think you're taking it totally out of context. If you will look -- and I will refer you again to the conclusion of the March 24, 1991. It immediately follows five major categorizations or definitions as to why I make the final statement or conclusion.

Item one is chorangiosis, which, in my publications and which I've told you today in discovery deposition, relates to chronic hypoxia.

Number two is chronic intrauterine infection. I couldn't be more specific.

Q. Okay. You couldn't be more specific than using the term fetal disease?

A. Well, I think that, you know, we can be here unnecessarily long, you know. I'm telling that

I've given you five interpretive sections which include hypoxia, which include infection in the first report alone, let alone other things.

Q. Okay. Doctor, maybe the problem we're having here is I'm not really good with your terminology of placental pathologists. And if that's the problem we're having, I want to apologize. Okay?

A. Well, I accept your apology because I think you're a decent guy.

Q. All right. Well, you are too, and I -- sometimes I think I understand what you're talking about, and then five minutes later I find out I didn't. So with that in mind, I apologize.

A. Okay.

Q. Now, is it true that there can be congenital infections that don't cause brain damage?

A. Yes.

Q. Is it true that there can be chronic hypoxia, that is, of not of sufficient severity that it doesn't cause brain damage?

A. It depends -- incidentally, when you use a term, please define. Do you mean infection in the placenta or hypoxia in the placenta, or do you mean it upon the cells of the brain?

Q. Both.

A. Well, clearly, which was the intent of my answer, if the infection is confined to the placenta and if it's not in the brain cells, then you don't have to have brain damage.

Q. Okay.

A. If the hypoxia is severe around the brain cell, then you're going to have a lot of damage.

Q. Okay. So with those definitions of congenital infection and chronic hypoxia, if -- is it true that you can have chronic hypoxia that is not so significant that you can have a normal baby?

A. Yes.

Q. Is it true that you can have congenital infections, the infection being of the type and severity that it can occur without the baby being born with brain damage?

A. In respect of the caveat that I injected, yes.

Q. All right. Is it also true then that one can have abnormal placental findings and not have a baby that has brain damage from the abnormal placental findings?

A. That is absolutely true.

Q. All right. So what we're saying is: The mere fact of finding placental abnormalities does not mean they caused the brain damage?

A. I agree with you 100 percent.

Q. The mere fact of finding evidence that the baby was infected, it doesn't mean it caused brain damage?

A. Now, I am -- for the record -- and I think this is extremely important -- if you are saying in general that it's true, yes. But if you are specifying the specific, highly specific, abnormalities that we are discussing in this case, then it's not true, Because specifically -- and I have to restate so there's no risk of one of your colleagues taking me out of context when they read what I've said -- if you have meconium, if you have nucleated red blood cells, if you have intimal fibrin cushions, if you have avascular villi, if you have chorangiosis specifically, then even independently alone those factors strongly are associated with clinical diagnosis of neonatal asphyxia. And that's why I have given you one of my papers which gives all the data to substantiate my claim.

Q. So generally speaking, a fetus can have an infection, it can have some subsignificant chronic hypoxia and still be born normal, generally speaking?

A. If you would say that the fetal placenta could have that, that would be true.

Q. Okay.

A. But if you have, quote, unquote, infection substantially present in critical organs of the body, as a matter of common sense, that would be unlikely.

Q. All right. All I'm getting at is this fetus -- it's possible for this fetus or any fetus to have infection, to have chronic hypoxia, both of those entities can be of -- be in mild enough form that the baby can be born normal?

A. I think we have to put things in the context of this case.

Q. All right. Well, let me ask that in general principle. Generally speaking, that can be true; correct?

A. If the amount of fetal infection is strongly localized, for example, to the placenta, only then would it be true. But if it has transmitted across into sundry critical fetal organs, that it would be very unlikely.

Q. All right. Now -- but you do recognize that not all infections that a fetus gets causes severe brain damage; agreed?

A. It depends upon the time of acquisition

of those infections.
Q. And the type of infection?
a. Exactly. And that's why I keep on forcing you back to discuss the case in hand.
Q. All I'm getting you to admit is that you may have a type of infection that's mild enough and the germ may be of the type that the babe can have the infection and not suffer brain damage. Agreed?
A. I would agree if it would be organisms other than what obviously would have been present in this case.
Q. All right. Now, would you agree with me that the slides don't tell us the effect the placenta's going -- let me rephrase that. Is it your -- is it your feeling, as a pathologist, that your placenta slides can prove the pediatric neurologist and treating neonatologist's opinions wrong?
A. If you're talking about Dr. Svoboda's opinion --
Q. Yes.
A. -- I believe strongly that my slides prove that he is wrong.
Q. Okay. And now if we're talking about the treating neonatologist's opinions, assuming they are

the same as Dr. Svoboda's, is it your opinion your slides prove them wrong also?

A. If we could assume that they're the same, yes.

Q. All right. Would you agree that, when you look at slides, you cannot tell from your review of the slides if the baby is going to be born with or without perinatal asphyxia?

A. I can tell probabilities, and we've discussed that already. I've told you already that, if you would refer to the data that I've provided to you, that you have a very high probability rather than a marginal probability of being correct just from looking at the center, if you know how to interpret it.

Q. All I'm getting at is you can look at the placenta slides, you may think that the baby has congenital infection, and for all you know the babe may be born without it. That can happen, can it not, sir?

A. No. Because what we're talking about is clinically provable infection. I mean, the fact that somebody has not reported the presence of mycoplasma does not mean that mycoplasma is not present. It just means that they didn't test for it in a good lab.

So what I'm saying is, please understand my need for precision of language here in communication. You know, just because they didn't identify an infection does not deny the existence of the infection.

(Whereupon, an off-the-record discussion was had.)

BY MR. PROCHASKA:

Q. You'll agree with me, Doctor, that, by looking at the slides in this case, you can't tell me what the pH of the baby's going to be?

A. I agree.

Q. You can't tell me if the baby's going to have seizures within 24 hours of birth?

A. I agree.

Q. You can't tell me what the MRI OR CAT scan results are going to show?

A. I agree.

Q. You can't tell me if the baby is going to have brain swelling or not?

A. I agree.

Q. You can't tell me if the baby is going to have a base excess?

A. I agree. I can only give you probabilities as to abnormalities of the spectrum of those rather than the presence or absence of individual items.

Q. You can't tell me if the babe's going to have abnormal EEG's?

A. Exactly.

Q. My point being, Doctor, you can't tell me by looking at the placenta if the baby is going to have all of those signs of perinatal asphyxia, can you?

A. No more or less than whether I can tell that a highly malignant tumor is going to kill somebody in a year or two.

Q. My point being, Doctor, that the baby has to be born and exhibit clinical signs and symptoms and test results before the diagnosis of clinical perinatal asphyxia can be made. Agree with me?

A. Not entirely.

Q. All right. If your placental pathology reports -- when you look at your placental pathology slides, did you expect this baby to be born with perinatal asphyxia?

A. Yes. I've said that repetitiously.

Q. If this baby did not have any signs or symptoms whatsoever of perinatal asphyxia, clinically, then that would prove that your assumptions, based upon the placental pathology slides, would have been wrong, agreed?

A. Yes.

Q. All I'm saying is, the final decision of whether your slides are right or wrong rests upon what we see clinically in the baby, agreed?

A. If you include laboratory results.

Q. All right. Agreed?

A. And if you include the question of who is interpreting the laboratory results.

Q. All right. My point being, Doctor, if this baby, if this newborn, did not have an infection present in its system, clinically or subclinically, then that would be indicative that your interpretation of congenital infection was wrong, agreed?

A. No, absolutely not. I've explained to you already, if they didn't do the test to prove it, they couldn't possibly say that I was wrong.

Q. Let me put it to you this way. If all of the tests that were done or could have been done had showed no infection in this newborn, that would prove your opinion about congenital infections wrong, wouldn't it?

A. If all of the tests that could be done would be done and would be negative, which is a huge hypothesis because there were an enormous number of tests that weren't done, then that would be true.

Q. And all I'm getting at, Doctor, is the only way that we know if your two opinions are right or wrong is to look at the babe, do the proper tests, procedures, clinical exam, and see if it is compatible with your two opinions; correct?

A. Yes.

Q. All right. Now, do you diagnose and treat newborns?

A. I advise neonatologists. In that context, I vicariously or secondarily, in a secondary role, am involved in the prospective management.

Q. In the last ten years, have you ever been the main attending physician treating and diagnosing the newborn?

A. Of course not.

Q. All right. In the last 15 years?

A. Of course not.

Q. In the last 20 years?

A. No.

Q. All right. You are not the expert in taking care of newborns, are you, sir?

A. No. I'm the consultant.

Q. All right. And so we understand each

other, you are not the expert in making a clinical determination of perinatal asphyxia?

A. That's correct,

Q. All right. So if I went down a list of 15 to 20 signs and symptoms and test results of perinatal asphyxia, going down that list, we'd be asking you questions outside your area of expertise, agreed?

A. Not entirely. It depends upon the question.

Q. Well, if we talk about is an irritable baby, a baby with no Moro reflex, a weak grasp, a head lag, poor respiratory effort, no spontaneous respirations, esotropia, metabolic acidosis, seizures within 24 hours, EEG's that are abnormal, depressed baby, a baby with an Apgar of 2, a hypotonic baby, a lethargic baby, a difficult-to-feed baby, poor tone when stimulated, apnea, and poor suck, a lab of 7.6 at one hour, creatinine at 1.7 at one hour.

If I gave you that entire list of signs and symptoms and lab results and asked you about making a diagnosis off of that list, would you agree with me that is something in the expertise of a neonatologist or pediatric neurologist, but not a placental pathologist?

A. Oh, I would disagree. I think that we're dealing, again, with semantics. I will not represent myself, not ever, to be a hands-on expert in the clinical care of the fetus or the newborn babe.

That doesn't mean to say that I'm not knowledgeable, and it doesn't mean to say that neonatologist colleagues do not expect me to be able to have dialogue with them about the final diagnosis based upon my understanding of what all of those things mean.

Q. My question though, Doctor, is: Are you ever the treating physician involved in observing and analyzing all of the signs and symptoms in the lab of that list I just gave you and making the diagnosis as a treating physician?

A. That question has been asked and answered in the context of about five minutes ago.

Q. You recognize that, if you were the one involved in making the diagnosis and treatment, that would be inappropriate for you because you're not trained and experienced in that area; correct, sir?

A. It is correct that my role is to function as a consultant, not as the hands-on person managing the baby.

Q. Would you agree with me that the

neonatologists and the pediatric neurologist who treated this child have more knowledge, expertise, and experience than you in diagnosing and treating problems of the immediate newborn?

A. Yes, which is not an endorsement that they're always going to be correct or else there'd be no role for a pathologist in medicine.

Q. Are you testifying today that the diagnosis of the treating neonatologists and pediatric neurologists are wrong?

A. Well, I don't want to be taken out of context. I'm just saying, if you are claiming that they are denying disease of the fetus prior to the intrapartum period, then I would claim that they are wrong.

Q. Okay. Now, if they are saying the perinatal asphyxia only occurred in the approximate five hours before birth, then you are also saying they are wrong?

A. That's another question honestly that's been asked and answered. You did ask that before.

Q. A little bit different. But you are saying they're wrong on that question also?

A. Absolutely, absolutely.

Q. All right. Now, you are not an expert in treating and diagnosing infections in newborns, are you, sir?

A. I am not.

Q. All right. You are not an expert in looking at MRI's or CAT scans?

A. I am not.

Q. Will you defer to the opinions of the persons who look at the CAT scans and MRI's in this case?

A. Yes.

Q. You are not an expert in OB/GYN?

A. You are correct.

Q. You are not an expert in pediatrics?

A. Honestly, you did ask these questions before, and I answered them before.

Q. Okay. If a pediatrician, who has expertise in diagnosing and treating newborns for congenital infections, opines that this newborn did not have congenital infection as a cause of her brain damage, is it your testimony that their opinion is wrong?

A. Depends upon the expertise of the person. If you're talking somebody like Dr. Charles Alford from Alabama on the subject, of course I'll defer to him. But if you're asking me nine out of ten board certified neonatologists and their knowledge of chronic intrauterine infections, it's on the cards that I would not defer to them. It depends upon their background and their training, whether they were trained specifically in infectious diseases of the fetus and newborn or whether they got their boards in neonatology never having had that highly specialized training.

Q. Let's just assume that the pediatricians and neonatologists and pediatric neurologists are all competent. Okay? If they all say that this newborn did not have congenital infection as a cause of her brain damage, is it your testimony that they are all wrong?

A. Absolutely, yes, for the reasons I just gave you. They can be competent, number one; They can be board certified, number two; they can satisfy standards of care, number three, but be not quite as knowledgeable of the clinical signs and symptoms and laboratory tests of infection as would be a pathologist much of whose research has been done in the area of infections of the fetus and newborn.

Q. Do you recall seeing anywhere in the chart where anyone diagnosed or came to the conclusion that this newborn suffered a congenital infection as the cause of her brain damage?

A. No. I saw that there was an IgM of 26, as I recall; but I don't believe anybody proceeded to interpret what it might mean.

Q. Okay. Do you agree that nowhere in the chart did any treating physician diagnose or opine that chronic hypoxia caused the brain damage?

A. I believe that's true. I can't swear that on the Bible because I -- it's a long time since I read physically the chart. But I believe what you've said is true.

Q. All right. Of all of the treating physicians who failed to make those two diagnoses or opinions anywhere in the chart in the entire history of the life of this child, is it your testimony that all of those treating physicians missed the diagnosis of chronic hypoxia and congenital infection as a cause of the brain damage?

A. Absolutely, yes.

Q. In the last 20 years, have you attended any seminars -- let me rephrase that. You lecture anybody on the treatment and diagnosis of congenital infections in newborns?

A. In a limited sense, yes.

Q. All right. Do you have books on

pediatrics in your office?
A. Oh, I have an enormous number of books.
Q. All right. Do you have books on pediatrics?
A. Yes.
Q. All right. Do you have books on congenital infections?
A. Yes.
Q. Wave you authored any of them?
A. I've authored placental chapters to do with infections.
Q. Okay.
A. And within that, you know, certainly I've had interaction with infectious diseases experts. I have also done collaborative research with the head of infectious diseases section of the National Institutes of Neurologic Diseases and Stroke.
Q. You're a well published individual, book chapters, articles; correct, sir?
A. I think that it's adequate publication. I mean, depends upon compared to what. Compared to Dr. Benirschke, it's minuscule.
Q. Okay. But my question is, sir: Have you written any book chapters or articles on the diagnosis and treatment of congenital infections in newborns?

A. Primarily from the point of view of the use of the placenta. But of course, it interacts with the rest.

Q. Right. I mean specifically directed to the diagnosis and treatment of congenital infections in newborns and in children, have you written any articles or book chapters?

A. Not in general, only specific.

Q. Has anybody ever asked you or requested of you to write those articles in their book?

A. No. I'm usually asked to do things collaboratively.

Q. All right. Would you agree with me, sir, that your area of expertise is clearly not in the field of diagnosing and treating congenital infections in newborns and in children?

A. Well, you know, I think that you're playing with words here. If you are saying that the placenta has no role in their diagnosis, then you're wrong. If you're asking me have I published in the general area of clinical pediatric infections, I have repetitiously said to you that's not my area and of course I've not published on it.

Q. You when you say if I'm asking, Doctor, all you've got to do is listen to my question and you'll know what I'm asking.

MR. PROCHASKA: Please read the question back. See if you can give me a yes answer to that.

(Whereupon, the Court Reporter read back the material requested by counsel.)

THE WITNESS: It's been asked and answered. In other words, I've given you the answer to that question in the preceding answer that I gave you.

BY MR. PROCHASKA:

Q. The answer is you're not such an expert, are you, sir?

A. The answer is that I am not an expert in clinical hands-on management of babes who are suspected of having infection, underlining the word "clinical."

Q. Now, can treating neonatologists and pediatric neurologists make accurate diagnoses of perinatal asphyxia without ever looking at placental pathology slides?

A. Yes.

Q. And they can be accurate in their diagnosis; correct?

A. Yes.

Q. In other words, the treating

neonatologists and pediatric neurologists in this case can make the diagnosis of perinatal asphyxia based upon the clinical signs, symptoms, and lab reports; agreed?

A. Yes.

Q. That's what they do all the time, isn't it?

A. I agree.

Q. When you do your placental pathology reports -- correct me if I'm wrong, Doctor -- but you don't put in your pathology reports, "This babe is going to be born with perinatal asphyxia"? You never make those reports, do you, sir?

A. Not on paper.

Q. All right. You just report the abnormal findings that you see, but you don't predict the diagnosis the babe is going to have and put it in writing and submit it to the hospital chart, do you, sir?

A. Certainly not on paper for obvious reasons.

Q. But you do when you submit those opinions in oral form when you are giving testimony?

A. What I mean clearly is that neonatologists frequently discuss cases with me prospectively. And I will tell them much more orally than I will put down on paper.

Q. Can you diagnose whether or not this child suffered from fetal distress two, three hours before delivery just by looking at your slides?

A. That's been asked and answered already. And I've referred you to the paper that has all of the data that's -- I'll give you an exhibit number if you want.

Q. That's all right. Doctor, I don't think I used the term fetal distress before in this deposition. All I'm trying to get at is, when you looked at the slides in this case, the slides don't tell you if this child, this fetus, had fetal distress as indicated by persistent lates and poor variability, do they? That kind of information is not presented to you just by review of the slides, is it?

A. I think we're playing with semantics again in the sense that -- now, just hold on a second. You asked the question, let me answer it. I've told you already that, when I see meconium, when I see nucleated red blood cells, when I see thrombotic lesions, I use the same degree of probability that the clinicians do. The clinicians can't say that just because an Apgar score is "X" or a pH is "Y" that the baby is necessarily suffering asphyxia. We go by degrees of probability. So I do the same thing as they do.

Q. All I'm getting at, Doctor, is, when you looked at that placental slides, you can't say, "I predict there's going to be persistent late decelerations and poor variability two or three hours before delivery." You can't do that by just looking at the slides, can you, sir?

A. Oh, I can raise question, and I have, in fact, raised question, and sometimes you'd be amazed at the extent to which one can do that.

Q. Did you do it in your reports in these two --

A. I've told you already, yes. I mean, in my opinion -- you've asked this several times -- I've said that the meconium, I've said that the nucleated red cells, they are just as predictive, in my opinion, as whether an Apgar score is less than 4 at one minute or less than 5 at five minutes. They are just as predictive.

Q. All right. Now, Doctor, I'm not trying to get in word games with you.

A. Uh-huh.

Q. But when I ask you a question, I want that question answered, and I don't want some answer to something else.

A. Okay. Okay.

MR. RATNER: I'm going to object to the form of the question and the tone of your voice. You're arguing with the doctor, and he's attempted to give you an answer to every question you've asked, Mr. Prochaska.

BY MR. PROCHASKA:

Q. And I don't mean to be arguing with you, sir. You and me are going to be here forever if we argue and I think I've learned that that gets us nowhere.

But when I say -- when I use the words "repetitive late decelerations with poor variability," that's what I mean. I'm not talking about meconium or some other things. Okay?

So my question to you, sir, is: When you looked at the slides in this case, did they tell you that this child did in fact have repetitive late decelerations with poor variability in an approximate two hours before birth? Yes or no?

A. No. This has been asked and answered already. I looked at these slides without any clinical information.

Q. Now, did you train under Dr. Benirschke?

A. I spent part of my training under Dr. Benirschke, that's true.

Q. Well-respected man?

A. Absolutely.

Q. You got a lot of your knowledge from him?

A. A lot, not all, a lot.

Q. Well, all I'm getting at is he trained you, not you trained him?

A. He would be the first to admit, if you go to the preface of his textbook, that it is a two-way process at this stage in our life, depending upon the area we're talking about. If you're talking about the area of meconium in this case, if you're talking about the area of nucleated red blood cells, it's a shame you didn't ask him the same question. I think he would defer on many of those things to me.

Q. You didn't answer my question.

A. Yes, I did, sir. I said that I have -- implied the greatest respect for him, I said to you that I had a substantial part of my education from him, and I further said that that doesn't mean to say that I have all of my education or that I would defer to him on all issues.

Q. Were you a mentor of his?

A. He was a mentor of mine.

Q. Okay. Thank you.

A. And I'm very proud of that.

Q. And you learned a great deal from him?

A. I did, and I'm very proud of that friendship.

Q. He spent many years teaching you the fine art and fine science of placental pathology?

A. No, that's not true. I spent one year with Dr. Ben rschke. He stimulated me enormously. Ne's been my constant mentor. I have bounced all of my concepts off him, including the meconium of this case, including the nucleated reds, including all of the things that I have published. I have found him an invaluable mentor. But that does not mean to say that he has supplied me the information on all of these topics as opposed to on some of them -- on some of them, vice versa.

a. He's never spent a year with you learning from you?

A. Of course not. He has, by way of the preface to his own book, given the answer to you if you just read the preface.

Q. All right. Now, it's Dr. Altshuler's opinion that -- and maybe I'm wrong. Okay. Let me start again. You've read Dr. Benirschke's deposition; correct?

A. I did.

Q. And I want to read to you page 68 and 69. It's about seven lines. It's the end of his deposition.

MR. RATNER: Why don't you hand us the doctor's copy of it there? Why don't you check those pages and follow along to make sure the question's correct.

THE WITNESS: I have it.

BY MR. PROCHASKA:

Q. All right. Starting at line 24.

A. I have it.

Q. All right. "Question: So if I was to summarize your opinion then, it's that you feel there were -- there was changes to the placenta, but you are unable to say more probable than not whether they caused harm for the baby?

"Answer: Yes. I feel that there are significant changes in the placenta that are abnormal; but if they caused the baby's CNS problems, I don't know."

Okay. First of all, you don't have any criticism of Dr. Benirschke making those answers or that answer?

A. Absolutely no criticism whatsoever.

Q. You recognize that Dr. Benirschke was saying, I find abnormal changes in the placenta, but 1 am not willing to say if those abnormal changes, more probable than not, caused the harm to the baby? You recognize that, do you not, sir?

A. I not only recognize it, but I believe I know exactly why he said that.

Q. All right. Now, what I want to know from you, sir, is, although Dr. Benirschke, your mentor, will not give an opinion as to whether the abnormal changes caused harm to the baby, you, sir, are willing to do that in this case; correct?

A. Absolutely, yes.

Q. All right. Can you tell me why you feel that you have the expertise to voice that opinion whereas Dr. Benirschke doesn't?

A. I could suggest two reasons to you.

Q. Okay.

A. Okay? And you'd have to check with Dr. Benirschke. Number one, that he knew that I had been recruited in this case at the time he gave this deposition; and number two, because, as you will glean from the introduction of his book and from various sections of the book, that in the area of meconium and nucleated red blood cells, although in the book it's not published as such, he has sought my research experience in the formulation of his opinions.

So the bottom line is, let's put things in perspective. He is an intellectual giant for which I am very proud that he is my mentor. His knowledge vastly exceeds mine. But in the precise focus of relationships between placental signs and baby outcome, there are many parts of that focus for which he defers to me, this case probably being an example.

Q. Would you agree that there are many good, well-known, placental pathologists who won't take the extra step and feel it's their expertise to make a connection between the abnormal placental findings and the injured baby?

A. That's a wrong statement because there aren't many placental pathologists who had 20 or more years experience of correlating placental signs with baby outcome, so that I need to be sure you do not misunderstand. Your statement was absolutely wrong.

It's very rare to find people who've had 20 or more years of experience of comparing placental pathology with patient outcome.

Q. **All** right. Would you agree with me though that there are well-known, respected, placental pathologists who don't -- such as Dr. Benirschke, who don't feel it's appropriate for placental pathologists to opine a cause of the harm to the babe based upon their analysis of the slides?

A. You've asked a two pronged question there. I've answered the first part. With Dr. Benirschke, I'm convinced that because he knew that I was recruited in this case --

Q. Uh-huh.

A. -- because he knew that the issues were chorangiosis -- which he assigned me to pursue, incidentally, many years ago, and I did, and therefore that I would, in essence, have more data than he would. He assigned me as the teacher to do this. The same thing with obscure villitis. He assigned me to pursue, and I did that faithfully. Same thing with the meconium. All of which were stimulations from him that I should do and that he knew that I was on the case. That's why Dr. Benirschke didn't pursue it by my belief, but you'd have to verify that with him.

In the matter of the other folks, I am diplomatically trying to convey to you that, in the numerical sense, they don't exist. They're on the fingers of less than one hand. Or you know what I'm trying to say.

Q. Sure. Have you assigned anything for Dr. Benirschke to do per your request?

A. Oh, I've often -- I have often said to him, you know, because of your fame and eminence, you really must jump on so-and-so who has written nonsense in the literature. And he has pursued that, and I would prefer not to name the times that that has happened.

We have a very close relationship. I just want to set the record very clear here. He knows enormously more than I do, always will, but that doesn't mean to say that it's not a two-way street in terms of assignment of what ethical and moral and other responsibilities are.

Q. When you --

A. Incidentally, I will share this with him, this deposition.

Q. When you, say, this year and next year, when you make your pathology report based on your interpretation of slides at the hospital at which you work, do you routinely put under the diagnosis your expectation of whether you predict or expect a bad outcome?

A. I do not.

Q. Do you know of any placental pathologists that do?

A. I do not,

Q. Do you know of any that are trained to do that?

A. I do not.

Q. Do you teach any of your residents to do that?

A. I would never do that because this is something that's not done, I believe, by any pathologist in any subspecialty of the discipline.

Q. Now, you've talked about congenital infection, chronic hypoxia as a cause of the bad outcome. Let me take the congenital infection as the topic for a moment. Okay? Can you name for me the specific bug or bacteria or virus that you opine caused the congenital infection in Katie Hoyt?

A. No. I think, in terms of what is popular in the '80s and the '90s, that you would have to have an obligation to raise question of cytomegalovirus. But that's done more so because of what is known in the '80s and the '90s rather than what one really believes.

Q. Is it your opinion that, although you can't name the specific bug or virus, it is your opinion that the most likely cause of injury due to congenital infection would be CMV?

A. Absolutely, yes, in terms of common things are common, and that's what we have to go by in the state of our knowledge in the 1980s and '90s.

Q. So as I understand Dr. Altshuler's opinion today as at the time of this deposition, it is your feeling that, although you don't know which bacteria or virus did cause harm to Katie Hoyt, based on probabilities, it's most likely CMV?

A. That would be the one that I would urge my virologist colleague to investigate. That doesn't mean to say that -- that I'm convinced that it has to be CMV, period. It means that that's the one that is up front to be ruled out.

Q. As a matter of fact, Marge -- excuse me -- Maggie Roberts asked you to investigate that, did she not, sir, when she gave you the list of questions?

A. I'm sure she would have asked me that.

Q. Mr. Ratner asked you that in his letter?

A. I'm sure he would have asked me that.

Q. And as a matter of fact, Dr. Benirschke even commented on CMV in his expert report, didn't he, sir?

A. Yeah. I mean, I think that's something that you have to think about. That doesn't mean to say that that's the absolute diagnosis.

Q. And when I read page one of Dr. Benirschke's report at the bottom, he says, "The diagnosis of all of these findings suggests a chronic fetal infection much most likely in such circumstances as is fetal cytomegalovirus infection.

A. Yeah. He means implicitly in terms of what rganisms we know today that could do it. In other words, he means that it's not likely to be toxoplasmosis or rubella or herpes or syphilis; and therefore, that's what he's doing there.

Q. Okay. So what I'm getting at, sir, is both you and Dr. Benirschke are in agreement that, although you don't know which virus or which bug, you both think the most likely one would be CMV?

A. No. I think what he is saying -- in fact, we know one another so well that it's a safe presumption. What he stated verbatim in his deposition was that many viruses can do this. And you know that he said that in his deposition.

But what he also said in his deposition and in that letter is that, quote, unquote, the most likely one, meaning of the ones with which we deal daily for which we have tests that we can do and all the rest, which would be the most likely, then it would be CMV. In other words, it wouldn't toxo, it wouldn't rubella, it would be the others.

Q. Okay. I want to talk to you just about his expert report, not his deposition. Okay? Listen to me carefully. Would you agree that just from what I read you off of Dr. Benirschke's report, just based on that, and what you've said here today, it is Dr. Altshuler's and Dr. Benirschke's expert report opinion that both you and he feel the most likely virus to have done the harm to Katie Hoyt would be CMV?

A. No. There's a word missing there which, in terms of intent, has to be said because that's what judges and juries are interested in. The most likely known one, in other words, the ones with which we deal every day --

Q. Uh-huh.

A. -- that would be the one, the most likely known one.

Q. Okay.

A. And he also is not ruling out adenoviruses and interoviruses and a whole host of other viruses.

Q. Now, even though Maggie Roberts and Mr.

Ratner asked you about CMV, nowhere in your expert reports, plural, do you rule it in or rule it out, do you, sir?

A. I would never do that. All I can tell you is what I've just said, that I would say to a virologist and to a neonatologist -- and incidentally, I do this prospectively, constantly, daily, prospectively -- you really need to look for, you know, CMV when I see things like this.

Q. Okay. You looked for CMV in this case, didn't you?

A. I sure did.

Q. Did you report anywhere in your reports where you found it?

A. No. I believe 1 emphasized in my report that one doesn't see it in any more than 25 percent of cases anyway. I made that very point in my report.

Q. Nowhere in your report did you say you opine that GMV is the virus that caused the harm to Katie Hoyt, did you, sir?

A. No, because, if you think about it, what I did in my report was come down the line strongly as to what I felt was definite. What I'm saying is that I am absolutely prepared to believe that it was CMV or a virus closely related to cytomegalovirus. That's what I think is the most likely common sense in a terms of a jury probable thing.

Q. Okay.

A. But I would never say that this babe definitely necessarily had CMV.

Q. Mow, when you said --

MR. RATNER: Off the record just a second.

(Whereupon, an off-the-record discussion was had.)

(Whereupon, a short recess in the proceedings was had.)

BY MR. PROCHASKA:

Q. You had mentioned it's probable CMV or a virus similar. Are you able to give me the name of the similar such virus?

A. No.

Q. Okay. Mow, let me talk to you about CMV. Do you profess to be an expert in diagnosing CMV?

A. I profess to having more than -- more than an average amount of knowledge. I'm certainly not a virologist, and I made that crystal clear. I am not in the category of people like Alford and so forth.

Q. All right. Now, when you completed your first and second expert report, you felt CMV or similar virus was the one most responsible for the congenital infection that contributed to the brain damage. Fair summary?

A. Yes.

Q. When you got the clinical chart, would you agree with me that nowhere in there does it give confirmatory evidence of that CMV or other bug in the opinions of any of the doctors as causing brain damage?

A. I disagree because that's exactly what I was talking about earlier. It's kind of like the rubella story. Many doctors were brought up in the tradition that CMV would have what you enunciated, and I know exactly what you're talking about. It was down there, hepatosplenomegaly, purpura, all these other things, you know. That was the old teaching in the textbooks.

It's now very, very well known that there is enormous population of fetuses who suffer infection in their body from CMV who do not manifest any of those things. Same as with the rubella story, et cetera. So that is exactly why I am not going to defer to those particular clinicians.

Q. What you're saying is, in the last ten years, we've learned more. The guys back in 1982, the treating physicians may have missed it?

A. Absolutely, yes, because they were subordinate to what was published at that time, and now we know a lot more.

Q. All right. In 1982 at least, we can agree, the treating doctors did not make a finding or express a diagnosis that this newborn had CMV?

A. That's right, and I've given you the probable reason.

Q. All right. Now, back in 1992, are you able to point to me what evidence in 1992 that you see today tells us that CMV is probably the infection that caused the brain damage?

A. Well, recognizing that the horse is already out of the stable and it's too late to do antibody studies of many varieties -- and Dr. Benirschke had mentioned that in his deposition -- you could say that, based upon the fact that CMV is very, very common -- okay? -- that would be an important reason even in '90, '92 to justify its probability.

There was an elevated IgM. The absence, the absence of an elevated IgM does not rule out CMV or other viruses, but absolutely the presence of an elevated IgM would make one even more suspicious of

CMV. There's really not much more to tell you other than that, by my opinion, there was disproportionate size between the head and the length of this babe.

I think that that would be consistent with, absolutely not diagnostic of, but it would be consistent with the concept of a viremic fetus who additionally was hypoxic and not thriving. And the very fact that we now know that, with CMV, you don't have to have calcifications in the brain, you can have brain damage in the absence of calcification with CMV.

Q. Okay. Mow, have you -- do you know Bradley Schaefer?

A. I certainly do.

Q. Okay. You've known him from your experience here at Oklahoma City?

A. That's correct.

Q. competent geneticist?

A. In my opinion, he's competent.

Q. I'm sure that he consulted on many cases you consulted on?

A. Over the years, I believe he did.

Q. You always found him to be experienced, knowledgeable, and professional?

A. Yes.

Q. Never found him to be incompetent?

A. I have never found him to be in any way incompetent.

Q. Do you respect him as a geneticist?

A. Within my limitations. I mean, I can't really judge geneticists because I'm not an authority on genetics; but my impression is that he is a very capable person, ethical person, and a fine decent person.

Q. You have nothing negative to say here and now about him in terms of his competence as a geneticist?

A. Absolutely nothing, having qualified my statement by saying that I am not a qualified geneticist to judge him.

Q. Well, at least we've got one specialty you're not an expert in.

A. And I will be delighted to emphasize that.

a. Okay. Now, has Mr. Ratner ever told you that he has ruled out CMV?

A. I believe I had a letter that I read of Bradley Schaefer. I think I --

Q. That's what I was looking -- would that be his expert report?

A. Probably. Didn't you put in it in with the exhibits?

Q. Well, I thought I did. Look again.

A. Unless it got mixed up in mine.

Q. Yeah, I think you -- I know I provided that to you.

Q. Yeah, that's right. I just put it on the record. We didn't mark it as an exhibit.

A. Yeah, I mean -- and there was also from Schiffrin, remember?

Q. Yeah, that's okay.

A. Here's Richard Paul, here is Bascom Anthony, here is Barry Schiffrin. And I suspect that Brad's letter is in here. Here is Benirschke's, here is Alan Hill --

MR. RATNER: Do you want him to find Dr. Schiffrin's report?

MR. PROCHASKA: (Counsel nodded head affirmatively.)

MR. RATNER: Yeah, he does.

THE WITNESS: Huh?

MR. RATNER: Go ahead and look for it.

BY MR. PROCHASKA:

Q. Well, at any rate, Doctor, you recall seeing his report?

A. I was aware that Brad had issued a

report.

Q. All right. Now, if I was to tell you his report suggests CMV and does not comment that he ruled it out, would you accept that from your recollection?

A. I beg your pardon? I'm sorry.

Q. If I were to tell you that the report suggests CMV but he didn't rule it out till his deposition, would that be acceptable with your understanding of his report?

A. Yeah. I think we're talking the same thing. We're talking about degrees of probability, et cetera.

Q. Now, is ruling in or ruling out the diagnosis of CMV more in the expertise of Bradley Schaefer than Geoffrey Altshuler?

A. Oh, it's much more in my expertise.

Q. Okay. Because?

A. I'd say for several reasons. Because number one, I've done a substantial amount of research on infectious diseases of the newborn.

Q. Uh-huh.

A. But in the clinical sense and in experimental sense, because I have interacted with clinicians and research scientists who are preeminent in that field, and he's never had the benefit of that, what you would call mentorship, and because, as a geneticist, the bulk of his consultations to which he responds is not in the matter of is this a case of congenital cytomegalovirus infection, whereas with me it is.

I get people who say to me, "This babe has one, two, three, and four. From your opinion of the placenta and the rest of the clinical results that we'll give you, to what extent do you think it is or it isn't?"

Q. Does anybody ask you, as a placental pathologist, to evaluate the results of TORCH titers, have those tests done, examine the child, and give an opinion as a consult based on the TORCH titers and your examination of the child whether or not the child had CMV?

a. Well, it's implicit from what I've said already, constantly. Every time I get a so-called small for gestational age babe, that issue looms forth.

Q. All right. Listen to me carefully. Do you get requested as a consult to come and examine the child patient and as a part of that exam to conduct TORCH testing and other laboratory work to rule in or rule out and express your opinion as to whether that child, based on your exam of the child and the TORCH titers, has CMV?

A. No.

Q. Have you ever had anyone consult you for that purpose in the last 20 years?

A. Oh, I've had -- several times people encourage me to come and look at the babe that we've discussed, but that's not the way somebody consults me.

The way people consult me is that they tell me that they want me to look at the placenta, I give them an opinion, then they give me the detailed story, and then we match up degrees of probability. And obviously, the bottom line comes from the virologist because he's the person who has the final say.

Q. I think you said it better than I, which is that, when you're consulted, you're consulted and requested to look at the placenta for evidence of CMV; correct, sir?

A. No, sir, because my whole point is that they also want to know from me that, if in my opinion it's not going to be CMV, independently of what the virologist says, what else might they be missing.

Q. All right. At any rate, we agreed that, in the last 20 years, you have never had a treating physician consult with you on their patient specifically to just examine the patient and conduct TORCH testing and express an opinion as to whether or not they have suffered from CMV based on --

A. That's taking things totally out of context because, number one -- number one, all of the primary physicians do those tests themselves and then they call a consultant.

Q. All right.

A. And what I'm saying is, what they end up doing is they will call -- they will call me to look at the placenta, they will call a pediatric infectious diseases expert to see the child once they've done those tests, to have those results.

Q. Please answer the question again and we'll get onto something else.

A. Okay.

Q. You've got to give me a yes or no answer to my question.

MR. RATNER: No, that isn't correct, Doctor. You don't have to give a yes or no. If you can answer it yes or no, it might move us along faster; but if you need to explain the answer, you've got every right to explain your answer.

THE WITNESS: Let me just say yes so we can move along.

BY MR. PROCHASKA:

Q. Okay. Is it your testimony and opinion that Bradley Schaefer is wrong in ruling out CMV?

A. I don't remember the context in which he spoke. But if he is saying that this is absolutely definitely incontrovertibly not CMV, I would disagree with Brad.

Q. All right. Now, let me put it in this context. I want you to assume that Bradley Schaefer, before he even did the TORCH testing, felt that this child did not have injury from CMV. First of all, if that is his feeling before he even did the TORCH testing, do you accept that as a reasonable opinion for him to have?

A. Now wait a minute. Are you saying he did not think it was CMV then?

Q. Re did not think it was CMV before he did the TORCH testing. Would you think that is a reasonable opinion for him to have, that he felt this child did not have harm from CMV without even having to do TORCH testing?

A. I would agree with that because I've explained that already. Brad is not an infectious diseases expert. In fact, that's not his area.

Q. All right. If he did TORCH testing and that only reaffirmed his prior feeling that this child did not have CMV as the cause of her injury, would you feel that that is a reasonable opinion for him to have?

A. No. I would need to know the details. You know, I would need to know, did he send this off to Chuck Alford down in Alabama? Did Chuck do something and tell him that, Brad, this is not CMV. I've said that Brad is highly competent, but I never have implied that he is an expert in infectious diseases.

Q. All right. Now, is it -- okay. Now, when did Mr. Ratner, if ever, tell you that Bradley Schaefer ruled out CMV as the cause of this child's injuries?

A. I don't recall. You know, to be honest, I have had such an enormous amount of clinical stuff in this case that I can't remember, you know, every little facet thereof.

Q. Would it be fair to say that he may have never told you that Bradley Schaefer ruled out CMV?

A. I doubt it. I have been inundated with so much from the office of Mr. Ratner via Ms. Roberts, who is just, you know, telling me all the time, you know, what people said and then she had it with you, here it is, you know. I can't possibly remember honestly. I'm just not that good. I can't remember.

Q. Maggie Roberts calls you frequently and tells you what's the testimony of all of deponents?

A. She basically has kept me apprised as to whether anybody has radically disagreed with me or not, and then I've shown you she's given me letters of Schiffrin and Hill and so forth.

a. Okay. But you don't recall either her or Mr. Ratner specifically calling you and telling you that Bradley Schaefer specifically disagrees with you that CMV is in fact ruled out as a cause of the child's injury?

A. I really don't recall. I'm not denying it. I'm just saying that, you know, I'm so boggled up with all this information, I have it out of -- you know.

Q. All right. Now, would you agree with me that a vigorous and well-nourished baby is the best proof of good placental function?

A. Oh, absolutely not. I've seen babes who look well-nourished who've even, according to a parent, smile; and I've seen them at autopsy because of deaths for other reason and found that they have had almost no brain cortex whatsoever. So the alleged state of nourishment or whether the babe allegedly smiled in no way, you know, impresses me as being status of the babe.

Q. Now, you have concluded that -- I have some trouble with the terminology here, so I had to write it down here. Okay? Let me start again. You've concluded there is pathological changes within the placenta, agreed?

A. Yes.

Q. That caused harm?

A. Yes.

a. Would you agree that, to conclude pathological changes within the placenta caused harm that -- let me rephrase that. Would you agree that, to conclude pathologic changes within the placenta caused harm, you would have to have support from clinical history to have that conclusion?

A. That's been asked and answered, you know. I really said to you on more than one occasion, before I give a final diagnosis, I want to have the clinical facts including the laboratory data. And when I say "clinical facts," I don't mean subjective, interpretive things alone. I mean objective data, things like what's the weight, what's the size, what's the head circumference, what's the hemoglobin, what's the rest, et cetera,

Q. Well --

A. I've said that already. It's been asked and answered probably three times. I've also said -- I've also said that clinical guidelines of asphyxia are not absolute, and people can argue for ages about what is a diagnosis of asphyxia. And so it becomes a matter of probabilities and what is the most reasonable thing.

And in that context, I've said that, given the presence of meconium, nucleated red blood cells, and I've answered this repetitiously, I'm probably just as reasonable to say that this is the picture of neonatal asphyxia as the person who goes by the Apgar score at one and five minutes and so forth.

Q. Well, I don't mean to be argumentative. I think we've talked about it. I'm quite confident I've never asked the question that way. Let me ask it a different way and throw in something new.

To conclude pathologic changes within the placenta caused harm, would you have to have strong support from the clinical history, such as a small head or signs of symmetrical or asymmetrical fetal growth retardation? In other words, I'm throwing in the examples of small head and fetal growth, retardation. Would you have to have something like that in the clinical history before you could conclude pathologic changes within the placenta caused the harm?

A. I'd have to have some target abnormalities. Now, you inserted the word "strong." You see, that's why we have to be careful about gamesmanship.

Q. I'll take it out. I'm take it out.

A. Yeah, yeah. Why don't you repeat the question.

Q. Okay. I'm sorry. That's a word game I didn't mean to play on you.

A. Okay.

Q. To conclude pathologic changes within the placenta caused harm, would you have to have support from the clinical history such as a small head or signs of symmetrical or asymmetrical field growth retardation?

A. Absolutely not.

Q. Okay.

A. I mean, there are a bunch of other things that you seem to have left out that I don't understand why you left it out.

Q. All right. Now, would you agree that, in this case -- and you've looked at the depositions, you've looked at the chart, you've noticed how the chart says fetal distress; correct?

A. (Witness nodded head affirmatively.)

Q. Okay. Would you agree that the clinical pathologic facts on the chart establish a failure to deliver a distressed fetus caused the injury?

A. No, I don't agree with that. You've basically asked me that question before, and I don't agree with that.

Q. Would you agree we have no chorionic micro abscesses in this as a significant finding?

A. Yes.

Q. Would you agree you have no triple vessel vasculitis of the umbilical cord as a significant abnormal finding by yourself?

A. Yes.

Q. Would you agree you need both before you can suggest that the baby is likely to have suffered from infection?

A. No. You're clearly talking about a univaried analysis investigation that a pathology fellow did with me. I'll tell you exactly what you're referring to. Many years ago --

a. That's what I'm referring to.

A. No, come on, sir. Let's not take things out of context. Those were two things that were published out of my unit by a pathology fellow and a neonatologist. And the first author, as I recall, was Bill Keenan, who was the neonatologist. And all that that said was that, on a univaried analysis, that what you've just named, chorionic abscesses and triple vessel vasculitis, in our opinion, very meaningfully were associated with what was separately diagnosed by commissions as neonatal sepsis. That's all that that said.

Q. For the record, Doc, I've got lots of notes here. I have no idea where that came from. But I don't think it was what you said.

A. Well, let me suggest to you --

Q. I think you're suggesting more literature research to me than I did.

A. Let me suggest to you that somebody who spoke to you had read one of my articles or that -- because that is -- I followed the literature for many years in terms of correlations between placental signs, and that particular little cameo there is vintage what Altshuler had done many years ago in

Cincinnati.

Q. See, you've been real particular about your answers because you think I've done all this research on you.

A. I suspect you've spoken to people who've done research for you if you yourself have not done it directly.

Q. Well, apparently you think I'm perhaps more competent than I am.

A. I think your extremely competent.

Q. Well, we'll find out. These guys never treat me like that. All right.

Do you, Dr. Altshuler, have to have a clinical manifestation and lab results of infection before you can -- I'm reading this bad. Is it your opinion that clinical manifestations and lab results of infection are needed to establish a diagnosis of infection in the newborn?

A. It is my opinion that an enormous number of things are done -- are needed, including the placenta, because it is very difficult to diagnose neonatal sepsis many times.

Q. All right. Now, when you say that, I'm assuming you mean then your answer is, yes, you do need clinical manifestations of infection, lab results indicative of it, in addition to placental findings before you can establish a diagnosis of infection in a newborn?

A. That's my opinion.

Q. All right. Now, that puzzles me because -- well, I guess my follow-up question is: Is it your opinion that we do have clinical manifestations and lab results and placental findings, all three, of infection in this case?

A. We have, in my opinion, findings of infection. I do not equate that with sepsis.

Q. Would you agree vasoconstriction of the placenta from meconium is only a potential means of neonatal brain damage?

A. I would agree.

Q. Would you agree -- I haven't asked this -- would you agree the chart discloses, quote, an intrapartum asphyxial crisis, end of quote, as indicative of a failure to deliver a distressed fetus causing brain injury in this case?

A. I'm prepared to believe that that's true. I mean, that the allegation is true, not that the fact is true.

Q. Okay. In other words, you're saying the chart says that, but you think the chart is wrong in its observation?

A. No, what I said verbatim was that I am prepared to believe that an allegation to that effect is present in the chart, but I do not agree that this in fact had occurred.

Q. Okay. Now, I want to talk to you -- I think we've talked about some of your findings. I want to talk to you about what may not be in your report. Okay?

Is it correct that you have not reported as a significant finding avascular villi with hemosiderin? You can look at this if you want.

A. No. As a matter of fact, I don't believe that emphasizing that these hematoxylin and eosin slides, they were not iron-stained slides, I don't believe that I was able to appreciate hemosiderin in this particular case. I don't believe I took a photograph of it, and I don't believe that I described it. But I'd have to reread my report, and I would stand by my report.

Q. All right. And you know your report better than I do?

A. Yeah.

Q. When I read it, I don't find anywhere that you say, you know, I note avascular villi with hemosiderin.

A. Right.

Q. I think that's missing. Would you agree with that?

A. I am absolutely ready to believe that. I think that's very likely.

Q. Okay.

A. I think that's very likely.

Q. All right. There -- you have found in no recognizable virus inclusions in your report?

A. That's absolutely true.

Q. All right. If you don't find avascular villi with hemosiderin and if you do not find recognizable virus inclusions, is it therefore in your opinion unlikely that Katie Hoyt suffered chronic intrauterine infection?

A. Let me be sure I understand you and ask that question again, would you?

MR. RATNER: Do you want to read it back?

THE WITNESS: Yeah. You want to read it back?

(Whereupon, the Court Reporter read back the material requested by counsel.)

THE WITNESS: Now I think I understand the question and let me answer it this way. That in the last five years or so, particularly in the last two to three years, I've learned a lot more about cytomegalovirus from our virologist. And the way I learn it is by comparing what I *see* in the placenta and what the virologist finds.

And I have come to learn that the absence of the hemosiderin in the avascular villi in no way contradicts the clinical consideration of cytomegalovirus infection. Have I explained that clearly? In other words -- let me answer it another way.

In the old ways -- in the old days when they used to publish and present at meetings --

Q. Uh-huh.

A. -- was that, if you had avascular villi and hemosiderin in those villi, that you should be extremely suspicious of cytomegalovirus even if you do not see the virus. Okay?

What I have come to the learn in the last two to three years is that there are cases of clinically overt cytomegalovirus infection who's placentas do not have intravillus hemosiderin. Does that fully answer the question? Maybe when you read the transcript you'll follow it.

Q. Probably not.

Okay. In other words, if you have -- in other words, if you have no recognizable virus inclusions and if you have no avascular villi, it doesn't matter whether there's hemosiderin or not. It's your opinion the patient is -- can still have suffered a chronic intrauterine infection?

A. Yes. I think what I'm saying is that --

Q. You don't have to have the hemosiderin?

A. That's right. But what I'm saying is that, if you have a villitis, it remains villitis of unknown etiology until you can prove the cause. Now, if you see the virus in the placenta, all that you know is that the virus is in the placenta.

Q. Okay.

A. Okay?

Q. Now, let me talk to you about chronic villitis for a moment. Is there some school of thought out there that thinks that chronic villitis has minimal clinical significance? Or studies or literature?

A. Well, there has to be when you're talking about what is possible, probable, and all the rest. Obviously there are many people who have never done -- who have never done seven-year follow-up studies who off the top of their head will say the babes appear normal and therefore villitis is unimportant.

I am convinced that this would be a true statement, that such people would exist. But if you would talk about what is prevalent in the literature --

a. Uh-huh.

A. -- not just from the doyen, namely, Benirschke, I think that people may disagree as to what causes it, what causes villitis; but I believe there is a consensus that there is a very meaningfully increased risk of a bad outcome in the associated fetus and newborn and growing child.

a. You recognize there might be in the literature from one of those few highly qualified placental pathologists a school of thought that chronic villitis has minimal clinical significance?

A. Of course. I mean, I've said that. Absolutely.

Q. You just disagree?

A. Yeah, because, I mean, again, we have to put it in context. The question is: Have those people data to back up their statement? And anytime that that sort of statement is made, I'd like to know what their data is.

Now, excuse me. In terms of context, if

you're saying and if they're saying that the associated newborn does not manifest it in the newborn period, I would agree. You see what I'm getting at?

Q. Dr. Benirschke used the term villitis of unknown etiology. Would you agree that that is an acceptable term to use in this case, that we have villitis of unknown etiology?

A. Well, short of sounding obnoxious, that's my term. I wrote the -- Dr. Benirschke gave me a mandate that I really should go out there and study these obscure villitises, and the term villitis of unknown etiology originated from my pen in 1975 when I wrote the monograph on it.

Q. Do we have chronic villitis of unknown etiology in this case?

A. Yes.

Q. All right. Is villitis of unknown etiology often present in placentas unassociated with symptomatic disease in newborns?

A. Yes.

Q. Meaning you can have chronic villitis and have a healthy baby?

A. And have an apparently healthy baby.

Q. Okay. Now, do you know of any particular published studies that have drawn a conclusion from the research that the author did that chronic villitis does in fact cause brain damage in newborns?

A. There's only one study that I know of which was not designed by the kind of epidemiologist who graciously assisted the investigation that I made. In other words, there's one study that I think was primarily in abstract form rather than in detailed publication in the area of what you're addressing now. But for all practical purpose, there has never been a proper epidemiological study of villitis of unknown etiology, ever.

Q. All right. So all I'm getting at then is that, for you to make a connection between chronic villitis and the brain damage in Katie Hoyt, you don't have a peer review reported research study to support you. What you really have is your knowledge and experience and training?

A. In part. I mean, I have published, for example, more than once the 25 percent, for example, of babes who have chronic villitis of unknown etiology have symmetrical, symmetrical, growth retardation. Now, for example -- all right, okay.

Q. Now, did you get Dr. Christman's records at all in this case?

A. You know, I honestly don't remember. I have discarded an enormous amount of records, no disrespect to Maggie. But she gave me an enormous amount, and I abstracted it and extracted it and have discarded a lot of it.

Q. Okay. Would you agree there was nothing that you saw or recollect in mother's records that is indicative of an agent she had that is capable of producing perinatal brain damage? And by "agent," I mean a viral agent or bacterial agent.

A. That's not true. I vividly recall, you know, and in fact when I reviewed the deposition, this mother indeed had at least a couple of episodes of, quote, unquote, viral-like illnesses, one being very much early in the pregnancy, and one being more remote in the pregnancy.

Q. All right. Now --

A. Both of which would have been consistent with a viral infection.

Q. All right. Let me ask it this way then. Was mom's virus indicative of an agent capable of producing the perinatal brain damage in Katie Hoyt?

A. Absolutely, yes. Absolutely.

Q. Now, when you say mom's virus was indicative of it, can you tell me what about that virus that you saw in the chart indicated to you it could cause the brain damage?

A. Well, let me be very specific. Coronavirus, c-o-r-o-n-a-v-i-r-u-s, replicates -- you know, spell it? -- r-e-p-l-i-c-a-t-e-s -- replicates in placental tissue, okay? It's endemic in the community. It's not dependent upon epidemics. You cannot culture that virus.

I wrote the first paper that shows that it is highly destructive of gastroenteritis in tissue that pathologists would look at. I am absolutely prepared to believe that that virus that replicates in the respiratory tract could do this. It doesn't have to be cytomegalovirus. It could be adenoviruses, it could be many others that attack the respiratory tract and attack other tissues.

And as I say, I recall vividly there are at least two episodes that this lady had that would consistent with, for example, you know, as one example, of the coronavirus.

Q. All right.

A. And we are ignorant -- I am totally ignorant about what coronavirus does in human transplacental transmission.

Q. Okay. If I understand you right, what you're saying is: The virus mom had could have caused the brain damage, number one?

A. Absolutely.

Q. Number two, you don't know what virus she had more probable than not? You've said many times throughout this deposition?

A. True.

Q. And you don't see anywhere in mom's chart or in baby's chart any evidence that allows you to say more probable than not what virus mom had that caused the perinatal brain damage?

A. No, not what virus. I see the IgM means there was some foreign infection, but it doesn't tell me specifically what virus.

Q. Okay. So my point being, after all of the records you've looked through, you are unable to express an opinion more probable than not on the name of the virus or identify the virus mom had that she gave the baby that caused the brain damage?

A. True.

Q. All right. And you also agree with me that, since some viruses can cause it and some can't, the critical question is: Did mom have the right virus or not that can cause this brain damage? Agreed?

A. True.

Q. And you're just opining that she does?

A. True.

Q. And you're opining that she does even though yourself or no treating doctor in the ten-year history of this child has ever either uncovered such a virus or suggested the name of that virus?

A. Oh, my experience demands that I have that attitude because it's only been in the last five to ten years that Chlamydia and mycoplasma and other agents -- I have given you an example that we need to investigate coronavirus, €or example. The IgM was up. It's crystal clear there was an infectious-like agent there.

Q. All right.

A. So the fact that I don't know the name of it is irrelevant.

Q. Okay. You'll agree with me that there are innumerable cold viruses, flu viruses, or stomach viruses that mom could have that would not account for the brain damage?

A. No, I don't agree that. I think that we're ignorant of that. There has been a crying need to pursue the extent to which respiratory viruses -- I gave you one example that can't even be cultured, that can only be diagnosed, you know, under an electromicroscope, for example.

Q. Well, you're not prepared to say that more probable than not every cold virus or every flu virus in your opinion causes brain damage?

A. No. I'm merely saying that, if you have an IgM of 26 in a babe whose placenta has chronic villitis of unknown etiology, that it's probable, very, very probable indeed, but it's a causation, proximate cause effect.

Q. All right. What I'm getting at is, you will admit that there are many cold viruses and many flu viruses that mom can have that will not cause brain damage to Katie?

A. I agree.

Q. Do you have anything in the chart, just in looking at mom's records -- well, let me rephrase that. Do you have anything in any of the medical records that enables you to demonstrate that mom did not have a harmless cold or flu virus but in fact did have a virus that caused brain damage? Anything in the chart that is demonstrative of proving that fact?

A. That's a sort of double negative question, and I'd appreciate if you'd ask the question another way.

Q. Okay. All I'm saying is: Is there any evidence in the chart that proves to you mom didn't have a harmless cold or flu virus, but in fact mom did have a virus that causes brain damage to Katie?

A. I believe it's been asked and answered in a different sense. What I said three minutes ago is that, in my opinion, the combination of that villitis, even throwing in the plasma cells that Dr. Benirschke mentioned, with an IgM of 26 --

Q. Okay.

A. -- is a meaningful, damag ng virus upon the brain until proven otherwise.

Q. Okay. I'd like to talk to you about nucleated red blood cells for a moment. You cannot provide precise time sequence for when the appearance of nucleated red blood cells within the fetal placental vessels of Katie began?

A. No. I can tell you, from my empirical knowledge, that it's at least 24 hours prior to delivery; and I can tell you that, in the March issue, I believe it was, of the American Journal of Physiology that the first author was Georgieff, G-e-o-r-g-i-e-f-f, and one of the major co-authors was Dr. Widness, W-i-d-n-e-s-s, did extensive studies in fetal sheep from which data I believe it is reasonable to conclude that it takes at least three days of hypoxia in the fetal sheep before there would be a significant outpouring of immature red cells. And I believe that the fetal sheep is an excellent model of what happens in the human.

Q. You found 11 nucleated red blood cells per 100 whites?

A. That was in a report that 1 calculated out. And I think in fact it was already calculated out.

Q. Would you agree with me at all that is not an extreme or even a moderate elevation of nucleated red blood cells, but it would be just slightly out of the normal range?

A. I would disagree in the sense that it relates to when the test was done and what was given in the interim.

Q. Right.

A. And also I would emphasize to you as an extremely important factor here, which needs to be put into the equation, we're not talking an absolute 11 as opposed to 7 or 6. We're talking about per 100 white cells.

Q. Uh-huh.

A. And in this particular case, the absolute white cell count was extremely high, which means that the absolute number of immature red cells was far higher than the number of 11 would betray, if we use that b-e-t-r-a-y.

Q. Now, you see that nowhere in the chart did any of the treating doctors explain why we have the elevated nucleated red blood cells?

A. That's right. Elevated nucleated red blood cells were introduced in the literature in 1875, and they've been lost --.

Q. I don't need all that.

A. -- and they've been lost.

Q. Okay. All I want to ask is: Would you agree that treating doctors in the Katie Hoyt case should not be expected to rule out every facet of the -- of atypical events?

A. Are you saying that they should not be expected to rule out --

Q. They have to rule out every facet of atypical events to explain what caused the perinatal asphyxia?

A. Well, of course they do. Are you saying to me do I believe that physicians have an obligation to look for all kinds of abnormalities? Because if that's what you're saying, I would tell you emphatically of course they have an obligation to pursue all sorts of abnormalities if they want the truth.

Q. I guess what I'm getting at is, if the treating physicians think that the perinatal asphyxia was recent and you think it's chronic, then they have to explain why we have elevated nucleated red blood cells, agreed?

A. Yes.

Q. All right. And my question to you is: Do you recognize that treating doctors should not be expected to rule out every facet of an atypical event in making their diagnosis?

A. Are we talking standards of care here?

Q. No, no, no. I'm just saying they can have a diagnosis of perinatal asphyxia being recent even though they can't explain why the nucleated red blood cells are elevated. And the reason that they can have that diagnosis in the face of unexplained elevated nucleated blood cells is because you, Dr. Altshuler, don't expect treating doctors to have to rule out every facet of an atypical event before they reach a reasonable diagnosis. Is that true or false?

A. The answer to the question is that a half truth is a whole lie. I mean, just because they say that there were acute problems does not deny the truth being that there were many more serious problems that were there far more long-standing.

Q. Okay.

A. That in my opinion were far more important to the outcome of this tragedy than they appreciated at the time. I'm not criticizing them. This was many years ago. Even in 1992, most expert neonatologists are not aware of the importance of nucleated red blood cells.

Q. So if I understand what you're saying, whereas their diagnosis in recent perinatal asphyxia, you're saying they should have diagnosed chronic, long-standing perinatal asphyxia?

A. Not at all. What I'm saying is that in 1982, and we went right through things like what are the traditional signs of cytomegalovirus, and you named them very elegantly. Okay. The traditional teaching in terms of standard of care -- and I'm not going to get into details beyond this statement -- okay? -- were such that I don't condemn those gentlemen and ladies for what they did. I'm just saying that it is that like a Monday morning quarterback. In 1992, having told you I've learned a lot in the last three years let alone 20 years, 1992 I can see proof positive in my opinion that the very long-standing causes were far more important than anything that they opine --

Q. Okay.

A. -- was not appropriately done in the medical management.

Q. So if I understand you right, if they now have the same knowledge you do in 1992, they should be able to relook at this chart, look at the elevated nucleated red blood cells, and now, with the benefit of ten years' newer knowledge, they should say to themselves, "Wait a minute, we have a long-term, chronic asphyxial event causing this brain damage'!?

A. I believe that open-minded individuals would thus change opinion.

Q. Okay., Now I've found it. And how their opinion should change is that they should understand that this brain damage didn't occur from fetal distress and asphyxial episode occurring a few hours before birth. They should now understand, based on new knowledge, that this was a process that was in effect for at least several days or weeks before delivery?

A. Examples that I am claiming --

Q. Is that yes?

A. Yes. Examples that I am claiming is that it's not the count of 11 that concerns me as much as the timing of when it was 11 and the fact that, at the same time that there was an enormously high count and presumably many hours beforehand, the NRBC would have been even higher.

Q. Now, when you say, with the benefit of this ten years and the new knowledge, is the most important aspect of the new knowledge you're referring to the significance of nucleated red blood cells?

A. It's hard to say what is the most important, but that would be a major factor.

Q. All right. Is there any other one that you can point to that would be new knowledge now that could change their mind that wasn't knowledge present in 1992?

A. The fact that I believe that somebody like Dr. Alford, A-l-f-o-r-d, would confirm that babes with CMV do not have to have hepatosplenomegaly, purpura, calcifications in the brain, et cetera.

Q. Okay.

A. So I think that is something that we've learned more in the last ten years; and I would hope that an expert like Dr. Alford would confirm that what I've said is true rather than false.

Q. Okay. Now, in that light, has Mr. Ratner told you that they did in fact consult some infectious disease experts?

A. I believe that they consulted Dr. Alford, I believe. But again, there's been so much that I've been told, you know, in this case, that I could be wrong. Do you know what I'm saying?

a. Well, I've learned from other depositions what I'm asking you.

A. Uh-huh. I could be wrong, but I believe that they've consulted Dr. Alford.

Q. All right. Would it be true that you recall they consulted more than one infectious disease expert?

A. I would have to believe they did. I mean, they consulted, for example, Dr. Benirschke as well as Dr. Altshuler on the placenta, so I would have to believe that they conscientiously sought more than opinion. But I don't remember. As I say, I'm exhausted by all these charts, you know.

Q. Have they ever told you that any expert they consulted with expressed an opinion that this child did in fact have CMV as the cause of the brain damage?

A. You know, I think that it was with this case, but I couldn't swear do it, that Dr. Alford --

Q. Uh-huh.

a. -- said that it was probably CMV. But I couldn't swear to it because you have to realize I've consulted not just on legal cases but in other cases, you know --

Q. Okay.

A. -- where we're all in a club together in a sense, and I lose track as to whether on oath it was this case. But I think in this case he was involved. But it will be on the records.

Q. All right. Now, have they also told you that there have been other infectious disease experts who could not make a connection between congenital infection and the brain damage?

A. I don't -- I don't remember that, you know.

Q. All right. Now, fair to say you have not seen any reports sent to you that makes that connection from an expert in congenital infections?

A. I honestly can't remember whether I saw anything like that per se from Dr. Alford.

Q. Okay. Well, any doctor? Have you seen any expert report where --

A. No, I can't remember. But to be honest with you, the opinions of many people don't interest me unless I know that they're recognized authorities in the field.

Q. All right. Recognized authorities in the field of placental pathology --

A. No, no. We're talking infectious diseases here.

Q. Yeah. Let me talk placental pathology for a moment. We have yourself, Dr. Benirschke, is there a Perrin?

A. Perrin, knowledgeable, yeah.

Q. Driskill?

A. Yes.

Q. N-a-e-y-e, Naeye?

A. Yes.

Q. Anybody else?

A. Well, you know, I can't get caught in this because these depositions get read and then people get offended in terms of what does Geoffrey think of them. Let me just say that those five people have been excellent illustrations of my suggestion to you that one needs to have been doing these things for 20 or more years before one has a chance of being an expert, you know.

Q. Those are all five experts?

A. They're five people who have been looking at material for a long time for various reasons in different locations, from different points of view, but I think they deserve respect as having done a lot of work with placental diseases.

Q. All right. Now, back to the nucleated red blood cells, got sidetracked.

A. Yeah.

Q. Can a patient have some hypoxia, as indicated by elevated nucleated red blood cells, but the hypoxia is not so severe as to warrant Dr. Altshuler using the words, quote, chronic fetal asphyxia, unquote, as being applicable to the fetus?

A. What I believe, and in fact don't believe, opine or is my strong opinion, that in the absence -- okay? -- in the absence of an acute blood loss, say, for example, a fetal placental vessel that got torn, and there was acute blood loss for two hours before they got the babe out, for example, or a very large placental separation with bleeding and so forth, including the concept of blood loss of a fetus from overwhelming sepsis where there's no question about the diagnosis that the babe is obviously septic and obviously has a lot of breakdown of red cells, you know. In the absence of things like that, in my opinion, elevated nucleated red cells mean, in my own personal experience, at least 24 hours of fetal hypoxia, and as I indicated in the experience of experimental physiologists, fetal physiologists, at least three or more days of chronic hypoxia.

Q. All right. I don't think you answered my question. Okay? What I'm getting at is: Can you have elevated nucleated red blood cells with hypoxia but the hypoxia is not so severe that it causes brain damage?

A. We're talking probability, so it's implicit, according to my answer in the absence of those two things on the caveat, that there is proximate cause there, in my opinion. I can't tell you whether it's **90** percent or **100**, but I would say it's certainly significantly more than 50 percent.

Q. So that I understand your answer, you're saying almost always, when you have an elevated nucleated red blood cell count, the hypoxia is going to be severe enough to cause brain damage?

A. No, because when you use terms like "almost always," that takes it right out of the intent of my answer. I told you I would not be so stupid as to say 95 percent, which is almost always. Let me put it to you another way. I can't recall ever having been convinced that a normal babe ever had elevated nucleated red blood cells.

Q. Okay. Let me put it my way. Will you agree that a babe can have a nucleated red blood cell count of 11 and not have suffered hypoxia so severe that it caused the brain damage? Is that possible or not?

A. It is absolutely possible. And again, you cannot divorce the 11 from what I told you. The time that the specimen was taken -- number one, the time that the specimen was taken; number two, the amount of medical intervention that had occurred in terms of how much fluids that had been given the babe; and number three, what was the absolute count.

I mean, because 11 per 100 white cells against a total count of 11,000 is enormously less immature red cells than when you're talking towards the 40,000 mark total count.

Q. Would you -- I'm going to talk to you about -- we're still on the negative findings in your report. Would you agree that there is a lack of being reported in your reports fetal fibrin intimal inclusion vascular lesions?

A. That's right. If you're talking about a numerical lack, that's right.

Q. Okay. Would you agree in your report

there is a lack of being reported fetal placental thrombi?

A. No, **that's** not true because I think that --

Q. Numerically.

A. I think that the picture's different if you recognize that, when I described end stage thrombotic lesions and avascular lesions, they are all part of the spectrum of the thrombosis. It's ongoing.

Q. I'm having a little trouble with that answer, but that's my fault. Let me ask it this way. You know, I've looked at this report.

A. Right.

Q. And I don't see where you report a significant number of fetal placental thrombi. You know, you can look at that before you answer.

(Whereupon, an off-the-record discussion was had.)

THE WITNESS: Okay. In bold font of the computer typewriter --

BY MR. PROCHASKA:

Q. Which one are we talking about? One or two?

A. On page three of the first report, March 24, at which time I did not have any clinical history, in bold font --

Q. Show me.

A. On page three. I think it was page three, wasn't it? Goodness, let's go off the record again. I guess I'm getting tired.

Okay, here it is. In bold font, page three, fourth line, starts actually on the third line, "Slide 1C additionally features," --and when I use a term like "features," I mean it's very prominent -- chorangiosis, focal avascular villi, and slight focal villitis of unknown etiology.

In the photographs that I took of that slide, which you're welcome to have, the point that's going on in this placenta is that there are rare very recent fibrin thrombotic changes that I photograph, rare, okay? Then there are conspicuous older lesions of fetal thrombosis there. The end stage being a total lack of blood vessel. It's so obliterated now that the blood vessel has been lost. You see what I'm saying?

Q. Well, I don't see anywhere where you use the term "fetal placental thrombi" or that you see large numbers of them. Is that a fair statement?

A. That's an extremely fair statement.

Q. Okay. So can I just simply say that you don't report a significant number of fetal placental thrombi?

A. Not in terms of the use of those words. And since this is a discovery deposition, the whole point is what does one mean.

When I use the term, and I suspect that the very few people who do placental pathology use the term, when they speak of avascular villi, they're talking about the end stage of what has been thrombosis within the fetal vessels.

Q. Well, let's put it this way.

MR. RATNER: He's not through with his answer.

THE WITNESS: And I believe that I have photographed that in here.

BY MR. PROCHASKA:

Q. All right. However you describe it, is there not noted, and however you describe it, a significant number of fetal placental thrombi? Now's that?

A. That's true. That's true. Not in terms of the use of those words.

Okay. And is it also true that there is not noted in your reports a significant number of hemorrhagic endovasculopathy?

A. You're talking about -- you see this is -- and you don't mean to do it? Okay? But you're talking about this out of context because, for example, I've told you that you're welcome to have this. And here I've photographed and I say in slide ID, fetal fibr, f-i-b-r, and then throm clearly means thrombus. That's the intent and that's in slide 1D. In fact is the paragraph under the paragraph we just read. See, there's no question when you combine the written description with the labels here that -- you're very welcome to have that in there. You've got fetal fibrin thrombotic change in slide ID, and you've got avascular villi in C. And now if I go to C, unfortunately I didn't also call it thrombotic in C. In the picture, not thus far. But that's it.

Q. All right. I'm going to ask it again. We'll get onto something else because I don't understand your answer. You give me shorter answers, and we'll get done quicker because I'm not understanding your long ones anyhow.

A. All right. Okay.

Q. Do we have a lack of hemorrhagic endovasculopathy as opposed to a significant number of hemorrhagic endo --

A. Yes, we have a lack.

Q. Okay. Would you agree that a lack of fetal fibrin intimal inclusion vascular lesions, comma, a lack of fetal placental thrombi, comma, and a lack of hemorrhagic endovasculopathy, comma, are aspects that negate against considering the venous sustained a significant degree of long-standing hypoxia?
A. Absolutely not, because I think you've taken that out of context for reasons that I've explained earlier.
Q. We're done.
A. Okay.
Q. Meconium staining, talk about that.
A. Uh-huh.
Q. You can have it without long-standing causation of brain damage?
A. Yes.
Q. You can have it with or without stress to the fetus?
A. No, that's not true.
Q. You only get it with stress to the fetus?
A. Yeah. Again, we're talking about semantics. I didn't stay distress, I said stress.
Q. Can you have -- you can have meconium staining without chronic hypoxia?

A. Yes.

Q. You can have meconium staining without infection, congenital infection?

A. Yes.

Q. Meconium staining is common in a post term baby?

A. Yes.

Q. The vast majority of meconium-stained babies do perfectly well?

A. No.

Q. The vast majority of meconium-stained babies are damaged?

A. We don't have formal studies in on that because it's never been studied. Not ever. There is not one study that has a seven-year epidemiologic follow-up of meconium.

a. Meconium-stained babies by can be born normal or abnormal, but you aren't about to say if the majority of them are born normal or abnormal?

A. What I'm saying is that the assumption has always been that many meconium stained babes are, quote, unquote, normal. But nobody has differentiated as to the length of time of the meconium, you know, to which the fetus is being exposed or -- or the neurological testing at seven years of age in relationship to that length of time. So there are no studies that enable the question to be answered.

Q. All right. Would you agree that meconium staining is not always a manifestation of chronic fetal illness?

A. Agreed.

Q. Would you agree that because you have meconium staining in this baby and you have a means of augmenting or causing inflammation by the chemicals involved in meconium, that you can't conclude from the placental findings alone that congenital sepsis was an important factor in causing harm to this baby? Get the drift?

MR. RATNER: Which question do you want him to answer, the get the drift or the first one?

THE WITNESS: No. I mean, it's true --

BY MR. PROCHASKA:

Q. Is that a no or a yes?

A. It's really I don't understand your question. I'm not sure you do either.

Q. I don't either. I'll redo it.

(Whereupon, an off-the-record discussion was had.)

BY MR. PROCHASKA:

Q. We understand that meconium has chemicals in it?

A. Yes.

Q. We understand it can cause inflammation?

A. Yes.

Q. We understand that it can cause inflammation --

A. Oh, I beg your pardon. Meconium by itself does not cause inflammation. You said earlier it potentiates it. Earlier you said yes, and that's what I'm agreeing to,

Q. All right. We agree meconium can augment inflammation?

A. Right. That we agree.

Q. Because meconium can augment inflammation, it makes it more difficult to tell if the inflammation is from infection or from the effects of meconium?

A. No, no. I mean, one of the very logical conclusions that one could make here was that the bacteria that I photographed were an inconsequential terminal contaminant. In other words, that they were not a meaningful player or actor in this scenario.

Q. All right. Let me see if you agree with this statement then. Because of the co-existence of meconium and the augmentation of inflammation by this chemical, one cannot conclude from placental findings that congenital sepsis was an important factor in causing the bad outcome. Did you agree or disagree with that? And she'll read it back if you want.

A. No. I would prefer you to ask the question a different way and maybe I can answer it in a way that will clarify the intent of the question, because the question, to me, is extremely confusing, extremely.

MR. PROCHASKA: Why don't you read it back and see if he can handle it.

(Whereupon, the Court Reporter read back the material requested by counsel.)

THE WITNESS: Let me see if I can persuade you why that's not an appropriate question. Because the whole point here was there was no augmented inflammation.

BY MR. PROCHASKA:

Q. Because?

A. Now, the interpretation as to wh, -- if I tell you my interpretation, you're not going to like -- you're not going to like it. But the point is, there was no augmented inflammation in this case. We went through all that before. There were no big abscesses, there was not a lot of inflammation, et cetera, et cetera, et cetera. There was none.

Q. Okay, fine.

A. Now, I would love, if this goes to trial, to answer, you know, my opinion as to why -- what I think that probably means, but you wouldn't want me to tell you that.

Q. Okay. Now, let me talk to you about --

A. That was meant to be on the record, my answer, incidentally so that I can pick up and --

Q. Talk to you about some of your findings. Okay? We had the finding of meconium, we talked about that. I think it's your opinion there was placental insufficiency?

A. Well, that's not a -- that's not a word that I use out of context. That's a pathophysiologist's term. I can talk about clinical abnormalities that seem to occur often with uteroplacental vascular insufficiency. Okay?

Q. Do you think there was utero placental vascular insufficiency in this placenta?

Q. Not in the traditional sense of what maternal-fetal medicine people mean.

Q. Okay. Let me talk to you about chorangiosis. The cause of chorangiosis is not definable. Would you agree with that statement?

A. No, that's not true because I told you three hours ago that, in my opinion, there is experimental evidence which supports my hypothesis that chronic low-grade hypoxia causes it.

Q. All right. Would you agree with me that it's been found to be associated with death in the fetus and newborn and malformation in the fetus and newborn?

A. Yes, I have published that.

Q. All right. Would you agree with me that it has not been published that it is associated with hypoxia and perinatal asphyxic events?

A. Actually that's not true because, in my data, an epidemiologist who would review that would be very, very impressed that it is associated. In fact, I've given you the data.

Q. Have you reported that it is also proven to be associated with hypoxia that can cause brain damage?

A. The stud] that I have given to you has a table. And in that study, it clearly indicates that even when one adjusts for other pathologic placental changes, that chorangiosis is very meaningfully associated with clinically diagnosed neonatal asphyxia. In other words, diagnoses that were made not by me but by colleagues of neonatal asphyxia.

Q. All right. So it's your opinion and do I understand it you have published that it's --

A. I am delighted to show it to you. I've given it to you in an exhibit already.

Q. We've spent enough time today.

A. All right.

Q. Have you published that it is also associated with perinatal asphyxia?

A. I have not made it the central part of a paper; but, yes, indeed, it's in the data, and it's there for anybody to review.

Q. Can I say you've made that statement somewhere in the literature?

A. Yes --

Q. All right.

A. -- if you would consider that a documentation of epidemiologic data, you know, says that, that would be true.

Q. Would you agree that chorangiosis is rarely encountered in normal pregnancies?

A. That's my opinion.

Q. Would you agree that it can be encountered in normal pregnancies?

A. Anything is possible, and so I would have to agree, it's possible.

Q. Now, when you published your study on chorangiosis, is it fair to say that you didn't have a control group?

A. Oh, I did. I had an excellent control group. This has amused me a little bit in terms of what my -- what my mentor said because we have to understand what we mean by "control."

Q. Okay. In other words, he thinks, from his definition of it, you had no control; you think, from your definition of it, you did?

A. Well, we're talking semantics, and that's what would need to be explained either now or later.

Q. All right. Would you agree though that you can't draw a cause and effect relationship without a control group?

A. The control group is there already. It's just a matter of whether he agrees or disagrees about what we mean by "control."

Q. Let me ask you the hypothetical. Would you agree you can't draw a cause and effect relationship without a control group?

A. Depending upon how one defines "control," yes.

Q. Chronic villitis, another one of your findings: If you have long-standing chronic villitis of several weeks, would you expect to have a small for a gestational age baby?

A. I'd expect a 25 percent risk for reasons that I gave you already.

Q. Would you expect to have a microcephalic baby?

A. Well, it depends upon the use of words. I would not expect microcephalic, but I would expect that there would be a relatively smaller head with respect to the length of the fetus.

Q. All right. All I'm getting at is, if the chronic villitis has gone on for, say, longer than a month, you may expect the fetus to have a relative microcephaly and be small for gestational age?

A. No. The problem that other experts made for you in this case is that, when people use the word "microcephaly," they mean certainly less than the fifth percentile of brain size. They mean really very, very severely small brains. And you can't really use the term relative microcephaly. It's -- what's the expression? Help me here.

Q. Relative micro?

A. What's the expression when you say something like people say facetiously an intelligent bureaucrat? They're oxymorons.

Q. Yeah.

A. You can't use the word relative microcephaly. It's an oxymoron.

Q. You can't use that?

A. That's right.

Q. I thought you used it in your papers or not?

A. I think that I would prefer to feel that, in m papers, I hope to goodness that I've referred to relative smaller heads, but I don't really mean the terminology of, quote, unquote, microcephaly.

Q. I got a growth chart here that I put some -- the dots on for weight, length, and head size.

A. Are they the Ross charts, Lubchenco? That's Lubchenco. No, Babson, beg your pardon, Babson. Okay.

Q. Is that okay?

A. That's a very acceptable growth chart. Growth charts differ all around the country.

Q. Now, before we go any further --

A. Yes.

Q. -- because I haven't marked this, I've got a growth chart where I've plotted three dots. One is a 40-week and one is a 43-week. You tell me which is the one we should mark for deposition exhibit.

A. This babe allegedly was 43 weeks, and some people say that in fact it was 8 days less, right?

Q. Well, yeah.

A. But in terms of charting, it's --

Q. You want us to mark both? I'm just wanting to know -- does Dr. Altshuler have an opinion if this is a term or a post term?

A. It's my opinion that it's post term, pos term meaning beyond 42 weeks.

Q. All right. Now, are you giving me the 43 minus 8 days?

A. Well, I think that people who -- look, let's say it's 43 minus 8 days. I'm not going to quibble over the difference between whatever it is, 41 weeks 6 days or 42 week. You know what I'm trying to say?

Q. We'll have marked as Deposition Exhibit No. 7 --

A. My sense is that if you chart it at 42 weeks, recognizing that different authorities are going to have different anthropometric data, the point will remain the same, whether it's 42 weeks or 41 weeks 6 days.

Q. All right. As 7, I have a -- Doctor, which one do you want, the 40 or the 43?

A. Well, let's go with both.

Q. Okay, that's fine.

A. Arguably it's 41 weeks and 6 days, is my understanding.

Q. Okay. We have both of them plotted on a Ross Laboratory growth record for infants. I'm going to hand them to you.

A. Uh-huh.

Q. Do you have the -- I just want to have you admit that the dots are in the right locations. If you need the data, I'll give it to you right now. Do you need the data?

A. Well, it would be nice because everybody can make a mistake. You can make a mistake.

Q. That's fine.

(Whereupon, an off-the-record discussion was had.)

THE WITNESS: Just in anticipation of your point, I just happen to have a ruler with me.

BY MR. PROCHASKA:

Q. Okay. I'm handing the doctor the neonatal admission note so that you can look at it and then see if the two pages that are marked Deposition

Exhibit 7 accurately reflect three red dots on it being placed in the appropriate spot on the graph.

A. Okay. So you have a length of 51.5 centimeter, and head circumference of 34, and a weight of 3,572, which exactly what I have on my chart. Okay?

I have a chart of Lubchenco, you have a chart of Babson, both charts being under the title of Ross Laboratories, just so the record is clear. All right? Because my Exhibit No. 3 is a Ross Laboratory chart, same as what we're now discussing, only it's from Lubchenco as opposed to yours, which is Babson.

Okay. So if we look at head circumference, your head circumference, which is the top part of this graph, is probably minus one standard deviation, if I interpret this chart correctly, and I believe I am. And you should please correct me if I'm wrong. It is minus one standard deviation because the dotted line -- broken dotted line is minus two standard deviation, and it's almost in the middle, right? Would you agree with that?

Q. You know it better than I do.

A. Well, I'm merely saying that, if you just look at the black point here and the dotted point, it's close enough getting down towards minus one standard deviation.

Q. All right. The dotted line is what you are calling a standard deviation?

A. No. The broken dotted line, according to this chart, is minus two standard deviations.

Q. Okay.

A. So my sense is --

Q. In between is about one?

Q. In between is about 1?

A. Minus one.

Q. All right. Just a minute now.

A. Okay.

Q. Let me -- I'm going to have these marked --

MR. PROCHASKA: These are aren't marked yet.

THE COURT REPORTER: No, I haven't had a chance.

MR. PROCHASKA: Let's mark the 40-week one as 7A and the 43-week one as 7B.

(Whereupon, Plaintiff's Exhibit No. 7A and 7B were marked for identification.)

BY MR. PROCHASKA:

Q. Doctor, I've had you look at Deposition Exhibit 7A and B; is that correct?

A. Yes.

Q. Each exhibit has three red dots on it; is that correct?

A. Yes.

Q. After you've examined where those three dots are placed on each exhibit, will you agree that the'y are placed in the appropriate location?

A. Yes.

Q. As I note from your expert report, you make a comment that Kathleen's head was at a smaller percentile than the length of her body; correct, sir?

A. In the relative sense. I would call this intermediate asymmetric growth retardation of the head.

Q. Okay. And you recognize that apparently as having some significance; correct, sir?

A. Yes.

Q. And it has enough significance that, to you, it is support for the fact that the head did not grow like the body length because of an injury the head suffered antinatally?

A. In my opinion, taken in isolation, this is not meaningful. Taken in isolation, it is not meaningful. But if one would refine this and put it into the anthropometrics of a 21-year-old primipara, white, and come up with pretty similar anthropometric conclusions as you are illustrating, if I would combine that information with the chorangiosis, with the villitis, with the elevated nucleated red cells, all of those factors are known associations that the one with the others with what, in my opinion in this specific case, is an intermediate asymmetrical fetal growth retardation.

Q. It's your opinion then, as you look at Exhibit 7A and 7B, Dr. Altshuler could not use the term, quote, normal, unquote, in terms of head size for Katie Hoyt at the time of birth?

A. Normal is an extremely provocative word. I will insist that, taken out of context, this graph, particularly which does not address a 21-year-old, white primagravida's data, this graph is meaningless. In the context of what I've answered already on the record, I think it is compelling evidence that there had been intermediate asymmetrical fetal growth retardation, meaning that relative to the length of the body, the head is smaller.

Q. All right. Is the head circumference, in your opinion in the context of this case, abnormal?

A. Yes.

Q. In the context of this case, a 34

centimeter head for a 40-week or a 40-week baby is not, quote, normal, agreed?

A. Emphasizing that the word "normal" is a provocative word, yes.

Q. It is your opinion that the deviation in percentiles between size of head and length of body is a meaningful deviation?

A. That is my opinion. And I like the word "deviation." Other people might call it deviant fetal growth.

a. Would you agree with me that many, many normal people -- excuse me -- babies are born with a deviation between head size and body length?

A. Only in the limitation of the word "normal," which is, again, a very provocative word.

Q. Would you agree with me that many healthy babies that are not damaged in any way are born with head sizes smaller than body length as pertains to percentile?

A. In the context of apparently healthy, yes, I would agree with you.

Q. Would you agree with me that, as far as the birth of babies goes, variation in percentile between head size and length is a relatively common finding in healthy undamaged babies?

A. Yes.

Q. Is it your opinion that use of the term "relative microcephaly" is an inappropriate term to use in this case?

A. What I've said is that I would hope that, in my publications, I could have avoided that term because I think, in the strict sense, it's an oxymoron because microcephaly implies severe smallness independently of other factors.

And what I'm saying in this case is that you have to put it in the context of the chorangiosis, the nucleated red blood cells, and the chronic villitis to recognize that the postnatal growth of this head should have been bigger.

Q. All right. You used the Ross Laboratories -- well, I used a Ross Laboratories growth record. Are those growth records acceptable and appropriate?

MR. RATNER: I'm going to object to the form of the question. He's already explained that you used Babson and he used something else.

THE WITNESS: I would not claim -- let me just clarify the answer. I would not claim that mine is a better record. In fact, many people have pointed out that the Lubchenco chart is not an optimal chart because it comes from a population base that is very much above sea level in the City of Colorado.

What I've said is, the optimal -- the optimal anthropometric chart would be a white primiparous population of mothers. And all I'm trying to do is to point out that it doesn't matter really whether you take your chart or my chart or another chart. The end point, I guarantee you, you will find is that, in my opinion, there is a disproportion between the head size and the length.

34 centimeters in isolation is just fine. Just fine. But 34 centimeters along with 51.5 centimeter length and the chorangiosis and the villitis and the et cetera that I've said already, in my opinion, is intermediate asymmetrical growth retardation.

Q. Can a baby be born with evidence of chorangiosis, chronic villitis, and a head smaller percentile-wise than its length have all the placental findings that you found and still be born unbrain-damaged?

A. I th nk that's entirely possible because many of the cases of chorangiosis have anomalies rather than neonatal asphyxia. Anything is possible; but in terms of probable, it is probable, in my opinion, that, if all those factors were present, that you would have some brain damage.

Q. Would you agree that, in most cases where chorangiosis is found, the baby is normal?

A. I would disagree.

Q. Would you agree, in most cases where chorangiosis is found, the baby does not have brain damage?

A. I don't have the data on that, and so I couldn't rea ly comment. And I don't think anybody -- in fact, to my knowledge, nobody else has that data.

Q. And lastly, is the use of the Ross Lab growth charts on Exhibits 7A and B acceptable with you?

A. Within the bounds of what I've mentioned, the ideal chart being what I've said.

Q. All right. Is it your opinion -- I guess it's your opinion on page three of your second report that there is a short umbilical cord?

A. Yes. Again, in isolation, I do not think that that is dramatically short, but there's no question in my mind it is short.

Q. Is 30 centimeters acceptable to you as a normal length?

A. I disagree with Dr. Benirschke. I think that 30 centimeters is extremely short. I think the literature would show that Dr. Benirschke has been ultra conservative in saying 30 centimeters because my sense is, to be less than 40 centimeters is short.

Q. All right. And when I you say "less than 40" -- I think that you measured 35 for this?

A. Yes.

Q. Would you agree that there was some cord that was clamped and left on the baby?

A. Yes.

Q. Would you agree it could approximate five centimeters?

A. I would definitely agree it could. I have no way of knowing. My sense is that not many people leave five or six centimeters with the baby unless they're doing a research project and need some umbilical cord.

Q. Now, I want to talk to you about how you became involved in this case. How well do you know Dr. Dan -- well, do you know Dr. Dan Roberts?

MR. RATNER: You started out the deposition -- we've gone into this at length.

THE WITNESS: It's on the record. It's on the record.

BY MR. PROCHASKA:

Q. Do you know that Dr. Dan Roberts heads the OB/GYN Department at Wesley?

A. I believe so because I was a visiting professor there, as I've said.

Q. At Wesley?

A. Yes.

Q. Okay.

A. I mean, a long time ago, but I doubt that I would have remembered what he looked like then, you know?

Q. Has Dan Roberts talked with you about this case?

A. No.

Q. When you visited with Maggie Roberts, did you eventually suggest that Dr. Benirschke be another gentleman who could review this case?

A. I don't remember. I think most people in this country know my strong professional and personal friendship with Dr. Benirschke. I suspect the same as you ask me the question, you know, are there any other placental pathologists in this country?" Knowing how conscientious Maggie Roberts is, she probably asked me, you know, what I think, and obviously I would have answered. But, you know, she would realize that he is famous because she's worked in this area.

Q. Would it be fair to say that your memory doesn't serve you well, you may have suggested him, you may not, you simply can't recall?

A. Yes.

Q. Would it be fair to say you may have suggested she also contact Bradley Schaefer?

A. Oh, no, I don't think I ever said that.

Q. Would it be fair to say you may have suggested they contact Pat Barnes?

A. No, I don't think so. Pat Barnes has long since left Oklahoma.

Q. John Bodensteiner?

A. I don't know about John. I may have in the sense that John left a lot after Pat Barnes, and if Pat -- at least if Maggie Roberts would have asked my opinion of an outstanding neurologist, I unhesitatingly would name John Bodensteiner. So it's possible she did ask and that I certainly would have made that recommendation.

Q. All right. You know John Bodensteiner, Pat Barns, Bradley Schaefer, do you not, sir?

A. Yes. As I've said, Pat Barnes was in Oklahoma many years ago. Brad Schaefer left some few years ago and so did Bodensteiner.

Q. Have you come to learn through Maggie Roberts that because they all know each other in one manner or another they were recommended to her to be contacted in this case?

A. I suspect that as unlikely, I suspect, because I think John Bodensteiner probably would have worked with people who would have known more about infectious diseases -- I'm not being disrespectful now of Brad -- than Brad. In other words, I would never assume that what you've said is true.

Q. Okay. Do you know the neonatologist, Bloomer Nelson, at Wesley?

A. No.

Q. Do you know Dr. William Svoboda?

A. No.

Q. Have you talked with any of the experts in this case?

A. No, not even Dr. Benirschke. However, at this point, I believe that I will since I have now been privy to his deposition.

Q. Why will you talk to him?

A. Because I will, you know, as I continuously interact with him in general, mention to him that I assumed that he knew I was going to handle it.

Q. Okay.
A. And then I'm assuming he's going to say, "Geoff, you're dead right."
Q. Drs. Driskill and Naeye?
A. Naeye
Q. Dr. Driskill wrote a book with Dr. Benirschke?
A. Yeah.
Q. Do you know that? Okay. Dr. Naeye wrote a book?
A. He has written a book that came out last year or in the last few months.
Q. Do you have it?
A. Yes.
Q. How did you get it?
A. Well --
Q. I mean, did you go out and buy it?
A. Well, the truth is both. I bought the book. I was probably one of the first people to buy it thinking I needed to support a colleague. But as it just so happens, he gave me a personally inscribed copy, quote, unquote, "To Geoff for our many years friendship."
Q. Okay.
A. So both.

Q. Dr. Naeye, does he seem to involve himself in finding connections between abnormal placentas and injured babies?

A. Dr. Naeye, for many years, I think would be the first person to describe himself as a person who's pursued the epidemiologic association between placental abnormalities and the outcome of pregnancies.

Q. Okay.

A. And he's been doing that for many years.

Q. All right. Was -- and I -- from your understanding, is he doing more of that than anybody that you know of? You know, more than yourself and Benirschke, Driskill, and Perrin?

A. Yeah. I mean, I think this is an excellent question. What he has done is -- for which I commend him, he has taken the collaborative perinatal study data, which is way out of date relative to modern issues, and he has, within the limitations of that study, gone about as far as he can go with raw data. And then the question of what does it mean is tested by colleagues, clinical colleagues, pathologist colleagues, and so forth.

Q. Without being overly generous to the man, has he probably done more work in trying to draw information about connections between bad placentas and bad outcomes than any placental pathologist you can think of?

A. No, I don't think that's a valid statement because what I'm saying is -- that's why I prefaced it by crediting him with the collaborative perinatal study -- he has taken a database that has nothing to do with fetal cardiac monitoring, because none of that was done at the time of the perinatal study, it has no data to do with mycoplasma and many of the agents that are now, you know, prevalently studied, and he has, with that focus, definitely been preeminent as a person who's amassed an enormous amount of global data.

But I think that that doesn't mean that he's necessarily done the most study, quote, unquote, of the relationship.

Q. I'm just trying to find out if he has more expertise or more knowledge or more experience in the area than Drs. Benirschke or Driskill or Altshuler or Perrin.

A. I don't think he does. Again, it relates to the specific question that you're asking. If you will look in that book, you will see that, in the area of meconium, he has cited my work because, in the same way as I've encouraged Dr. Benirschke to do this, I encourage Dr. Naeye to do it, and he did it. So we interact, and I have respect for what he has done.

Q. Do you know a Dr. Tom Bryant, the obstetrician here in Oklahoma City?

A. No, I don't actually. Tom Bryant? I can't place him.

Q. All right. Now, as I look at your conclusion, you say, "After exhaustive review of the medical records, I find no reason to consider that negligence caused Kathleen's bad outcome."

Now, you've reviewed the depositions and you've reviewed the records. And is it clear that the chart raises a question or the depositions and the chart both raise a question about the misuse of Pitocin when either CPD is present or late decelerations are present?

A. No. In truth, I don't believe I've reviewed, quote, unquote, depositions, plural, like that. I mean, I have reviewed Dr. Benirschke's deposition, and I can't think at length of having reviewed the specifics of an expert.

I looked at Schiffrin's letter, but I don't think that I'm aware that Schiffrin feels that there was negligence. But I don't think that, in any way, that Schiffrin's deposition was ever given to me, and if it was in any form, then -- you know, I don't know.

MR. **RATNER:** I don't think you've had any depositions except Benirschke's.

BY **MR. PROCHASKA:**

Q. Have you at least because you -- have you at least in your experience come to learn about whether it is -- that there is a question of appropriateness in using Pitocin when CPD is present? Have you at least learned that?

A. Well, I'm aware of a lot of things upon which I won't comment with a patently obviously clinical standards in the maternal-fetal medicine, you know.

Q. Have you also learned from your experience that, when a mother goes a long time with contractions and she's not progressing and still not delivering, still at minus two station, that -- have you learned at least that that has been associated with CPD?

A. It depends again on the context. I can't possibly address clinical standards of care issues because definitions and semantics, as we've spent a lot of time talking about, the same thing applies to the maternal-fetal medicine. So I'm not going to address clinical hands-on management.

Q. Have you -- when you looked at the chart in this case, did it raise a question in your mind about a failure to deliver a distressed fetus was a potential cause of the bad pregnancy outcome?

A. No.

Q. When you review charts, do you sometimes, whether for plaintiff or defense, do you sometimes take note of that, that maybe a failure to deliver a distressed fetus directly caused a bad pregnancy outcome?

A. Oh, absolutely. I believe I went to two trials for plaintiffs on matters relevant to that in the last year or two.

Q. Okay.

A. I mean, in behalf of patients.

Q. Now, when you say you went to trial on behalf of plaintiffs, what were the names of the two plaintiff lawyers?

A. Well, I did a video deposition, which I assume is acceptable as trial -- I mean, I didn't actually physically go there -- for a Mr. Ira Rosenberg.

Q. Where is he at?

A. And he is in Bucks County, Pennsylvania, and the video deposition had to be given in Philadelphia. And --

Q. What's his first name?

A. Ira, I-r-a, last name is Rosenberg, R-o-s-e-n-b-e-r-g.

Q. And what city is he in?

A. Well, he's -- how can I tell you? He's in Bucks County, and I'm sure you can find him through the American Trial Lawyers Association. I mean, they would have him listed. And another one was Schlaprizzi, S-c-h-1-a-p-r-i-z-z-i.

Q. What --

A. And he is in St. Louis, Missouri. And my point is, in terms of the intent of the answer, sure I've looked at -- in clinical issues and have felt that it was questionable in my mind, insisted that I would not be a maternity or medicine expert, but I've looked at it and had my suspicions.

Q. Okay.

A. And felt reassured that I was correct in giving, you know, my expertise to the causation side of the case.

Q. Did you have your suspicions about a misuse of Pitocin or failure to deliver a distressed baby in this case?

A. I did not.

Q. Would you feel comfortable in saying, if that was obvious from the chart or the depositions, you would have those suspicions?

A. I would say that if -- if an educated materno-fetal medicine person could prove that to me, then I'd be dealing with to what extent was damage done before the error. You see what I'm saying?

Q. Yes.

A. And the bottom line would be that -- my sense is that it would have to have been done antinatally for the reasons given, mainly since this is a discovery deposition, for the additional reason that, in the systemic recovery of the babe, who did not have intractable hypoglycemia, who did not have necrotizing enterocolitis, who did not have massive liver enzyme changes, who did not have persistent renal failure problems, my sense is that I would view that as an antinatal thing and that your allegation would still be, in my opinion, not the proximate cause of the bad outcome.

Q. My question, you are unable to separate how much damage this baby suffered from a congenital infection versus the hypoxic -- chronic hypoxic insult?

A. Well, I believe I can because I believe I've literally just answered it. When you will reread that transcript, you'll see what I'm saying. Because of the lack of a whole bunch of clinicopathologic correlative things that would go along with, in my opinion, intrapartum overwhelming damage, that strongly reinforces that the bulk of the damage in my opinion was done prepartum.

Q. Okay. But -- and I understand that. What I'm saying is, although the bulk of the damage was done prepartum, are you able to say how much of that bulk was done by the congenital infection and how much was done by the hypoxia?

A. Well, we're splitting hairs because what I've said to you is that the hypoxia has been there for a long time, and I'm not denying that there was hypoxia in the birth process. Quote, unquote, normal pregnancies with normal fetuses with normal deliveries have hypoxia of the fetus.

But what I'm saying is, for all practical purposes, in my opinion, that the bulk of the damage was done in terms of proximate cause prepartum, not intrapartum, for the reasons that I gave you and the long recitation earlier.

Q. I guess what I'm asking: Is the damage from the congenital infection part and the damage from the chronic hypoxia part, are we talking about two sources causing injury, or are those both one in the same causing jury?

A. What you're really asking me to do, which is eminently reasonable, is to translate what I mean by the word "bulk." And if I would say to you that at least 75 or more percent or 80 or more percent of this damage, for all practical purposes, was done beforehand and that the other 20 percent difference would be such that it wouldn't have, in my view, altered the quality of life difference any differently, that's the perspective.

Q. All right. Now, the 20 to 25 percent of the damage, when did that occur?

A. That would be a very loose, wild hypothesis to me because what I've clarified for you is that this babe, in my opinion, did not have the overwhelming acute shock-like damages of an intrapartum overwhelming onslaught upon kidneys, heart, liver, gastrointestinal tract, things like necrotizing enterocolitis, et cetera, et cetera.

So what I'm saying is that my sense is that very, very little of this babe's damage was inflicted by any alleged, alleged, negligence on the part of the intrapartum management.

Q. If I understand you, the 75 to 80 percent of the damage, in your opinion, occurred before the intrapartum events, and what happened in intrapartum events may have caused 20 to 25 percent?

A. I don't want to confuse you because, for example, today is Friday. Last Tuesday I might have said 85 percent and 15 percent. What I'm conveying is and what I said on the record is that, for all practical purposes in terms of difference in quality of life, I don't think there would have been a difference.

Q. I understand that --

A. And I cannot really get hung up on 80 percent or 85 --

Q. That's fine.

A. -- or 79.5.

Q. Fine. I'm not going to hold you to that. But what I would like to find Erom you is, whereas you're agreeing the majority happened antinatally --

A. No, I said substantial majority.

Q. -- majority --

A. -- bulk, major, great impact thing.

Q. -- happened --

A. Prepartum.

Q. Prepartum, okay. The lesser damage happened intrapartum?

A. Yes.

Q. I just want you to tell me is intrapartum appropriately defined as approximately five hours or less before delivery?

A. I would give you 24 hours before delivery.

Q. Okay. That's fine. That's all I'm after.

A. Yeah.

Q. Now, I'm going to review my notes here, Doctor, and just see what things I've left out.

(Whereupon, an off-the-record discussion was had.)

BY MR. PROCHASKA:

Q. Your report doesn't comment on any placental lesions that are characteristic of the TORCH infections?

A. That's not true.

Q. Okay.

A. I mean, we spent an enormous length talking about villitis, and that is characteristic of TORCH infections.

Q. All right. Would it be -- I know we have villitis, but if we look at the placenta as a whole, do we not have placental inflammation?

A. I mean, villitis is placental inflammation, so we have placental inflammation.

Q. Okay. As far as you know, are there only two organisms that produce serious perinatal infection in the absence of placental inflammation?

A. That's my opinion.

Q. All right. But it's also your opinion we have an inflamed placenta?

A. That's right. All I'm getting at, just to make life simple -- okay? -- is that --

Q. You don't have to bother.

A. -- is that it's possible that one could get overwhelming disease in the birth process, but I have never seen that with any organisms other than with herpes simplex virus and Group B streptococcus. Does that explain it?

MR. PROCHASKA: Read that back.

(Whereupon, the Court Reporter read back the material requested by counsel.)

THE WITNESS: Now, can we go back on the record? Because within the intent of the answer, I meant overwhelming infectious disease. Is that fair enough? Okay?

MR. PROCHASKA: (Counsel nodded head affirmatively.)

(Whereupon, an off-the-record discussion was had.)

BY MR. PROCHASXA:

Q. Okay. You talked about two plaintiff lawyers. Can you give me a third plaintiff's lawyer you've recently reviewed a case for?

A. You know, I really don't commit those to memory. It's just that those went to trial, so they obviously have a real impact.

In the State of Kansas, which is another way -- since he's always delightfully sends me Christmas cards, is Victor Bergman. Even years later, I looked at a case for him, many, many years ago, he still sends me a Christmas card.

Q. If I ask Mr. Ratner to get from you three cases in 1990 who you reviewed for the plaintiffs and issued an expert report in a deposition, could you send that to him?

A. No, I doubt it because, on some of these cases, in any event, they would be ongoing if it's even 1990. Some of these seems to drag out a long time and I'm not going to get caught up, quite candidly, in whether I've breached ethics or all the rest, you know. I think you're entitled to know the trial cases I remember well because they went to trial and because they're over. But I'm not going to run the risk of -- nor am I going to spend a lot of my time on a thing like that when all you've got to do is go through the Trial Lawyers Association and you'll find all kinds of people -- Unger, up in Minnesota, plaintiffs' attorney, Mike Unger up in Minneapolis, Minnesota.

Q. Okay. Give me one other name and then we'll be done on that issue.

A. Tom Strong, I went to trial for in the State of Missouri, Springfield, Missouri. It's not all that far from you.

MR. RATNER: That's all he's asked for.

BY MR. PROCHASKA:

Q. One more.

A. I can't think of too many more. What I've told you, Strong in Springfield, Missouri. **I've** told you Schlaprizzi. I mean, these are people who are close to home. **It's** not going to cost you a lot of money in long distance. Jim Bartimus, in the State of Kansas, B-a-r-t-i-m-u-s.

MR. RATNER: That's all he's asked for now.

BY MR. PROCHASKA:

Q. How many cases a year presently do you review?

A. Many. The vast majority of them don't go obviously. The absolute bulk of them don't go anywhere near trial, but I review many of them.

Q. More than 30?

A. Oh, yes.

Q. More than 40?

A. I don't know. That's getting up there, but a lot.

Q. Around 40 a year?

A. A lot.

Q. And the majority of those you give a deposition?

A. I guess the majority means over 50 percent, so I guess so. I guess so,

Q. Three hundred dollars an hour per review? I mean per hour per review?

A. Yeah. But it's hard to know, when you say the majority, you know, whether there are. It could be -- in the last year, in the last year, in truth, that would be true. In the last year it's been chaotic, in the last year.

Q. All right. And you do the exhaustive

review on virtually all cases that you do?

A. Absolutely. Except that what I would clarify is that, you know, quite often, when I take these consultations, 40 a year or whatever the number, my opinion would be such that, if there's no case, it's not really a big bill. It's $500. Do you see what I'm saying?

Q. Yes.

A. So I don't want you to get the impression that they all get the big workup and they all get the big bill, you know.

Q. All right. Without going down in detail, just give me an approximate of how much money you made in 1991.

A. I would not do that because clearly that sort of question has been asked and not answered before, and I've been advised not to do that. I mean, I have been very open with you in terms of, you know, Trial Lawyers Association folks to whom you can talk. Obviously the major insurance carriers have consulted me. I've told you that, in the last one year, it's been chaotic. But I am not going to go into personal details beyond that.

Q. All right.

MR. PROCHASKA: I have nothing further.

MR. RATNER: I have no questions at this time, Doctor. Thank you.

* * * * * *

GEOFFREY P. ALTSHULER, M.D.

STATE OF OKLAHOMA)

) ss.

COUNTY OF ____________)

Subscribed and sworn to before me this ________ day of ____________________________, 1992.

____
Notary Public, State of Oklahoma

My Commission Expires:

C E R T I F I C A T E

STATE OF OKLAHOMA)
)
COUNTY OF OKLAHOMA)

I, Annette L. Bean, Certified Shorthand Reporter within and for the State of Oklahoma, do hereby certify that the above-named GEOFFREY P. ALTSHULER, M.D., was by me first duly sworn to testify the truth, the whole truth, and nothing but the truth in the case aforesaid, and that the above and foregoing Deposition was by me taken in shorthand and thereafter transcribed, and the same was taken on the 29th day of May, 1992, at 11:35 a.m., at The Waterford Hotel, in the City of Oklahoma City, County of Oklahoma, State of Oklahoma, in pursuance of and under the stipulations hereinbefore set out, and that I am not an attorney for the parties or a relative of either of said parties or otherwise interested in the event of said action.

IN WITNESS WHEREOF, I have hereunto set my hand and seal this 15th day of June, 1992.

Annette L. Bean
Oklahoma Certified Shorthand Reporter
Certificate No. 01323

L. Bean

ANNETTE L. BEAN, CERTIFIED
SHORTHAND REPORTER FOR THE
STATE OF OKLAHOMA
Oklahoma CSR No. 1323
Texas CSR No. 2571

5 29 92

ALTSHULER (HOYT CASE)

7). Reviewed Dr. Fields B. - Virology 2d edition

11). Prefers to review slides without clinical information

16). Only info he has is that reviewing for Doc.

24). In diseases of developing fetus and child, clinical information will strongly influence the bottom line

27). If you pump into ATLA the record would show I'm pretty much on target

29). Opinion was infection long standing caused asphyxia

57). Can be congenital infections that don't cause brain damage

58). Absolutely true that you can have abnormal placental) findings and not have a baby that has brain damage from the abnormal findings

80). Trained by Benirschke

84). Benirschke deters to him on areas of meconium

85). After him and Benirschke - no one else exists in placental pathology

109). Article by Keenan "vintage what Altshuler had done years ago"- sore spot

124). Nucleated red blood cell theory from article of fetal sheep

127). Half a truth is a whole lie

132). In a "club together in a sense" with other defense experts

141). Can have meconium staining without chronic hypoxia

142). Meconium is common in a post term baby

144). Meconium potentiates or augments inflammation

172). Testified for two patients in last year of two

181). Reviews more than 300 case/year