IN THE SUPERIOR COURT OF THE
DISTRICT OF COLUMBIA
CIVIL DIVISION

PHYLLIS MORAN AND CLARENCE MORAN, individually and as parents and next friends of Jason Moran, a minor,

Plaintiffs,

VS.

COLUMBIA HOSPITAL FOR WOMEN, et al.,

Defendants.

CIVIL ACTION NUMBER 92-03476
Calendar 8, Judge Shuker

The testimony of ELIAS CHALHUB, M.D., taken by telephone at the Mobile Infirmary Medical Center, 5 Mobile Infirmary Circle, Mobile, Alabama, on the 3rd day of February, 1993, commencing at approximately 2:00 o'clock, p.m.

A P P E A R A N C E S
(BY TELEPHONE)

FOR THE PLAINTIFF:	JACK H. OLENDER & ASSOCIATES, P.C. ATTORNEYS AT LAW 1634 EYE STREET, NORTHWEST 11TH FLOOR WASHINGTON, D.C. 20006 BY: HARLOW CASE, ESQ.
FOR THE DEFENDANT - COLUMBIA HOSPITAL FOR WOMEN:	WILLIAMS & CONNOLLY ATTORNEYS AT LAW 725 TWELFTH STREET, NORTHWEST WASHINGTON, D.C. 20005 BY: JEREMIAH C. COLLINS, ESQ.
FOR THE DEFENDANT - DR. MARC JEROME:	GLEASON & FLYNN ATTORNEYS AT LAW 2275 RESEARCH BOULEVARD SUITE 220 ROCKVILLE, MARYLAND 20850 BY: JAMES P. GLEASON, JR., ESQ.

ANGELIA JONES COXE
COURT REPORTER

I N D E X

I, Angelia Jones Coxe, Commissioner and Court Reporter, certify that on this date, as provided by the District of Columbia Rules of Civil Procedure, there came before me at the Mobile Infirmary Medical Center, 5 Mobile Infirmary Circle, Mobile, Alabama, on the 3rd day of February, 1993, commencing at 2:00 o'clock, p.m., ELIAS CHALHUB, M.D., witness in the above cause, for oral examination, whereupon the following proceedings were had:

ELIAS G. CHALHUB, M.D.,

the witness, after having first been duly sworn to tell the truth, the whole truth, and nothing but the truth, was examined and testified as follows:

EXAMINATION

BY MR. CASE:

Q Doctor, for the record, would you please give us your full name?

A Elias George Chalhub.

Q Do you currently reside at 3970 Pinebrook Drive in South Mobile, Alabama?

A In Mobile, Alabama, yes.

Q All right. Have you given a deposition since May of 1992, which I believe is the last time that I took your deposition in the Merriwether case, M-E-R-R-I-W-E-T-H-E-R?

A Yes.

Q On how many occasions?

A Two or three times, perhaps more. I can't remember. Since last May?

Q Yes. In the last eight months, approximately.

A Last eight months, I guess perhaps five to seven times.

Q In those five to seven times, were you testifying

on behalf of a doctor or a hospital in a medical negligence case?

A Yes.

Q Did each of those cases involve the issue that I understand you're going to testify about in this case, that is, causation of a -- injury in a newborn?

A No, I can't tell you that because I can't remember each individual case. I don't know the answer to that.

Q All right. Let me ask a broader question this way. Have you ever, in your professional career, testified that perinatal asphyxia or trauma was the cause of a child's neurologic deficits?

A Sure.

Q On how many occasions?

A At least twice, perhaps more.

Q And do you remember those occasions?

A They were a number of years ago. I think there was a case involving a baby that had multiple fractures of the skull, from forceps and another baby that had persistent fetal circulation.

Q Do you know where those cases were brought?

A I can't remember, I believe one was in

California and one was in Alabama or Arkansas.

Q In the last five years, have you ever testified in a case that perinatal asphyxia was a cause of a child's neurologic deficits in a medical malpractice case?

A Yes.

Q One of those was the California or Arkansas case that you just mentioned?

A No. There have been multiple cases like that.

Q Let me ask it this way. I thought that your answer to my question originally was that you have testified in two, maybe more, cases where you offered the opinion that perinatal asphyxia was the cause of a child's neurological deficits.

A Well, I assumed you were talking about for a plaintiff. That was at that time. But I've testified for defendants on multiple occasions that perinatal asphyxia caused the child's problem,

Q Would that be prior to the labor?

A Well, certainly. That's the definition of perinatal.

Q Is prior to labor?

A Oh, absolutely. That's what -- the World Health Organization's definition.

Q All right. Give me the World Health Organization's definition of perinatal.

A It's from twenty-eight weeks of gestation to seven days postnatally. That's in any standard neonatology textbook.

Q Right. And I believe my last question was, do you remember testifying -- in those defense cases were you testifying that the injury was sustained prior to labor?

A Well, you know, I can't tell you every case, you know, Mr. Case. You know, there's no way to do that. I don't know.

Q Can you give me an example of a defense case where you were offering testimony that perinatal asphyxia was the cause of the child's deficits during the labor period?

A Sure. A ruptured uterus or abruption of the placenta or intrauterine group B streptococcal sepsis.

Q What caused Jason Moran's problems?

A Some insult that occurred approximately thirty to thirty-five weeks of gestation or perhaps a developmental abnormality.

Q What happened at about thirty to thirty-five weeks of gestation?

A Well, there was probably some insult to the internal capsule basal ganglia area of his brain.

Q And tell me every reason why you believe that.

A Well, it's every reason in the chart; that he was a full-term infant, that his Apgars were normal, that his cord gases were normal, he had no multisystemic organ involvement, no evidence of cerebral edema, he's normal cognitively, he had no seizures, and he was only in the hospital four days.

Q And those things that you have just itemized lead you to conclude that this child suffered an insult at thirty to thirty-five weeks gestational age?

A Yes. I also might add that he has a normal MRI scan.

Q What kind of insult did this boy sustain at thirty to thirty-five weeks?

A Well, you know, there's no way to go back into the uterus at the time. But based on statistics in other children in this situation, it would be, you know, some type of either lack of oxygen or blood flow, infection, or developmental abnormality in the region of the internal capsule basal ganglia.

Q Slow down, Doctor.

MR. CASE: Madam court reporter, maybe you can repeat that. Infections, then what?

A Lack of oxygen or blood flow or developmental abnormality in the region of --

MR. CASE:

Q Doctor, please.

A In the region of the internal capsule basal ganglia.

Q So essentially we're dealing with infections or lack of oxygen during that period?

A Or developmental abnormality.

Q Okay. What type of infections might cause the insult that caused this spastic diplegia in Jason Moran at thirty to thirty-five weeks gestational age?

A The most likely probability would be viral, but certainly could be mycoplasma or bacterial.

Q What type of viral infection?

A Adenovirus, Coxsackie, echo.

Q Slow down, please, Doctor. Can you give those to me again?

A Adenovirus, Coxsackie, echo, influenza, parainfluenza.

Q What is an adenovirus?

A It's just an adenovirus. It's a virus which will cause different symptoms at different individuals, depending on their age, sex, and exposure.

Q How does the symptomotology vary according to sex?

A Well, males, in certain infections, particularly viral infections, are more severely involved than females at certain ages, such as newborns. And particularly with premature infants, males seem to be more severely involved than females or more frequently involved with infections.

Q How about female adults about thirty years of age by adenovirus?

A Well, it depends on what her immune status is and what the remainder of her health is.

Q Assume a normal immune status.

A Well, she could have anywhere from a cold to an encephalitis to pneumonia to a myositis.

Q What's myositis?

A Inflammation of the muscles.

Q Are you aware of any evidence of encephalitis or cold or pneumonia or myositis in Mrs. Moran during the thirty to thirty-five-week period of her gestation?

A **No.** I didn't imply that, either.

Q I didn't suggest you did, Doctor.
That's something that -- well, strike that.
Is it safe to say then that, in your opinion, adenovirus is not the bug that, in your opinion, hurt Jason Moran at the thirty to thirty-fifth week of gestational age?
A I mean, I don't know. I didn't say yes or no.
Q So you don't know whether that one caused his injury?
A That's correct.
Q Now, what is Coxsackie?
A It's an enterovirus.
Q E-N-T-E-R-A-L?
A E-N-T-E-R-0. I think it is an RNA virus that was discovered in the 1950's during the polio epidemic in Coxsackie, New York.
Q And how does that cause damage to an infant, let's say like Jason, at the thirty to thirty-fifth week of gestation?
A By inflammation.
Q And does it manifest its infectious process in the mother?
A The majority of the time, no.
Q Okay. And why not?

A You know, I don't know the answer to that. The vast majority of intrauterine infections are asymptomatic in mothers, certainly greater than ninety percent. We don't -- you know, we don't -- there are just different mechanisms for different viruses.

Q How does one diagnose the presence of Coxsackie?

A Well, if you had any symptoms in the mother or any indication after birth, then one might obtain antibody studies, culture the child or the mother, and you'd have about a forty percent chance of recovering the agent.

Q What type of antibody studies?

A Excuse me?

Q What type of antibody studies?

A Either neutralizing antibodies, hemagglutinin inhibition antibodies, depending on which test you ordered.

Q What types of symptoms in the mother might lead you to request such a study?

A Well, if you had suspected -- you know, if she had an obvious cold or URI, or muscle soreness or headache, that might suspect you. But as I told you, that doesn't happen very often.

Q And it's your testimony that that happens less than ten percent of the time with Coxsackie infection?

A Yes.

Q You suggested that maybe the condition of the infant might cause you to perform a culture. What about the condition of the infant might cause you to perform a culture?

A We'll, I mean, it depends on the gestation and the symptoms and the presenting features.

Q What about the gestation? What might lead you to perform a culture?

A Well, a number of premature infants are born as a result of infection. If the infant had -- well, that's in terms of relating to gestation.

Q How premature does the infant have to be in order for you to want to culture for Coxsackie?

A Oh, I didn't say for Coxsackie. You said for infection in general. I mean, I'm kind of -- you're kind of mixing apples and oranges and not very specific with your questions, so I didn't imply that, either.

Q All right. What does -- does Coxsackie cause premature rupture of the membranes or something?

A Well, it causes premature delivery and the majority of the time the membranes rupture prematurely.

Q Why does it cause premature delivery?

A Why? I don't know.
Q Does it always cause premature delivery?
A Does it always? No.
Q In what percentage of cases does it cause premature delivery?
A I don't know the answer to that.
Q Is that what caused Jason's problem in this case, Coxsackie infection?
A No. I -- and I mean, I don't know. But I doubt it.
Q Why do you doubt it?
A Because it's unusual.
Q How unusual?
A It's a possibility, not a probability.
Q You can't be any more specific?
A No.
Q How many infants born in this country are born with a Coxsackie infection?
A I don't think anybody knows the answer to that, Mr. Case, because nobody cultures all infants.
Q And is it safe to say it's less than one percent?
A I don't know. I'm not sure how you could arrive at real statistics.

Q How would influenza cause viral infection at thirty to thirty-five weeks that might cause the infant to be damaged neurologically?

A Well, the mother would get the infection, the infection would go to the infant, and it might manifest itself in motor problems or interruption of organizational problems of brain, or in terms of vasculitis.

Q Any evidence of that in this case?

A Oh, you have motor problems. I mean, you have a spastic diplegia or spastic quadriplegia with greater involvement in the lower extremities with normal cognitive involvement. So yes, you do.

Q So do you think influenza did it in this case?

A I have no way to know. I mean, there's just no way to be certain.

Q Well, assume for me that the mother didn't experience any signs of influenza during the thirty to thirty-fifth week. Can you rule it out then?

A No. I've told you that greater than ninety percent of women are asymptomatic for the majority of viral infections. So, no, that doesn't rule it out.

Q All right. So more than ninety percent of the people who have influenza just don't show the signs of it?

A No. The babies don't show the signs of it. And the mothers, you know, who may have a silent infection, may or may not show evidence in their baby.

Q Is it your opinion that influenza is somehow the cause of his problem in this case?

A The probability is no. But again, you know, I don't know.

Q What is the parainfluenza?

A A parainfluenza is -- there are types one, two, three and four. It is a respiratory virus, it's an RNA virus, that will cause multiple types of presentations of infections in different situations and different ages.

Q What type of different presentations at different ages?

A Pneumonia, pharyngitis, laryngotracheobronchitis.

Q Are you talking in the newborn or in the mother?

A You just asked me in general. I mean, I was giving you the types of infections it causes.

Q Are you talking in the newborn or the mother?

A Which do you want?

Q Either, Both.

A Well, it's going to vary.

Q Well, let's start with the mother.

A Pneumonia, sore throat, myositis, laryngotracheobronchitis, bronchitis, possible central nervous system involvement.

Q And how about in the newborn?

A It can -- well, you know, we don't know the complete presentation. If it was cultured, you can oftentimes have an infant that may have microcephaly, that may be delayed, may have a motor deficit, may have some congenital abnormalities.

Q If the child were infected with this virus during the thirty to thirty-fifth week, would they still have the bug when they are born?

A It may or may not.

Q What does that depend on?

A It depends on the virus, the host, and the immune response.

Q How does the mycoplasma cause the neurologic damage in an infant?

A It can cause it by inflammation, by a meningitis, by a vascular compromise as a result of that is generally the way. It's -- I'm not sure we actually understand the total pathophysiology of mycoplasma. It also is a higher incidence in causing premature deliveries and miscarriages.

Q Are you saying that you don't think mycoplasma is the probable cause of Jason's neurologic deficits in this case?

A No, I don't.

Q What type of bacterial infections might cause this, assuming they were sustained at the thirty to thirty-fifth week of gestation?

A You know, there's just a whole host of bacteria that, if infected at that time, and -- you know, could cause them. Gram negative, gram positive organisms.

Q Did you see any evidence of that in this case?

A Do I see any evidence of that?

Q Do you see any evidence of that?

A Well, you see the end result of having an infant that had -- probably has a lack of oxygen or blood flow in the region of the intracapsular basal ganglia. The etiology is not clear because one cannot go back and mark that. But you clearly know that this is not an intrapartum or event around the birth and delivery process.

Q Is it fair to say that until the membranes rupture an infant is usually well protected from microbes?

A No.

Q That's not fair to say?

A No. That's not fair to say.
Q I assume you disagree with Dr. Avery's book, Diseases of the Newborn, where, on page seven thirty, he says, throughout pregnancy and until the membranes rupture the infant is usually well protected from microbes?
MR. GLEASON: What edition are you reading from, Harlow?
MR. CASE: Fifth.
THE WITNESS: Which edition and what page?
MR. CASE: Seven thirty.
THE WITNESS: Well, I don't have that edition with me. I don't think I can answer that without looking at it, Mr. Case.
MR. CASE:
Q Well, what's wrong with the statement that Dr. Avery makes --
A Well, *of* course --
Q -- that throughout pregnancy and until the membranes rupture the infant is usually well protected from microbes?
A There's nothing wrong with the statement, but it's out of context. And, you know, I don't like to read things --

Q Tell me why you disagreed with Dr. Avery's statement.

A I don't disagree with it. I don't have an opinion without reading it totally in context. If you want to, you know, send it to me or ask it to me at a later time I'm happy to do that.

Q My understanding was that you disagreed with that statement when I first asked it, Doctor.

A No.

Q Now I want to know why you disagreed with it when I first asked it.

A No, I don't dis --

MR. GLEASON: He told you, Harlow, that he can't respond to the specific quote that you have given.

MR. CASE: Well, with that answer, he knew that Dr. Avery said it.

THE WITNESS: First of all did Dr. Avery write the chapter or is it from Dr. Avery's book?

MR. CASE:

Q Doctor, when were you first contacted about this?

A October the 8th, 1992.

Q Who contacted you?

A You know, I don't recall whether it was Mr. Gleason or a member of his office.

Q Was that the second time that his office had contacted you?

A Yes.

Q The Merriwether case and this case, you've ever been contacted by Mr. Gleason's office? (Sic.)

A I believe he's contacted me on one other case.

Q When was that?

A I don't -- sometime last year.

Q Did you agree to become involved in that case?

A I don't believe so, I think I reviewed that case and we discussed it.

Q What did you discuss about that case?

A Well, I don't remember the details of the case, to be honest with you. And I don't know what status it's in, so I'm not sure I would be appropriate to discuss that without Mr. Gleason's permission.

Q Did you agree to become involved in that case as an expert?

A No, I don't believe so.

Q Did you agree not to become involved as an expert?

A I think that that's still in discussion.
Q Why is it still in discussion?
A Well, you will have to ask Mr. Gleason.
Q He's not being deposed here, Doctor. You are. Can you tell me why?
A Well, I understand that. I can't remember why, you know, so I can't tell you.
Q Why did Jason Moran have a one-minute Apgar of one?
A Why? I -- I don't know. I suspect that he was obviously depressed at one minute, which is not unusual, really doesn't correlate with any long-term problems. But I don't know the reason.
Q What's the mortality rate for infants who have a one-minute Apgar of zero to three?
A A one-minute Apgar of zero to three? Probably very low. I don't think we -- I'd say less than one percent.
Q And can you direct me to any scientific literature that supports your statement that the one-minute Apgar of zero to three correlates to a mortality rate of less than one percent?
A Well, that would be certainly my twenty years of

experience, and I think most writings in neonatology would support that. You know, it's obviously dependent on what the remainder of the circumstances are, what's the five-minute, the ten-minute Apgar, what's the condition of the infant, what's the cord gas, what's the evidence of other organ involvement, what's the nature of the neurologic deficit. All those would obviously play a factor.

Q I assume you would disagree with the statement that an infant with a zero to three score at one minute have a mortality rate of five to ten percent?

A Well, if there's no further information, I would disagree with that.

Q And why?

A Well, you know, there -- a number of infants have Apgars of less than three at one minute and, in fact, the vast, vast majority are absolutely normal.

Q I wasn't suggesting that the vast majority were abnormal. I want to know why you disagree with the notion that infants with a zero to three score at one minute have a mortality rate of five to ten percent.

MR. GLEASON: Mortality?

MR. CASE: Mortality. They die.

A Well, first of all, that wouldn't be my

experience. That's not my understanding of the literature, and that's certainly not what I have been trained or have knowledge in. So I'd -- you know, I'd say it's certainly inconsistent with my learning.

MR. CASE: Jim, this is from Neonatal Perinatal Medicine, Fifth Edition 1992, Volume Two.

MR. GLEASON: Say it a little slower, Harlow.

MR. CASE: I'm sorry I'm getting into that habit.

MR. GLEASON: Neonatal Perinatal Medicine?

MR. CASE: Fifth Edition.

A Who is the author?

MR. CASE:

Q Fanaroff, Mosby.

A What page is that on?

Q Seven-o-five, Doctor.

A Let me see if I have the right -- well, I guess -- which edition is that, fourth edition?

Q Fifth. It's 1992, this year's edition -- last year's edition.

A I don't have that. I'm sorry.

Q Do you have the fourth edition?

A Yes.

Q Do you refer to it from time to time?
A From time to time.
Q Why do you have it in your library?
A Because I'm a physician.
Q And do you have it there so that you remain current and up to date on developments in your field?
A No. I had it at one time. It's obvious that most textbooks are out of date when you buy them.
Q All right. So is it still there on your shelf, the fourth edition?
A Yes.
Q Why is it on your shelf?
A Well, you know, I have a lot of books on my shelf which I probably should discard.
Q So is that one that you are going to be discarding before trial?
A No, Mr. Case, I don't intend to discard it before trial. I don't intend to go through my books.
Q The fifth edition, the current edition? (Sic.)
A What about it?
Q Have you ordered it?
A No, I haven't ordered it.
Q Do you intend to?

A No.
Q Why not?
A Why should I?
Q Why did you order the fourth edition?
A Because at the time I thought it was a good textbook.
Q And now you don't believe it's a good text?
A No, I -- I think it's still a good text.
Q All right. But you don't want the fifth edition?
A No. I -- it's not that I don't want it. I mean, I have no -- you know, I have no plans to order it, I mean, whether I want it or not.
Q What other texts do you have in your library there on neonatal perinatal medicine?
A Volpe's editions, the -- several previous editions of Avery. That's only in this library. I -- you know, I have another library in my other office at my home.

So I have a number of journals on pediatrics, Journal of Pediatrics, Perinatal Clinics, Pediatric Neurology, The Practice of Pediatric Neurology and so forth.
Q Are any of those texts that you have in your library authoritative?
A What do you mean by authoritative?

Q You don't know what the word authoritative means?
A Well, it's been my experience that different people have different meanings. If you would just kind of tell me what you mean I'll be glad to tell you.
Q That you would look to as an authority.
A Well, I -- you know, I would say what I consider authoritative is a text that I would refer to from time to time that I think is reasonable, reproducible, and may agree with some or all of what is printed if it is reproducible by other authors and consistent with the literature.
Q Are any of the books in your library authoritative as you use that term?
A Oh, yeah. I would think so.
Q Which ones?
A I mean, all the ones that I mentioned, you know, would meet that definition.
Q How about the Volpe, "Neurology of the Newborn?"
A It's an excellent textbook.
Q You would agree that it's authoritative?
A By my definition.
Q And how about Dr. Avery's books?
A I think it's also an excellent textbook.
Q And authoritative?

A Well, you know, by my definition, stating that there is some excellent information that oftentimes is reproducible. I don't agree with everything in there or sometimes how it's stated, depending on the author who writes the chapter. Volpe was written by Volpe. Avery is written by many, many authors.

Q Any authors that jump out to you as being a particularly unauthoritative?

A No.

Q Any that are particularly authoritative?

A I -- I don't know what "particularly authoritative" means, so I don't know how to answer that.

Q Authoritative within your meaning.

A Oh, I -- yeah, I think there are probably a number of them. I can't remember all the authors from Avery so I can't tell you that for sure.

Q And do I understand that you don't know the cause of Jason Moran's one-minute Apgar score of one?

A Oh, well, the baby was depressed. It was probably related to his previous neurological deficit. But again, I'm not certain. I don't know the cause.

Q Would this baby have had a persistent bradycardia since his viral insult, is that your testimony?

A I don't believe I've ever made that statement, Mr. Case.
Q I didn't say you did. I wanted to know if that was your testimony.
A Well, I would assume that if it's testimony -- no, it's not my testimony.
Q All right. Why was the baby born with no tone?
A Why was the baby born with no tone? Because it was depressed at birth at one minute.
Q Which is the first -- what are the scores in an Apgar score? What are the different measuring sticks?
A Heart rate, tone, reflex ability, color, and respiration.
Q Which of those is the first to become compromised when an infant experiences an episode of perinatal asphyxia?
A Well, it depends on when -- it may be none, okay, or it may be all or it may be some. It depends on what the etiology is, when it occurs, and what gestation.
Q So depending on when it occurs in the gestation, a baby might lose the heart rate first before it loses its tone? Is that your testimony?
A Well, you keep using the word perinatal, and I -- you know, I -- if you are using my definition, then if it

occurred at thirty to thirty-five weeks the baby may have no problems or may manifest some problems at birth.

Q In what order, though, when a child suffers from perinatal asphyxia, do -- does he suffer a diminution in tone?

A I don't think I understand that question.

Q All right. Strike it. Let me try it again. Is the heart rate the last thing to go when a baby is suffering from perinatal asphyxia?

A I can't answer that question.

Q Why not?

A Because I don't understand it.

Q In other words, Doctor, is the baby going to lose tone, reflex, color, and respiration before he totally loses his heartbeat?

A It depends on the problem.

Q And what about the problem has an impact on whether he loses the heartbeat last?

A Well, it depends on what the etiology of the difficulty is.

Q Well, explain to me what about the etiology with impact whether the heart rate goes last.

A Well, if an infant has a cervical cord injury and

is blue, has no tone, no respirations, no reflex ability but may have a normal heart rate; or if he has congenital muscular dystrophy, he may be the same case; or if he has a congenital myopathy such as a mitochondrial myopathy.

Q When a baby is resuscitated -- let's assume you've got a baby like Jason who has no tone, no reflexes, blue color, no respirations, and a slow heart rate. Will you agree that that was his condition at birth?

A Well, the description is a one at one minute for the heart rate and the rest are zeros.

Q So is that yes?

A No, that's what I said.

Q Doctor, did he have respiration at birth?

A No.

Q Did he have color at birth, was he blue?

A It says it was zero, it doesn't say what color.

Q What color are you assuming he was?

A Blue.

Q So he was blue at birth?

A I'm assuming that. It doesn't say that.

Q What about his reflexes? He was floppy?

A He had decreased -- obviously had decreased tone if he had a zero, yes.

Q Did he have any tone at all?
A Not according to this.
Q And did he have any reflex action at all?
A No.
Q So he was born without respiration, blue in color, no reflexes, and no tone and a slow heartbeat; is that correct?
A Correct.
Q When an asphyxiated infant who has suffered perinatal asphyxia is resuscitated, in what order do those Apgars come back?
A Which Apgars?
Q Those categories, in what order do they come back?
A Well, I mean, which Apgars, five, ten, twenty, thirty minutes. Which ones?
Q I'm talking about the categories, Doctor. Does the heart rate respond most quickly, does the reflexes respond more quickly?
A Well, it depends on the cause, Mr. Case.
Q All right. Let's assume perinatal asphyxia from an asphyxial insult at birth.
A There's a hundred of those causes. So which one

are you talking about?

Q A kid having his head trapped for too long and not getting oxygen.

A Well, I wouldn't -- you know, if you're talking about this situation, obviously the child had no problem as a result of that.

Q Obviously, Doctor.

MR. GLEASON: So stipulated.

MR. CASE:

Q Could you answer my question, please?

A I did the best I could, Mr. Case.

Q No, you didn't. Now, answer my question. A kid gets his head trapped at C section and becomes asphyxiated as a result. In what order do the categories of Apgar come back, assuming he's born with a one-minute Apgar representing a low heartbeat?

A What's the criteria for asphyxia then?

Q Doctor, what do you mean?

A Well, I mean, what is the criteria to establish that the baby was asphyxiated? You're saying a one-minute Apgar reflex, that -- no, that is not the case. So tell me what the criteria is in that particular situation. Is the kid on a ventilator? Is he having seizures? Does he have

heart failure, renal failure?

Q Doctor, I think you're getting a little bit ahead of yourself. I'm asking you in what order, when that kid is resuscitated, the categories of Apgar come back. Is that something you're unable to do?

A As you asked the question, it is, Mr. Case. I don't understand what you are trying to get out without an appropriate question.

Q I'm sure you don't, Doctor.

A Now, don't get mad.

Q Is there any literature that recognizes or advocates that the time it takes an asphyxiated infant at birth to recover his respirations is equivalent to the time that the asphyxial insult occurred prior to birth?

A I don't know the answer to that.

Q You're not aware of anywhere in the literature where that's suggested?

A No. I just don't know where it is. If it is, I'd be happy to look at it.

Q You've never heard of that before?

A No.

Q Do you try to stay current on the literature?

A Excuse me?

Q Do you try to stay current on the litearture, Doctor?
A I do.
Q And how do you do that?
A By reading.
Q Do you read all of the journals or do you just read the parts that interest you, the particular subjects that interest you?
A I -- do you mean reading all of the journals meaning what? Meaning journals in my field or journals that I may select or what?
Q You have just recited earlier this afternoon the journals that you subscribe to. Do you read them cover to cover, or do you look at the front of the journal and say this part interests me and this part interests me so I'm going to read those?
A Well, let's first be clear. I did not recite the journals that I subscribe to. You didn't ask me that. But when I do look at journals, if there are articles of interest then I will read them. If there are articles that I do not feel I wish to pursue, I won't read them.
Q What journals do you subscribe to?
A The New England Journal of Medicine, The Journal

of Pediatrics, Pediatrics, Neurology, Archives of Neurology, Pediatric Clinics of North America, Perinatal Clinics, the Neurology Clinics, The American -- let's see, the AMA Journal, and I can't remember the name of it -- the Journal of the American Medical Association, Brain, there may be a few more. That's all that come to mind right now.

Q Why do you subscribe to those journals?

A Because I think that they have good material in them.

Q And that's one way you stay current in your field?

A Yes.

Q What is your field?

A I'm a neurologist with special competence in child neurology.

Q How did you get that special competence?

A I took the boards.

Q Anything else?

A How did I get the special -- well, I mean, I obviously went through the appropriate training program, was recommended by the head of the training program, took the board certification, and was accredited.

Q Describe for appropriate training program.

A A pediatric internship, pediatric residency, adult neurology, special NINDS fellowship, and then child neurology NINDS fellowship

Q What is NDS?

A NINDS, National Institute of Neurological Diseases and Stroke.

Q Where is that?

A Where is that? In Bethesda, Maryland.

Q And when did you complete that?

A No, that was the award for -- by the NINDS for the fellowship to the institution that I did it at, which was at Washington University in St. Louis.

Q In what jurisdictions have you testified in deposition as an expert witness?

A Mostly in the southeast. Florida, Georgia, Mississippi, Louisiana, obviously Washington, Maryland, California, Arkansas, Texas, Cleve -- Ohio. There may be a few other states.

Q Out about out of the country, have you looked at any cases out **of** the country?

A No.

Q When is the last time you have testified in Maryland in a case?

A I don't think I've ever testified in the State of Maryland.

Q Have you given a deposition in a case pending in Maryland?

A Yes.

Q How long ago?

A It's been a number of years.

Q Do you remember the plaintiff's attorney's name?

A No, I don't.

Q Did you ever give a testimony in a -- deposition testimony in a case where Andy Greenwald was the plaintiff's attorney?

A The name sounds familiar, but I don't remember.

Q And that's -- if that had occurred that would have been several years ago?

A I don't recall.

Q Could it have been last year?

A It's possible.

Q And it's your testimony you have never been to Maryland to a deposition?

A You know, I can't -- you know, my memory doesn't serve me well whether it's in Maryland or in the District. I can't honestly tell you.

Q When is the last time you gave a deposition in the District?

A I don't recall. You know, sometime in the last two years.

Q Was that a case where Mr. Olender took your deposition?

A That was one of them, yes.

Q Was there others -- were there others?

A That I went to Washington? I don't believe so.

Q What materials have you reviewed in this case?

A A copy of the complaint, the MRI scan that was provided to me, day-in-the-life film, medical records regarding Phyllis Moran from Marc Jerome, Columbia Hospital for Women, Robin Winfield or Weinfeld, the medical records regarding Jason Moran from Columbia Hospital for Women, Pediatric Therapy Services, Fairfax County Health Department, Fairfax Public School Records, the Children's Hospital National Medical Center, St. Louis Children's Hospital, Georgetown University Medical Center, some depositions by -- I'm sorry, there's also some medical records from the Vienna Family Medicine, a psychological development report by Dr. Menski, a deposition of Dr. Scanlon and Dr. Wert.

Q Any others?
A No, I believe that's it.
Q Did you ask to review any other materials?
A Excuse me?
Q Did you ask to review any other materials?
A No.
Q Did you generate any report in the case?
A No. Mr. Gleason has not asked for a report.
Q Doctor, what are the causes of spastic diplegia?
A In who, when, and what situation?
Q Anybody. What are the possible causes of spastic diplegia?
A An aneurysm, a cerebrovascular accident, an infection, a toxin, drugs, trauma, alcoholism, a vasculitis from a systemic disease, spinal cord injury, lack of oxygen and blood flow to the internal capsule and periventricular area. I think that's about it for -- at least that I can recall.
(Pause.)
A Are you still there?
Q Yeah.
A Okay.
Q Your testimony in a nutshell, Doctor, is that you

don't know the precise cause of Jason Moran's neurological deficits, but you do know that they are not related to any insult or asphyxia that may have occurred at birth; is that true?

MR. GLEASON: I would object to the form of that. You may answer, Dr. Chalhub.

A I would object to paraphrasing me inappropriately, so no.

MR. CASE:

Q What's your opinion?

A I've already given it to you for the past hour.

Q Give it again. What's your opinion about the cause of this child's neurological deficits?

A That Jason Moran suffers from a motor deficit, spastic quadriparesis, greater in the lower extremities than the upper extremities, secondary to an intrauterine insult approximately thirty to thirty-five weeks either related to a lack of oxygen or blood flow, infection, or developmental abnormality.

Q But you don't know what infection?

A No, I don't.

Q Can you point to anything in the record regarding -- that would help us understand which organism infected

this child?

MR. GLEASON: Harlow, I'm not -- you can ask whatever questions you want to ask. I just think you've thoroughly explored this area at an earlier point in the deposition. So if you want to ask him, you can do it, but I think he's given you as best an answer as he can to it. If you want to go into that area again --

THE WITNESS: I agree. I really don't have much else to say.

MR. CASE:

Q So I think so fair to say that -- well, strike that.

What are echoviruses?

A It's an enterovirus, an RNA virus.

Q And are you able to exclude that in this case?

A Am I able to exclude it?

Q Yes.

A Not totally. You know, do I think it's a probable cause, no.

Q It would be highly unlikely, wouldn't it, Doctor?

A I would say it's not a probable cause.

Q And, in fact, you're not able to say that any of

the viruses that you have identified or bacterial infections or any of the other infections are a probable cause in this case?

A Well, no. You know, as -- you asked me -- you know, we've been through that for an hour, Mr. Case.

Q I don't think I've been on the phone for an hour, Doctor, but go ahead. Your time may be different down there than up here.

A Well, my time shows that you have been on the phone for an hour, but --

Q It's five of 4:00, and the call wasn't placed until 3:00, Doctor.

A Well, you guys have different times than we do. But anyway, I won't argue with you about the time.

What's your question? I'm sorry, I don't know the question pending.

MR. **GLEASON:** He's thinking about it, I think.

MR. CASE:

Q Doctor, what's your hourly charge for reviewing cases?

A A hundred and seventy-five dollars.

Q How many hours do you have in this case so far?

A I guess approximately six to eight hours.
Q Have you billed for that time yet?
A You know, I honestly don't know. You could certainly ask Mr. Gleason, and if he has it I'd be happy for him to give it to you.
MR. GLEASON: I don't think so at this time, Harlow. If I have it, I'll send it to you if you want.
MR. CASE:
Q Are you still flying first class, Doctor?
A Well, it depends on where I'm going and how my income is at that time.
Q Well, if you come to trial are you going to fly first class?
A I may or may not. It depends upon the availability and what I have to do.
What do you fly, Mr. Case?
MR. GLEASON: Let's -- Mr. Case doesn't have to answer question, Dr. Chalhub. Let's try to move along.
THE WITNESS: Well, I think that's a ridiculous question.
MR. CASE: Well, off the record.
(Off the record.)

MR. CASE: Doctor, that's all I have. Thank you very much,

MR. GLEASON: We will -- Madam reporter, I'd like -- this is Mr. Gleason, and I do want a copy. I assume -- Jerry, do you want a copy?

MR. COLLINS: Yes, I would like a copy. No questions.

MR. GLEASON: Okay. I'm sorry. And I don't have any questions, either. But anyway, I do want to make sure that Dr. Chalhub has an opportunity to review the transcript, given that we're conversing by telephone here. And, you know, I want to make sure nothing was lost one way or the other. So usually I have a copy sent to me, but since you're down there you can send the copy to -- directly to Dr. Chalhub for review and then he can provide an errata sheet and send that to me. Is that okay, Doc?

THE WITNESS: That would be fine.

MR. GLEASON: Madam reporter, is that acceptable?

THE REPORTER: Yes, sir. That's fine. I'll take care of it.

MR. GLEASON: Then if you would go ahead and

send the copies -- unedited copies around to counsel before, that would be appreciated. Okay?

THE REPORTER: Yes, sir.

MR. GLEASON: Okay, Doc, I guess that's all for you.

FURTHER, THE DEPONENT SAYETH NOT.

CERTIFICATE OF WITNESS

I, ELIAS CHALHUB, M.D., do hereby certify that on this the _____ day of _____, 1993, I have read the foregoing transcript and, with corrections attached hereto, if any, it constitutes a true and accurate transcript of my testimony taken on oral examination on February 3, 1993.

_____
ELIAS CHALHUB, M.D.

Subscribed and sworn to before me this the ____ day of _____, 1993.

_____
Notary Public

My Commission Expires: _____

C E R T I F I C A T E

STATE OF ALABAMA)
COUNTY OF MOBILE)

I do hereby certify that the above and foregoing transcript of proceedings in the matter aforementioned was taken down by me in machine shorthand, and the questions and answers thereto were reduced to writing under my personal supervision, and that the foregoing represents a true and correct transcript of the proceedings given by said witness upon said hearing.

I further certify that I am neither of counsel nor of kin to the parties to the action, nor am I in anywise interested in the result of said cause.

ANGELIA JONES COXE
COURT REPORTER

DEPOSITION OF ELIAS CHALUB, M.D.
[Estate of Jason Moran]

TAKEN ON February 3, 1993
by HARLOW CASE, ESQ.

Pg/Ln	
42/14-19	.... related **to** Lack of oxygen **or** blood flow, infection or developmental abnormality

Feb 3-1993 - MORAN v. COLUMBIA.

42/14 - [illegible] related to lack of oxyg, injury or developmental abnormal[illegible].