In The Matter Of:

Mark Turner, et al v.
City of Chicago, et al

Michael S. Radetsky, M.D.
Vol. 2, February 8, 1996

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IN THE CIRCUIT COURT OF COOK COUNTY ILLINOIS
COUNTY DEPARTMENT LAW DIVISION

NO 91 L 21091

MARK TURNER a disabled person by his
co-guardians DIANE TURNER and WILL TURNER,
Plaintiffs

vs

CITY OF CHICAGO a municipalcorporation d/b/a
MUNICIPALCONTAGIOUS DISEASE HOSPITAL et al ,

Defendants

TELEPHONE DEPOSITIONOF MICHAEL S RADETSKY M D
VOLUME II
February 8,1996
9 15 a.m
500 Marquette Northwest Suite 280
Albuquerque, New Mexico 87102

PURSUANT TO THE ILLINOIS RULES OF CIVIL PROCEDURE
this deposition was
TAKEN BY MR BARRY GOLDBERG
ATTORNEY FOR THE PLAINTIFFS

REPORTED BY MARY ABERNATHY SEAL, RPR, RMR. RDR. NM CCR #69
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INDEX PAGE

Page 218

A: Well? I can't answer it, sir, without looking at the context. I didn't copy down the word "fretful."
Q: Well. whether you copied it or not, what do you assume the word to mean?
MS. McDONALD: I think he's indicated he needs to see it in the chart. You know, maybe to speed things up there are some -
MR. GOLDBERG: That's not the point. I'm asking you, as a physician. what does the word "fretful" mean to you, whether it's in the chart or not?
A: It means what it means in the context in which it's used. It's very hard to answer unless I know the context.
Q: Well, Doctor, answer the question anyway.
A: Mr. Goidberg, I have answered the question.
Q: You haven't.
MS. McDONALD: He's answered the quesuon.
Q: Do you know what the word "fretful" means? Yes or no, medically?
MS. McDONALD: He's indicated it means different things in different contexts.
Q: What does it mean, Doctor?
MS. McDONALD: That's a perfectly adequate answer.
A: I have answered the question. sir.
Q: You, haven't, sir. I'm waiting for an answer.

Page 219

Either you know, you don't know, or -
MS. McDONALD: Or it has a different meaning in different contexts.
MR. GOLDBERG: And I'm waiting for an answer.
MS. McDONALD: That's an answer.
A: If you want to point to a particular area in the chart and I can point to it -
Q: I'm not pointing to anything, Doctor. I'm asking you. as a physician, what the word "fretful" means.
MS. McDONALD: And he totd you it means different -
Q: I'm waiting for an answer to the question.
MR. GOLDBERG: Read it back to him.
(The record was read by the reporter.)
A: It means different things in different contexts.
Q: Tell me all the different things it means to you, Doctor, as a physician. And give me the contexts.
A: That's an impossible question to answer, sir.
Q: I don't think so, Doctor, and I'm waiting for that. My experts were asked the question. I'm now asking you.
A: Don't yell at me, sir.
Q: I'm not yelling.
A: I have answered the question.
Q: Tell me what "fretful" means or we terminate the deposition. I will go to court and get an order.

Page 220

MS. McDONALD: He answered the question.
MR. GOLDBERG: No, he hasn't answered the question, and I'm waiting.
Q: Tell me all the different meanings that you consider "fretful" to mean.
A: I don't consider "fretful" to mean any particular limited series of things. In the opinion of whoever uses the word, it obviousiy has a descriptive meanung regarding the behavior of a person. What that descriptive meanung is depends on the context in which it's used.
I'm sorry, sir. I'm not finished. And therefore, in order for me to try to answer the question what does "fretful" mean, one needs to look at the context.
Q: I'm reading from a note that says, "Fretful at times." What does that mean?
A: Can you refer me to the note?
Q: It's a note on page 45 on the date of the 8th. "fretful at tunes." What does it mean?
A: I'm fmding that parucular point, if you'll just wait a moment. Now. is that from a progress note?
Q: No, it's from a nurse's note.
A: Okay.
Q: You will have either page L83, or 45 is the number, one of the two. Do you have the original?
(A discussion was held off the record.)

Page 221

Q: 12:00 is the time, Doctor.
A: I'm still looking for it, sir.
Q: Do you have the nurses' notes in your copy of the chart?
A: Well, as I said, I'm looking through the notes that I have in order to try to find the nursing notes.
Q: Have you found them yet? Are your pages numbered in the lower right corner, Doctor?
A Some of them are, sir, and some of them aren't.
Q: What are the pages that you have? What series? L or -
A: I have a number of different piles of things here that were all the notes.
Q: I'm talking about the chart itself. Do you have that?
A: The chart I have is in loose-leaf form. It is not stapled and it does not have a three-ring binder on it.
Q: In the bottom right corner, is there a number, or a letter and a number?
A: Well, one packet, for example, has numbers. Another packet has numbers. Some of them - they all seem to have - well. I take that back. Most of them have numbers. Some of them do not. And I can't seem to find that particular nursing note that you're referring me to. Maybe you can -
Q: I'm giving you the number coding system, Doctor,

Page222

that's on my copy. L83 or 45. Nurses' notes from the date of the 8th.

A: I can't find them in my copy of it, sir.

MS. McDONALD: They're not in my copy, either, for some reason. This was maybe from the original chart. I don't know.

MR. GOLDBERG: This is the copy that I have. and this is what you made from the original.

MS. McDONALD: But I'm just pointing out for some reason they're missing in my chart, too.

A: I do not have that.

Q: (By Mr. Goldberg) In your copy of the chart you received. you don't have any nurses' notes?

A: No, I do not have that number 45 on a nursing note.

Q: You have L83? Doctor, I don't want to belabor this. Find the nurses' notes you do have, and find the date of January 8.

A: Well, you know something, Mr. Goldberg? That's exactly what I'm trying to do.

Q: Well, that's what I'm waiting for.

MS. McDONALD: Let me just say, it may be missing, because it's missing from my copy, but if he looks on it - maybe you have the one from January 4. There's also a reference in there on the nursing notes.

MR. GOLDBERG: I'm not interested in January 4.

Page 223

I'm interested in January 8.

Q: Do you have that in the materials that were sent to you. or not?

A: I do not find a copy of nursing notes from January 8.

Q: How about January 9?

MS. McDONALD: That would be the same page, wouldn't it?

Q: On January 13 or 15.

A: Well, you know, maybe when you fax the other materials, sir, you could just fax those to me and I'd be able to have them.

Q: I will do that, but I'm trying to find out, Doctor, whether in any of the materials you have been sent and the material you reviewed, in any of those, did you have the nurses' notes, the complete set of nurses' notes from the 27th until the time of discharge?

A Well, I certainly had nursing notes up until the - let's see. Up until the 7th, I have nursing notes. But I can't find any nursing notes after the 7th.

Q: Have you taken a thorough look, Doctor?

A: Well. I'm relooking for the second time now, sir.

Q: All right. I want to make sure that we don't have an error in that you weren't given adequate time to review the records. If you have looked at them and you're convinced and

Page 224

thoroughly satisfied they're not there, then I'll take another procedure.

A: Let me look in one last place, if you will.

Q: All right.

A: Voila, I found it. I found the nursing notes with a 45 at the bottom. Is that what you were asking for?

Q: There is a page -

A: Yes. I see it.

Q: - of the nursing notes that has 45 with the top of it having 1/7/71, 1/8/71 and 1/9/71.

A: Well, the nursing note I have that has a 45 on the bottom says MarkTurner with a number, physician's reference, 1/7/71 at the top, so that's - I do have a copy right here.

Q: Okay. So then if you drop down some lines, you see 1/8?

A: Got it.

Q: Yes?

A: Got it.

Q: I can't hear you, Doctor.

A Yes, sir, I have it.

Q: Thank you. Can you speak into the microphone, Doctor? We hear you better.

A Okay. How's this?

Q: See there next to the day 1/8/71, it says, "Fretful at times"?

Page 225

A: Yep.

Q: What does that mean to you?

A: Well, inasmuch as there's no other modifying phrase with it, in reading that over, I would assume that to the observer, the child seemed to her to be worried or concerned or a little bit uncomfortable at the time. But it wasn't a constant thing; it just happened from time to time.

Q: Have you given me the answer to that question now, Doctor?

A: Yes, I have.

Q: Okay. Immediately above that, on the same page, you see it says 1/7/71?

A Yes, I see that.

Q: You see it says, "Very irritable when disturbed?

A Yes.

Q: What does that mean to you?

A: It means the child cries when disturbed.

Q: Have you finished the answer, Doctor?

A: Yes.

Q: Dropping down below the "fretful at times" that you just read, you'll see it says on the 8:00 note, "Fretful when disturbed."

A Yes. I see it.

Q: What does that mean to you?

A: It means that the child seems uncomfortable, or

Page226

worried or perhaps whines some when disturbed
Q: Have you %shed that, Doctor?
A: Yes
Q: Are the nurse's notes, the type of which we ve just read, something which you took into consideration in reaching the opuuons concerning this child's status!
A: I took the notes into consideration in reaching my conclusion, yes.
Q: Well. in reaching your conclusion, did you then also consider and evaluate the status as observers who werewiththe child wrote in the chart?
A: Yes, I did.
Q: Now. Doctor, would you turn to a page of the nurse's notes that deals with the date of the 3rd? And I can give you the front of the page number, but I don't know what would be on the back. It's either L89 or 56 on the front. On the front is a graph sheet.
MS. McDONALD: The back of L90.
Q: L90.
A: Well, I don't have a number that's readable to me, but I have nursing notes dated 1/3/71 in which there are some notes and then there's a cross through the notes. Is that what you're referring to? Does it start with staff, or staff rounds?
Q: No.

Page 227

A: Let me flip to the next one, then.
Q: It's on the – we're talking about –
MS. McDONALD: I think he's looking at L88.
A: Yes, I have the one you're referring to.
Q: Do you have that in front of you?
A: Yes.
Q: And the nurse's notes, the date I'm referring you to is 1/3/71. Do you find that, Doctor?
A: Yes, I do.
Q: Is this the first written note, reads "staff rounds"?
A: Yes, I see it.
Q: Dropping down on the left side there, you see where it says 1/4/71?
A: Yes, I do.
Q: It says "Fretful at times"?
A: Misspelled, but yes.
Q: However it's spelled, do you see that?
A: Yes, I do.
Q: What did you assume it to mean in that context?
A: Again that the child was from time to time worried or concerned or uncomfortable.
Q: The child; right?
A: The child, yes, sir.
Q: Have you completed your answer?

Page 228

A: Yes
Q: The next note on the next shift says, "Somewhat fretful." What did you assume that to mean?
A: The same
Q: What does the word "restless" mean to you, Doctor,
A: Is the "restless" the one that you're referring to on 1/3/71.
Q: It's on the page there, yes.
A: I'm sorry. It's 1/5/71. I misspoke.
Q: Right.
A: I interpret that to mean that the child was not resting comfortably, but perhaps was rolling around more, or seemed to be somewhat uncomfortable.
Q: Did you, Doctor, anywhere in any of the notes that you, in fact, dictated and had typed include the nurse's notes, the ones we've just read?
A: Well, let me refer back to those notes. No. I did not include those excerpts in my notes.
Q: Why not?
A: I did not consider them to be important observations from the part of the nurse that I wished to use as a way of review.
Q: Why not?
A: Because they were not significant to me.
Q: Doctor, is it correct that "fretful" is a phrase

Page 229

that can be used depending upon the person using it to describe a status dealing with mental status or altered mental status?
A: I don't know, sir. I have never used the word "fretful" that way, but again, as with most words, people use them in various ways.
Q: Did you assume or consider that the way that it was being used is in the context of someone describing altered mental status?
A: No. I assumed that it did not include a child who had a meaningfully altered mental status, no.
Q: Have you, Doctor, ever seen in any textbooks, Pediatric Infectious Disease, things of that type, where among the descriptive phrases used in describing an altered mental status that the word "fretful" is used?
A: I don't have a memory of seeing that word, no.
Q: And Doctor, if, in fact, the author of that note used it to describe an altered mental state, I take it you would then be able to use that in that context and fit it into the picture concerning the status of this or any child; correct?
A: I don't understand that question at all.
Q: Doctor, you have made an assumption as to what you believe the word "fretful" meant, didn't you?
A. I have interpreted the words that were on the page just like everyone else, sir, and it's not an assumption.

Page 234

Q: If that were to be the case and the places in this chart where "fretful" were, in fact, written - would that in any way have any impact upon your opinions concerning the status of this child?

MS. McDONALD: Let me object because there's no basis for the hypothetical. But go ahead.

A: Well, if that hypothetical were true. it would make me think longer about what the child's mental status was during those days in which that word was being used, because it conflicts with an appraisal of the child's mental status which was performed by the physician staff. And given that conflict, I would have to reconsider what my portrait of the child's condition was at the time and reconsider whether the child had earlier evidence of a significant disease. But I would be caught in that conflict because the physician staff was quite clear that the child did not have a meaningful altered level of consciousness at the time.

Q: I appreciate that. But that's what you'd be required to do; correct?

A: Yes.

Q: You could do that: correct?

A: I would have to.

Q: All right. Now, the next thing I want to ask you, Doctor, is, have you ever seen written in any articles, journals, literature, involving pediatrics or infectious

Page 235

disease, that the phrase "restless" was used in the furtherance of describing an altered mental status?

A: I don't remember specifically, sir.

Q: Is that something which, Doctor, in your opinion, a person that was observing a child could use for that purpose?

A: They could, but I doubt very much whether that would be the only word that they would use.

Q: Now. if I were to ask you to assume that on the 5th, the word "restless" was used by the author of that note to imply in her opiruon that this child's mental status was significantly altered, you could then take that and integrate that into the factual picture or the verbal picture or the written picture that you have of this patient in your mind's eye; correct?

MS. McDONALD: Let me just object. Again, there's no basis for that assumption, but go ahead.

Q: Is that correct, Doctor?

A: That's correct.

Q: Now, the more places, Doctor, that you would see evidence earlier on in this case of this child having evidence of altered mental status would then be something which, if hypothetically you took it into consideration, might or could change your opinions: is that a fair statement?

A: That was kind of a tricky sentence, because there was a lot of that "might have" and "could have" stuff in it.

Page 236

But I certainly would have to integrate that in the formation of my opmion.

Q: And in this case, with reference to the word "fretful" and with reference to the word "restless," you have given us the opinions as to how you mterpret it when you, in fact, reviewed this case and at the time you reached your opinions and gave your opinions at the deposition the last time and this time: correct?

A: Yes.

Q: Did you note, Doctor, that Dr. Gotoff, in his reading of the interpretation of the word "fretful" and "restless" had a different meaning and interpretation than you do?

A: Perhaps you could refer me to that.

Q: Well, do you remember that?

A: No, I don't.

Q: Did you note or did you read the deposition of Dr. Schulman?

A: No, I did not.

Q: Did you read the deposition of any of the plaintiffs' experts?

A: Yes. A Dr. Charash and a Dr. Livingston. Do I have his name correct?

Q: There is one of the experts who has the name Livingston.

Page 237

A: Yes. A Charash and a Livingston were the two that I read.

Q: As to them, do you recall what they used as the definition of the two words I have just asked you, "restless" and "altered"?

A: You mean "restless" and "fretful"?

Q: "Fretful," yes, thank you.

A: No, I don't remember specifically.

Q: Doctor, the word "irritable." Is the word "irritable" something which an observer, in your opinion, can use to describe an altered mental status in a child of this age?

A: Yes, someone could use that word.

Q: Have you ever seen that word used or written in that regard to describe - in other words, in the furtherance of describing a mental status, to use the word "irritable"?

A: I have seen people use the word "irritable" as a word used to describe a mental status.

Q: Where have you seen that written?

A: I have seen it written in patient charts.

Q: Have you seen it written in any texts such as Nelson or Feigin or Pediatric Disease, Feigin and Cherry? Have you seen it written in any recognized authoritative text or recognized text of any kind?

A: I'm sure I have, because it's a word that is

Page 238

commonly used in the attempt to describe in words the portrait of a child who has a meaningful altered level of consciousness.

Q: When it's used to describe a child who has a meaningful altered level of consciousness. in those circumstances, hypothetically, where it's used and appropriate, what does then the word "irritable" signify and mean to you?

A: It means a child who is inappropriately in pain and [a] crying in a way that is outside the expected range of normality for a child at a particular age given a particular stimulus. And it also means that that condition is one which is more or less constant, rather than coming and going.

Q: You said pain. Pain from what. Doctor?

A: Well. the usual interpretation of children who cry a lot and are described as irritable is that they are in pain either without being moved or upon being moved, or that the pain that they have is made worse by being moved, and that's why they're Irritable. But that's an assumption, since no one, you know, has talked to a six-month-old recently.

Q: I appreciate that, Doctor, but isn't one of the jobs that physicians, pediatricians, and others that care for children of this age are expected to do is to deal with how, and using the limitations a sur-month-old has, to reflect what he or she is experiencing?

A: Yes, and that's why I have tried to explain what the usual interpretation of this excessively irritable state is.

Page 239

Most people consider it to be one in which the child is in pain and is expressing the irritability because of the pain.

Q: Doctor, have you ever used the word "irritable" in describing children in the age under one year of age in the definition or context different than you just described, that you recall?

A: *Again,* I may have at one time, sir. I try to stay away from that, because "irritable" has acquired a certain interpretation of its own that implies serious disease when in reality it's a word that is used to mean many things by the people who use it. To avoid that conflict between what I mean and what other people think I mean, I try to avoid the use of the word "irritable" now. But I may have done it in the past.

Q: And you do know that other people, Doctor, who may not try to avoid that conflict may use it to accurately describe a child who is in pain, or it may be used to describe a child who is not in pain; correct?

A: Yes. The word "irritable" is used to describe all kinds of children. sir.

Q: Did you, Doctor, in the review of your records, the records of this child. look to see whether or not the word "irritable" was used to describe -

A: I did not seek out the word "irritable," but I noted that the word "irritable" had been used.

Q: Who the are the persons that used it? Are there

Page 240

nurses, physicians, or both?

A: Well. it was used by a nurse, certainly, and I think we've already pointed that out. Whether it was used by physicians, I don't recall right now that the word "irritable" was used by a physician prior to the diagnosis being made, and I'd have to search out whether the word "irritable" was used subsequent to the diagnosis. I'd be happy to do that, if you'd Like me to.

Q: Well, let's look in the area. Doctor, of the 2nd, 3rd, 4th, 5th, 6th and 7th on your notes. By your notes, I mean the ones dealing with the chart, Exhibit 4B, okay, Doctor!

A: My notes are Exhibit **4A.** I believe, **sir.**

Q: You have the original as *4A.* We made copies which are *4B.* but they're the same. So starting with the 2nd, did you find, between the 2nd and the end of the 7th, any physician that describes the child as being irritabie?

A: No.

Q: Same question. Doctor, the 2nd through the 7th. Did you find any physician that described the child as being in pain?

A: Yes.

Q: When?

A: There is a progress note on January 6th at 2030 hours by Dr. Shastri, and there is a progress note on January

Page 241

7th by Dr. Zarif.

Q: Read those *two* notes, please.

A: The note from Dr. Shastri reads as follows: "Child's mother complains that child cries when his right arm is moved. Right arm is tender, swollen and warm. Movement seems to produce pain."

And the note from Dr. Zarif says, "Baby cries when right arm is touched."

Q: Turn back to page - where it says the 5th, Doctor, which is page *6* of your typewritten sheet.

A: Yes.

Q: You find a nurse's note?

A: Yes.

Q: You find where it says, "Right wrist seems tender, extremity painful to touch'?

MS. McDONALD: E-X.

Q: You find you put in your notes "extremity painful to touch'?

A: Yes.

Q: You assume the E-X to mean "extremity"?

A: Yes.

Q: And Doctor, E-X could then also properly be "extremity," or could it also be "extremely"?

A It could be "extremely," sir.

Q: Either way, either word doesn't change the meaning

Page 242

of the context, is that correct?
A: I don't beheve so
Q: Doctor. with regard to pain on the 5th, did you assume that that pam was real?
A: Yes
Q: Did you assume that if it was present and real, that it mght or could cause this chdd to be Irritable?
A: Yes
Q: Same question for the 6th and 7th Did vou assume it to be real and it might or could cause the chdd to be in pain, in real pain?
A: Yes
Q: With regard, Doctor. to the mother's depositton, or the mother's reference to her comments bv wav of hstory and other hospital charts did you note that the mother made reference in either of those two places to the chdd bemg in pain at a pomt even earher than the 5th?
A: I beheve the mother felt that the chdd was in pain prior to the 5th, yes
Q: Doctor, tor purposes of your consideration of the assessment of this chdd from a viewpoint of the picture vou created in vour mind overall. did you assume what the mother said and beheved to be correct?
A: I beheve that the mother was honest in her memory, yes

Page 243

Q: Have you, Doctor, from your experience, come to learn that, of course, mothers may vary, as is everything, as is true with everythmg in life?That there are mothers that are good historians, some are superb, some are poor, some are terrible? But if the mother was a good historian - did you assume in this case that she was or wasn't a good historian?
A: I assumed that her memories were honest memories. I thought that her historical recollection was fair. I didn't thmk she was a superb historian, but I didn't think she was a poor historian. That's fair.
Q: Has it been your experience, Doctor, that you find that mothers, because of the fact they're with their children for a much longer time in a given period than the health care provider, would have a better awareness than would the person who's with them for the first time of what's different about their child?
A: I think that's true. sir, when the events are very contemporaneous about which they are recalling the mformation. But at a distance of decades, I'm not sure that's the case.
Q: Right. So the longer out from the time period, the less you would find the reliability factor would be there; right?
A: That's correct.
Q: But if, within matters of days, while the memory is

Page 244

fresh, they gave that history, that would be closer in time, wouldn't it?
A: Yes, it would.
Q: Yes?
A: I said yes, it would.
Q: *Thank* you. In fact, you have written about that very pomt. haven't you?
A: Yes, I have.
Q: Now, Doctor, can the word "irritable," in your medical opinion, be something which a physician or a nurse or both may use appropriately in the context of describing a meaningfully altered level of consciousness?
A: It can be used to mean many things, and that certainly is one of them.
Q: With regard, Doctor, to early signs and symptoms of meningitis, have you ever seen that phrase written?
A: Which phrase is that, sir?
Q: "Early signs and symptoms of meningitis."
A I don't specifically recall having seen that, but I may have.
Q: Have you ever specifically written and used those very words. Doctor?
A: I may have, sir.
Q: And "symptoms of meningitis"?
A: I may have, but I don't recall specifically.

Page 245

Q: Whenever you wrote something and had it published, was it your intent and was it your belief that you were writing it in good faith for those to read and rely upon?
A: Yes.
Q: Have you ever seen, for example, in any medical text "early signs and symptoms of meningitis" as a heading or category?
A: I don't recall.
Q: Is that something you'd expect to see in any recognized text, such as Nelson?
A: I don't expect to see that specifically in a text.
Q: Would you expect that it would nevertheless be there?
A: Not necessarily, no.
Q: Under the heading of "meningitis"?
A: Not necessarily, no.
Q: And if it were there, would it surprise you to see the area dealing with early signs and symptoms of meningitis to be a category or heading?
A: No, it wouldn't surprise me.
Q: Have you, Doctor, in the furtherance of this case, looked at the ninth edition of the Nelson textbook on pediatrics which was the year 1969, to see what was written surrounding meningitis?
A: No.

Page246

Q: Or the same questlon for otitis media.
A: No
Q: Or the 10th edition from 1975?
A: No
Q: Have you gone to any books such as Feigm and Cherry to see what was written on meningitis?
A: Not in conjunction with this case, no
Q: You have indicated there are certain authors that you beheve in the area of pediatric mfecuous disease to be recogmzed authorities, have you not?
A: No
Q: You have not said that7
A: No
Q: Well then, let me ask you Who are some of the people in the United States you consider to be recogmed figures in mfectious disease?
A: Well, depends what vou mean bv recogmed figures I can certainly give you the names of people who are prominent in their writings and in their reputation for issues involving infectious disease
Q: I'll be glad to use that if that's the way you are comfortable
A: But I want to make sure that you understand that I consider no person to be authoritative m the sense of all-knowmg and always correct

Page 247

Q: Including yourself.
A: Unfortunately true, sir. The names of such people, many of the names that you have named, Dr. Feigin, Dr. Cherry are two of them.
Q: Any others you can think of that come to mind?
A: Well. really, there are many, many names, and if I were to say a name, it wouldn't mean that they were any more wise than names that I mght madvertently leave out.
Q: Well, how about my givmg you a name that I think you might be familiar with. Jerome Klein.
A: Yes.
Q: Is he someone that you have read some of his articles?
A: Yes.
Q: Have you ever spoken to Jerome Klein?
A: I may have briefly once.
Q: Has he and you ever collaborated on any work?
A: No.
Q: Has he ever written any critique on any of the work you have had published or sought to have published?
A: Not to mv knowledge.
Q: Has he made any commentaries on works that you have published?
A: Not to my knowledge.
Q: Is that something which, Doctor. when you publish

Page 248

somethmg, if someone writes a commentary or a critique, that you in fact would - and pursue the fmdmg thereof?
A: I don't understand the question
Q: When someone such as yourself writes an arucle, someone writes a commentary on it. isn't that something that you would expect to be made aware of by your publisher?
A: Well, in the one instance in which that happened to me, I was unaware that a commentary was to be published in conjunction with my article.
Q: Are you aware that any article you have ever published had a commentary written about it?
A: Yes. One article that I published had two commentaries written about it.
Q: One by a lawyer, and one by Dr. Klein; correct?
A: No. It was Dr. Feigin and Dr. Kaplan wrote the commentary, and an attorney wrote another commentary.
Q: Excuse me. Dr. Feigin. Have you read anything that Dr. Klein has written about you?
A: No.
Q: Now, Doctor, do the articles that you write and seek to have published containopinions andconciusions which, when you write them, you believe are honestly correct?
A: Yes.
Q: And when you write things for publication, you have an audience in mind, do you not?

Page 249

A: 1 don't know entirely who the audience is, but I write them at a level with an audience in mind. In other words, the terminology and complexity of the presentation is written to match the sophistication of an audience.
Q: Now, did you ever read the commentary about one of your articles written by Dr. Feigin?
A: Yes.
Q: Did you read the commentary written by the attorney?
A: Yes.
Q: Did you approve those commentaries?
A: I had no prior knowledge of the commentaries.
Q: Did you send any letters or responses to either one of them regarding the commentaries?
A No.
Q: Did you ever call or discuss it with them or they with you?
A: No.
Q: Do you remember what those commentaries had to say?
A: In rough outline, yes.
Q: Did you find them to be reliable and scientifically correct?
A: Well, the attorney's commentary was not a scientific commentary. The commentary by Drs. Feigin and Kaplan I thought represented their point of view quite well.
Q: Does that mean it was scientifically and medically

Page250

correct?
A: There were portions of their commentary that I did not agree with. There were poruons of their commentary that I did agree with.
Q: There were portions of the commentary concerning what you said that they didn't agree with, wasn't there?
A: I don't believe so.
Q: Now. Doctor, smce the publication of certain papers that you have published. you have been sought out as a defense expert witness across the country, haven't you?
A: Well, I don't know if I'd go that far, sir. I was acting as an expert consultant before and after the article.
Q: Right. And Doctor, isn't it correct that since the publication of this article. certain defense lawyers. as a result of having read this article, have contacted you and told you that they read the article and they wanted to talk to you?
A: Well, they wanted to submit a case to me. They didn't particularly want to talk to me.
Q: Right. They wanted to have you review a case; correct?
A: That's correct.
Q: As a matter of fact, Doctor, that's happened quite frequently since these articles have been published; isn't that true?
A: It certainly happens, sir.

Page 251

Q: Doctor, do you remember any cases smce the publication of your article that you specrfically have testified in court on involving meningitis?
A: Well, I know I have testified in court on cases in which merungitis was the subject matter since the arucle was published.
Q: Do you remember the names of those cases, Doctor?
A: Not specifically, no.
Q: Do you remember who the expert witness was in any of those cases against you or on the opposite side, more correctly?
A: Not specifically, no.
Q: Oh. Do you remember, Doctor, Roger Barkin being an expert witness in a case involving meningitis in which you were an expert on the opposite side?
A: No, not specifically. There was a case in North Carolina in wtuch the issue of merungus was, I think, at the core of the case, and I'm trying to recall whether Dr. Barkin was involved in that case or not, but he may have been. I don't remember specifically.
Q: Do you remember any case in which, on the opposite side of you, Dr. Barkin was an expert in addition Eo the one you just described?
A: Not in a case of meningitis, no.
Q: Any case. I said.

Page 252

A: Yes
Q: What case or cases do you recall Dr Barkin was mvolved in that you were on the opposite side?
A: One I recall was a case in Georgia involving a child who had a cardiac arrest in wh c h Dr Barkin was testifying for the plaintiff
Q: And those are the only two that you recall Dr Barh was an expert on the opposite side of you?
A: Yes
Q: And Doctor, the case in North Carolina Do you recall the opuuons that you gave in that case?
A: No, not specrfically. not in a vivid way, no
Q: And you don't have a copy of your deposition, do you, Doctor?
A: No, I don't
Q: You didn't keep your notes?
A: Well. a deposition was never taken in that case
Q: Excuse me, your trial testimony
A: No, I never saw a copy of it
Q: Do you remember the name of the plaintiff's attorney in that case?
A: I think I do, but I can't think of it at the moment But I will think of it in the next half-hour
Q: Okay How about the defense lawyer? Do you remember who that was?

Page 253

A: No, I don't remember his name
Q: How about, Doctor. the hospital or the defendant doctor?
A: Oh, the name of the defense attorney was William Hagood.
Q: Do you remember the name of the hospital?
A: No, I don't.
Q: Do you remember the name of the defendant?
A: It's a name like Eiger or Eisner or a name that began with an E, but that's all I remember.
Q: Now, Doctor, are you an attorney?
A No.
Q: Have you ever written anything involving what is, in fact, legal issues or principles that was published?
A: Well, I wrote an article in which I introduced in a very brief way some of the legal aspects of medical malpractice as an introduction to or a review of the influence of antibiotics on serious infections in children and adults.
Q: And did you do any legal research to determine what the legal aspects were that you were writing about?
A Some.
Q: And did what you wrote reflect what your understanding was of those legal principles?
A: Yes.
Q: And do they reflect accurately and honestly your

[10]

[22] Q: Do you remember the name of the lawyer?
[23] A: Yes, Jonathan Reis.
[24] Q: In St. Louis?
[25] A: Yes.

Page 255

[1] Q: Doctor, with regard to the papers you have written,
[2] have you ever written any article that, in fact, suggested that
[3] a patient in whom there was a suspicion of meningitis or
[4] bacterial meningitis has a possibility that the giving of
[5] antibiotics should be withheld?
[6] A: No.
[7] Q: Have you ever seen that written or published
[8] anywhere in any work of recognized authority?
[9] A: Yes.
[10] O: To withhold the antibiotics?
[11] A: Yes.
[12] Q: Where have you seen it written?
[13] A: There was a publication in the New England Journal
[14] of Medicine in which an investigation of the effects of
[15] corticosteroids on meningitis was disclosed, and the suggestion
[16] that came out of that artlcle was that one should purposely
[17] delay the use of antibiotics until the corticosteroids could be
[18] given and have their effect in place before the antibiotics
[19] were given.
[20] In other places, there have been articles regarding
[21] the timing of antibiotics in children who are critically ill,
[22] and the outcome of that particular set of recommendations was
[23] that antibiotics were not emergency drugs and that
[24] stabihzation of a patient was more important than giving the
[25] antibiotic.

[22] this question the last time - have you ever written
[23] specifically on what "correlation" means?
[24] A: I have not written about correlation as an isolated
[25] issue.

Page 257

[12] Q: The way you used it in the article was the way you
[13] used it in the article for your analysis?

[16] correlation in describing my findings.
[17] Q: And Doctor, for purposes of this case, do you use a
[18] different definition of "correlation"?
[19] A: No.
[20] Q: For purposes of any of your subsequent articles, do

Page 258

A **Again,** I don't believe I defined "correlation" in that articie, but I used "correlation" in a way that was appropriate for the article.

Q: Now. Doctor, in one of your articles you describe three groups of patients. I'm referring *to* the article involving duration of symptoms and outcome in bacterial meningitis. Do you have that in front of you?

A: Yes. I do.

Q: That particular article, Doctor - in it there are basically three categories that are referenced or referred to of patients.

A: In that article, based on what I found during my research and analysis, I defined three groups of patients with bacterial meningitis based on the syndrome of meningitis which each of them had.

Q: So those three groups, Doctor - what I'd like to ask you *to* do **is** this. If I'm not incorrect, isn't it true that one of them is the fulminating kind; right?

A: Fulminant, yes.

Q: Correct?

A: Fulminant, yes.

Q: All right?

A: Fulminant, **yes.**

Q: Right. Fulminant.

A: Yes. Not fulminating, but fulminant.

Page 259

Q: Fulminant. And another one, Doctor, is where the disease **is** less **than** three to five days?

A: No, the second category **is** made up of those patients in whom the diagnosis of meningitis was made preceded by general and nonspecific symptoms for less than three to five days.

Q: Preceded by -

MR. GOLDBERG: Would you read that back, please?

(The record was read by the reporter.)

MR. GOLDBERG: *Thank* you.

THE REPORTER: You're weicome.

Q: And the last category, Doctor?

A: The last category was clinically overt meningitis. Or I may have used the word "clinically apparent meningitis

Q: Now, Doctor, in the context of **this** article, clinically overt - was **this** a phrase that, in the writing of **this** article, you coined yourself?

A: Yes.

Q: Do you make reference anywhere in the article that that was a phrase you coined and a description you were using?

A: I didn't use any notation to say that it was a phrase that I had used for my own purposes, no. But I did describe the kinds of things I meant by it.

Q: You did describe the kinds of things **you** meant by it; right?

Page 260

A: Yes.

Q: What page is it you described the kinds of things you meant by it?

A: 696.

Q: Is that in the right column?

A: Yes.

Q: After footnote *41?* **Is** that the part that says for the final subgroup, those were clinically overt nonfulminant meningitis?

A: No.

Q: Where *is* it that you're referring to?

A: Well, it's in the same paragraph, ten lines down from the beginning of the paragraph in the line beginning, "Clinicallyovert menmgitis."

Q: All right. Clinically overt meningitis, then, examples, stupor. coma, seizures, nuchal rigidity, bulging fontanelle; right?

A. Correct.

Q: **Now,** those were what you used as an example; correct?

A: Correct.

Q: Were there others that you didn't put in there, Doctor, or **is** that **an** exhaustive list?

A: It's not an exhaustive list of words to try to describe that 'kind of patient. I could have used other words.

Page 261

Q: What other words could you have used that you did not?

A: Meaningfully depressed level of consciousness without other explanation. I could have used that phrase.

Q: Depressed?

A Depressed or altered.

Q: Or altered level **of** consciousness -

A Without another explanation.

Q: Anything else?

A: One can include altered mental **status and** clinical septicemia or shock. One could include certain **cranial** nerve abnormalities, such as unequal **pupils,** crosseyedness, paralysis, **things** of that sort.

Q: Have you gwen me all of the descriptions?

A: **Well,** I'm trying to think of others that I might have used, but -

Q: Take your time. I'm just trying - I don't see you, Doctor, so I don't know when you're finished **or** when you're thinking. So **just,** say, give me a word, or "I'm done," so I don't interrupt you.

A: All right. Could have used the word "opisthotonus," arching of the back. Those are all the words that occur to me right now, *sir.* But I may think up some as time goes on.

Q: Okay. I understand. Now, in the context. Doctor, of these clinically overt **signs** that are on page ***696,*** those

Page 262

that would fall within clinically overt merungitis. your definition, would you agree that these are those which in other texts, articles and journals. may be described and defmed as late marufestations of meningitis?

A: I don't know. I'd have to see the article or the text.

Q: Have you ever read or seen, Doctor. in any article, journal or text thmgs described as early signs of merungitis?

A: I **think** you asked me that already, and I don't have a memory of that, no.

Q: Isn't it true, Doctor, that - are these symptoms, by the way, that we've just had you read? Stupor, coma, seizures, nuchal rigidity, bulgmg fontanelles? Are those symptoms?

A: No.

Q: What are they?

A: They're signs.

Q: These are signs; right? What **are** symptoms?

A: Symptoms are pieces **of** historical mformation related to the clinician.

Q: Give me an example. What are symptoms of meningitis, bacterial or otherwise?

A: Well. a symptom would be something Like a parent saying, "Johnny cries every time I pick him up." That would be a symptom.

Page 263

Q: Any others, Doctor?

A: Well. you know, the list can go on and on, but the idea is that they're describing behaviors or **things** that they're **seeing** to the clinician without putting a particular name on it. For example. 'Johnny won't wake up."

You examine Johnny, and you say, "Johnny's in coma."

It's historical observations or experiences related to the chcian.

Q: **Is** irritable, fretful, restless, the kind of **things** that could fall within symptoms?

A: They are symptoms, but they're nonspecific and general symptoms.

Q: But are they nevertheless symptoms that could be reported historically with a parent who has a child later diagnosed as having meningitis?

A: Yes.

Q: Now. Doctor, in **this** particular article that we've got in front of **us, is** it your opinion that anyone reading it would be expected to assume the categories or additional examples that you have given me that should be added to describe clinically overt?

A: Yes.

Q: And would you agree that a meaningfully depressed or altered level of consciousness would be an important category?

Page 264

MS. McDONALD: Without other explanation?

A: Well, you understand, sir, I put down those words **as** mere examples, not to put down an exhausuve hst The artlcle itself is not about how to diagnose meningitis It's **an** artlcle trying to mvestlgate the issue of the timing of antibiotics and outcome Had I been writing an artlcle about meningitis, I would have given more specific attention to the use of words and descriptions. All I **sought** to do here was to give people that idea of what I meant by clinically overt meningitus Since I was writing for **a** medically sophisticated audience. I felt that examples such as the ones included there were sufficient for that purpose

Q: And the one that should be also considered by the sophisticated audience, but whch are not written, would include meaningfully depressed or altered level of consciousness without anv other explanation; correct?

A: Again, in one form or another Maybe not that parucular phrase. but in one form or another, that kind of thing would occur to the audience reading this partlcular arucle, yes

Q: Looking at the first paragraph, Doctor, on page ***694,*** **IS** it correct today that bacterial **meningitis** still **is** the most destructive of acute infections m normal individuals?

A: Yes

Q: And Doctor, in that second paragraph where you

Page 265

write, halfway into the paragraph, "However, the question of whether a delay in initiating antimicrobial therapy actually increases the risk of sequelae has not been answered." Is that true today, as well?

A: No.

Q: It is not true today?

A: Correct.

Q: How has it been answered?

A: **It** was answered in my article and the subsequent studies that validated the article.

Q: So **this** paper validates that?

A: **This** paper answers the question, and the conclusions of **this** paper have subsequently been validated.

Q: What papers specifically validate the question that is posited here, Doctor?

A: The **two that** you have in your possession, sir.

Q: Tell me which **two** those are.

A: Those are the 1993 article from the Pediatric Infectious Disease Journal.

Q: Their numbers, Doctor?

A: Well, I don't have them in front of me. As you know, sir, you didn't fax them to me.

Q: Oh, the two that **you** don't have at all.

A: That's correct.

Q: "The effect of a recent previous visit to a

Page 266

physician on outcome after childhood bacterial menmgitis"?
A: Yes.
Q: That's one paper that you're referring to?And the other paper, "Outcomes of bacterial meningitis in children, a meta-analysis";correct?
A: No.
Q: Huh?
A: No, I don't believe that's the paper at all.It's the 1993paper by Kilpi. if I'm nor mistaken, as the lead author, about duration -
Q: I don't have any other arucies other than the ones we've just gone through. I was given and I have marked them, 10, 11, 12, 13, 14, Doctor. Where is the article by Kilpi that you're referring to, then?
A: I thought I had sent it off to Ms. McDonald, a 1993 artlcle in the Pediatric Infectious Disease Journal.
Q: Do you have it there?
A: No, I don't.
Q: By Kilpi?
A: I believe so.
Q: Spell it, please.
A: I believe it's K-EL-P-I.
Q: I don't have it here, Doctor.
A: Let me see if the exact reference is included in my 1994 article. Yes. If you'll look at the article that I

Page 267

published in 1994, the timing of antimicrobial therapy.
Q: One second. Doctor. I'm trying to get this - yes, sir.
A: If you look at references 12 and 13.
Q: Footnotes, are you referring to?
A: No. references at the end.
Q: Yes, the references. 12 and 13?
A: Right. That's actually one study published in two segments, and the segment I'm referring to is segment or reference 13, by Kilpi.
Q: Do you have that arucle with you now?
A: No, I don't. I thought I had sent it to Ms. McDonald. If I didn't, the error was mine and I'lt send it later in the day.
Q: Would you be good enough, Doctor - I asked that all the articles that you relied on or that you believe support your position would be forwarded, and if it was inadvertent one way or the other, as long as I have it, it's fine. But I'll read what I have in front of me, okay?
A: That would be fine.
Q: Number 13, Kilpi, T., and then it has another name, Anttila, M.. Kallio, and the arucle's name is "Length of prediagnostic history related to the course and sequelae of childhood bacterial menmgitis," Pediatric Infectious Disease Journal, 1993.12/1, 84 through 88?
for it.
Q: Have you ever, Doctor, taken any steps to write to the publisher or to amend in any way that article to include or change in the fashion you described?

Page270

A: I learned that from textbooks and arttcles on statistics.sir.

Q: So there are textbooks and articles dealing with thts very type of subject, aren't there?

A: No. Well. there are articles. Actually, there are textbooks dealing with what is meant by strength of an association.

Q: Are you a stattstician?

A: No.

Q: Now, Doctor, with regard to the various studies. they are described in here in the arttcle that were analyzed; correct!

A: Correct.

Q: Does the Kilpi arucle whch I was nor supplied with - whtch I'm marking as Exhibit 17, although it's not here - does it have new or different or additional studies that it tncorporates?

A: Yes.

Q: When were those studies done?

A: The study was published in 1993.

Q: But is the data for that paper on the basis of new studies either retrospective or prospective?

A: Yes.

Q: When were those studies done?

A: I'd have to review the article to give you an accurare answer.

Q: You don't remember?

A: No.

Q: How many people are the subject of those studies?

A: I'll have to review the article to give you an accurate answer.

Q: The answer is you don't know; correct?

A: Yes, that's correct. sir.

Q: Who is Dr. Kilpi?

A: He's a physician in Finland.

Q: Have you done any research with him directly?

A: No.

Q: Did you have the raw data that he used that is the subject of this article or study?

A: No.

Q: Was it a retrospective or prospective study?

A: Prospective.

Q: Did you see the protocol that was used for the prospective study?

A: No.

Q: Do you know if there was one?

A: Well. only to the extent chat it was described in the methods section of the article.

Q: Was this a human study?

A: Yes.

Page 272

Q: What were the drugs and what were the purposes of the study?

A: The study, as I recall. was part of an overall effort to more clearly delineate meningitis in many aspects that was coordinated through the University of Helsinki and mvolved all pediatric centers in Finland It was collected prospecuvely, out of which a number of papers have been pubhshed, that one bemg an example of such a paper

Q: And am I to understand that you are relying upon this paper to support the position vou are taking?

A: Correct

Q: Is there any other paper, other than the Kilpi paper and the other Kilpi paper. Exhibit 14. that we've marked, that supports. in your opmon, your position?

A: Well. there's the other paper from the same group pubhshed in 1994, and those are the two validating papers for the results whtch I reached in mv paper of 1992

Q: What is the paper in 1994? Where is that footnote or reference?

A: Well, you have a copy of it

Q: You're talking again about 'The effect of a recent previous visit to a physician on outcome after childhood bacterial meningitis"?

A: Correct.

Q: And you have that paper there, do you not, Doctor?

Page 273

A: No, I do not.

Q: I'm sorry, that's right. Forgive me. Doctor, I'm going to read to you from that paper, article 14, and ask whether you agree with this statement as being correct.

A: I would prefer a copy of the paper, sir, before doing that. You said you would fax it to me.

Q: I appreciate that, but I'm going to read to it to save time anyway, and you'll be faxed a copy.

"No clinician would intentionally defer prompt diagnosis and treatment of bacterial meningitis, but occasionally a child in whom bacterial meningitis has not yet developed or become clinically detectable will be sent home. When recommending home treatment of a febrile child, the physician should never forget to advise the patient to bring the child back immediately if the child's condition worsens or does not improve within a given time."

If I have read it correctly, is that a correct statement you would agree with?

A: I would agree with that.

Q: Yes?

A: Yes.

Q: Let's take five minutes. The court reporter has been going, and then we'll be back. Shall we hang up the phone. do you think, or call back?

I'm going to get the faxes together. Why don't you

Page 274

get your faxes together. It's five to 12:00. It's Eve to 11:00 where you are. Let me go farther and we'll take a break.

Can you do this, Doctor? The Kilpi article that you're referring to - you say it's at your office. How far is your office from where we are. or you are now?

A: About half an hour.

MR. GOLDBERG: Yeah? And Ms. Court Reporter. I gave you items 1 through 15 - or rather 10 through 15 today, right?

THE REPORTER: Yes, sir.

MR. GOLDBERG: And 15, just to be sure. was 'The outcomes of bacterial meningitis in children, a meta-analysis"; correct?

(A discussion was held off the record.)

Q: We'll leave it at 17. You have the errata sheet there. so you'll send me the errata sheet, which is 16, and I will send you copies of 14 and 15. And we'll get back to you within the next ten minutes.

A: Do we have your fax number?

Q: I'm going to give it to you now. Thank you.

(A recess was taken.)

Q: Doctor?

A: Yes, sir.

Q: Are you ready to proceed?

Page 275

A: Yes.

Q: Okay. I'm going to proceed, and reserve my right on Exhibit 17. As I said. we're going to proceed, however. And Exhibit 16 Ms. McDonald and I don't have, so we'll go on from there.

In the article. Doctor. I note it states, among other things -

A: I'm sorry, sir, I don't know which article you're speaking of.

Q: Thank you. The one where we're going - "Duration of symptoms and outcome of bacterial meningitis." Your 1992 article.

A: Yes, I have it.

Q: You make a statement on page 696 under the heading "Interpretation of meningitis data," and I'll read it to you. It says, "All existing studies examine only the duration of symptoms. not the duration of meningitis." Do you see that?

A: Yes.

Q: I take it one of the things, among other things, it may also mean is that it is your belief that no one knows when merungitis begins; correct?

A: Correct. Now, I say correct, given the discussion we had during my first deposition as to the vagaries of defining "beginning of meningitis."

Q: Right. Now, is it correct also that the existing

Page 276

studies that were the subject of this review examine only the durauon of symptoms and not the duration of meningitis?

A: That's correct.

Q: And do you agree with what's written here, "And experience suggests that onset of general symptoms is likely to be a poor approximation of the onset of meningitis itself"?

A: Yes.

Q: Now, Doctor, is it correct that, getting back to these categories that you were talking about, can we refer to them as 1, 2 and 3?

A: I don't know what 1.2 and 3 refer to.

Q: Well, I'll give them to you in the way that you went through them. One was less than three to five days with general nonspecific signs.

A: I think it's general and nonspecific symptoms.

Q: Symptoms. And symptoms in the context of what you defined symptoms to mean a little while ago; right?

A: Correct.

Q: So symptoms in that context is different than signs; correct?

A: Correct.

Q: And, Doctor. the second one is fulminant; right? We'll use 2 as fulminant?

A: That's fine.

Q: The third one will be clinically overt meningitis;

Page 277

correct?

A That's fine.

Q: And clinically overt meningttis is one that has signs in keeping with what you so far today testified; all right?

A: That's fine.

Q: All right. That being the case and with that as a working stepping stone, which, in your opinion, is the category that you put MarkTurner in?

A: Category 1.

Q: Would you be good enough, please, to tell me the reasons why you believe it's category 1, giving me all the reasons?

A: Well, the reason is very simple. He had an illness which was characterized by fever, irritability, used as a phrase in the notes, fretfulness. Another one used in the notes, discomfort, but no signs of clinically overt meningitis until the 7th, at which time a spinal tap was performed based on a finding which is considered to be a sign of clinically overt meningitis. Therefore, he fell into category 1 as having an illness which was proven to be meningitis preceded by general and nonspecific symptoms.

Q: Is the sign that you are referring to the bulging fontanelle?

A: That's correct.

Page 278

Q: It's the fontanelle that you're referrmg to as a sign, right? Whatever the record says'

A: Whatever the record says

Q: Now. Doctor, what **is** the significance of it bemg less than three to five days?

A: The significance is that there **is** not enough data from human experience on which a firm opmon can be esrabhshed for general and nonspecific symptoms lasting longer than five days And therefore, in the context of my artlcle, I was not able to amass enough information on which to express an analysis for that category

Q: Does the fact of how long the symptoms appear - if **it's** less than three or more than five days, does that have any bearmg one way or the other?

A Well, in general. the duration of symptoms prior to the diagnosis of meningitis does not seem to predtct outcome

Q: Outcome insofar as whether it will or wffl not become meningitis?

A: No, outcome in terms of neurological injury in a chdd who has meningitis.

Q: But does it have anything to do with predictmg whether or not the child who has these general and nonspecific signs may go on to be confirmed as having meningtis?

A: I don't exactly understand your question.

Q: There's **two** separate items that I'm lookmg at and

Page 279

you're lookmg at, I know, at least one. You're looking as to whether the outcome will be whether the individual has a certain clinical picture: correct?

A: In my analysis, I looked at outcome to mean permanent neurological injury following meningitis.

Q: Permanent central **nervous** system damage of one **type** oranother?

A: That's correct. And I include death in that category.

Q: Okay. That's what you mean by "outcome";right?

A: Yes.

Q: And that's how you're using whether or not these general and nonspecific **signs are** there three to five days; right?

A: Yes. They're symptoms that are there for **less** than three to five days.

Q: And my question is, **is** there any correlation or any way to know whether those symptoms may, in fact, be at the time meningitis, leaving aside the predictability of outcome by your definition?

A: Well, as we've already stated - and I think you even read out the poruon of my arucle that refers to it - in general, the duration of symptoms does not allow one to predict when meningitis begms

Q: But does it have to do with anything with predicting

Page 280

whether the patlent who has these symptoms wffl, in fact, be diagnosed as havmg merungus?

A: Not to my knowledge

Q: So that there **are** patients in whom these general and nonspeclfic symptoms - one of two things may happen They may get meningitis or not get meningitis, in the context of our discussion, correct'

A: Well, actually, one of three things can happen They can go on to get merungitls, they can go on to develop another focal illness, or they may get better on their own

Q: But in the context of meningitis, Doctor, what I'm merely trying to stav with is, these general and nonspeclfic symptoms may never materialize mto merungus in that pauent who has the symptoms, or it may go on to be merungus, correct?

A: Correct

Q: With that in mind, is there any way to - have you seen any study that relates or tries to relate these generalized and nonspecific symptoms as to what percentage of children go on to get meningitis?

A: No.

Q: If that be the case, Doctor, that you can't take and predict whether these chddren wffl or will not go on to get meningitis, would you agree that where these general and nonspeclfic symptoms exist, one at least would be alerted to

Page 281

the fact that such a patient may end up with meningitis?

A Yes.

Q: With regard, Doctor, to those symptoms, using the definition you have given me, what are the symptoms from all the records that you have reviewed and the histories that you personally have been involved with that were present to a historian - being a nurse, a doctor, or a combination of the **two** - in a patient who later was diagnosed as having symptoms **had?**

A: I didn't understand that at all.

Q: In a patient who **is** subsequently diagnosed with meningtis, from your own experience directly, what **are** the symptoms that were told to either the doctor or the nurse, or both, before it was diagnosed?

A: Well, the universe of symptoms that are related prior to the diagnosis of meningitis being made **are** all the ones that we talked about. They can be nonspecific symptoms, general symptoms of the sort that we've discussed, or they can be very specific symptoms which relate directly to clinically overt meningitis when the child is subsequently seen. So it can run the gamut.

Q: Well, I'm glad you said it that way, because it makes it easier for me. **Is it** correct that these speclfic symptoms may, in fact, later turn out to, in the **same** patient that has these, have what you have described as clinically

Page282

overt **signs?**

A: Yes.

Q: Yes?

A: That a chdd - you'll get hstorical information from a family, and you may conduct an examination, and based on your examination, you conclude the child has Clinically overt memgitis.

Q: Well, Doctor, I want to stay with the symptoms and the signs. The symptoms that you earlier described and defied. stupor, coma. seizures, nuchal rigidity, bulgmg fontanelle. meaningfully altered - depressed or altered level of consciousness, that whole litany. Are you with me?

A: Sure.

Q: Those are things that I take it may occur in the normal progression of **this** disease as the disease process develops?

A: No. I wouldn't use the word "progression," sir.

Q: You would not?

A: No.

Q: Doctor, is there a pomt at which you consider meningitis medically to be in existence in any given patient?

A: Well. the absolute answer to your question is, meningitis is in existence when the spinal tap tells you so.

Q: I appreciate that. But what I'm trying to do, Doctor, is something a little more exact. Before the spinal

Page283

rap tells you, a patient can **still.** nevertheless, in truth, medically have memgitis; correct?

A: A child can have clinically overt meningtis prior to a spinal tap being performed.

Q: You choose to use the phrase "clinically overt meningitis" and I don't. I'm askmg you whether a patlent, even such as MarkTurner, to be even more exact, if you were to have done the spinal tap five seconds sooner, before the spinal tap, would you say that Mark medically had in truth had merungitis?

A: Well, it is my opinion that a spinal tap performed five seconds earlier also would have been diagnostic of meningitis, and I presume that five seconds earlier the same physical findings which led the physicians to perform the spinal tap would have been there.

Q: What I'm trying to then differentiate, Doctor, in a very exact way, is this. However long before the spinal tap is done, you're saying that the physical findings which led the person to perform the spinal tap would be there. **Is** it your opinion that those **signs** are what makes meningitis be in existence, or some pathophysiological process in the body taking place?

A: What I'm saymg **is** this: A patient has the physical findings whtch suggest meningitis, clinically overt meningitis. That's a c h c a l judgment. One **is** then obligated

Page 284

to perform a spinal tap, which may or may not confirm the diagnosis of meningitis. If it confirms the diagnosis of meningitis, then there was a congruence between the physical appearance, the clinical judgment, and the biological fact. If it refutes the diagnosis of meningitis, then the child still had the same clinical appearance and the judgment of the chcian was the same, but it was not confirmed.

Q: Now, doesn't that nevertheless mean, Doctor. that in a pauent - if the doctor doesn't see the signs or symptoms, ifa doctor doesn't see it or misdiagnoses what's present, Doctor, just as the tree falling in the forest has to be heard, is the question that's been posited, is it the doctor seeing the signs and symptoms that then cause **him** to do the test and confirm it. that means diagnosis of meningitis is present? Or **is** it that there's a disease process in reality in the human body that is there that means the patient has meningitis? Which is it?

A: I'm sorry, sir. I got lost. The physician wffl not perform a spinal tap unless they feel that the person potentially has meningitis.

Q: I appreciate that, Doctor.

A: Now, people can have meningtis without seeing a physician. They can have meningitis with a physician not seeing the overt signs of meningitis and therefore not performing the spinal tap. One can have a spinal - one can

Page 285

it. It's important when does the patient medically have the problem, irrespective of someone knowing it?

A: Once the patient has the clinical findings, which a physician could see and make the clinical diagnosis of meningitis, if he were to be there, **that's** when the patient had clinically apparent meningitis.

Q: I understand **that,** Doctor. I'm right with you, and I fully understand it. But that's not **what** I'm talking about.

A: Then I'm sorry, I'm -

Page286

A: Well. we had this discussion last time, and I think you ll recall that my own viewpoint is that biological merungitis. if one would like to use that phrase, is present when there are the combination at the same time ofbacteriaand an inflammatory response to the bacteria.

Q: Okay. So what I was lust asking you about, you would define biologic meningitis being present with those criteria bemg met?

A: That's correct.

Q: Okay. And Doctor, have you ever, in books such as Feigin and Cherry, Dr. Klein's articles or literature, recogruzed arucies in Pediatrics, Pediatric infectious Disease - have you ever seen a definition of merungitis indicating that when the pathogen, whichever offending organism it may he, invades the meninges, as being the time when they say the patlent has meningitis?

A: I don't recall that specifically.

Q: And if I were to read to you from articles that said it from recognized authorities that you define as well known, would you agree or disagree with their works on that pomt?

A: Well, I think you now know what my own viewpoint is on that. and to the extent that someone does not reflect that viewpoint, I would not be in concurrence. But of course, these are definitional items w h c h have no clinical significance, and therefore, it's not a subject on w h c h a large amount of energy

Page 287

is spent trying to clarify or contend with.

Q: Okay. That being the case, and going on with my point, I would like you to do thts for me, please. I want you *in* a hypothetical model of a patient. otherwise normal human being, six months of age, with all the characteristics from birth of MarkTurner. hypothetically assume a patient in fact at six months develops biologic meningitis. Are you with me?

A: Sure.

Q: And I mean at the very moment of creation, if you will. The very moment of inception of the seeding of the meninges. Are you with me? There is such a time in reality, isn't there?

A: I don't know, sir.

Q: Well, are you suggesting that there isn't a time when the pathogen mvades the meninges?

A: Well, I *think* we discussed this last time. "Invasion" is not the right word.

Q: What would you like to use?

A: And "seeding" is not the right word.

Q: What is the phrase or word you would personally like to use?

A: The uuth seems to be that bacteria enter the spinal fluid space, and I would presume in a theoretical way, which has no clinical significance, there is a moment in which the first bacteria appears in the spinal fluid space.

Page 288

Q: All right. Let's stay with that. When that takes place, is that when biologic merungitis is in existence?

A: No.

Q: When is it?

A: It's when you have the combined presence of the bacteria along with an inflammatory reaction.

Q: *All* right. Now, is there any time period that you can cite me to, any article, journal, any text, that suggests or hypothesizes or confirms how long after that first bug, if you will, is in place in the fluid before this presence of an inflammatory response will take place? Are we talking seconds. minutes, hours. days, week, months. years? What?

Hello?

A: I'm trying to think of an answer to your question.

Q: I'm sorry. I couldn't tell if we were disconnected, Doctor. There was a silence. I'm sorry.

A: I'll try and breathe heavily mto the microphone so you'll know I'm here.

Q: I just didn't know if you were there or what's gomg on.

A: I don't think that that mformation is available, but I'll tell you what is available.

Q: What is? Wait a second. What I have just asked you, you have no opinion on, because you don't think that information is available; correct?

Page 289

A: Well, I'm going to let you know what is available.

Q: What is available?

A: There's no human mformation. obviously.

Q: Yes.

A: From animal studies, what is known is that there are animals who will have the entry of bacteria into the spinal fluid space, will clear the bacteria from the spinal fluid space, and will never become ill, and will never develop meningitis. That is known.

It is known that the speed with which the inflammatory reaction occurs following the presence of bacteria in the spinal fluid space differs from animal *to* animal, and that that difference can be a difference of hours to days. But the distribution of that inflammatory reaction over time and the outer limits of that distribution are not known.

Q: Now, if I understand what I have read, both by you and others on this point, you cannot accurately take animal studies and predict how they will be in humans.

A: There are appropriate cautions in trying to apply animal data to humans, depending on what the data are and what the question asked is.

Q: Okay.

A: Sometimes it can be applied quite well. Sometimes it cannot be applied at all. Sometimes if it's all that you have, you need to incorporate what is known from animals into

Page290

an overall opinion in human beings for lack of anything else to base an opinion on.

Q: What is the animal, Doctor, that for the purposes of what we're talking about is useful? Is it the monkey, is it the pig? Is it the mouse? What is it?

A: It's the rhesus monkey.

Q: It is, isn't it? And the rhesus monkey would be the closest that you could come up with. right?

A: Yes.

Q: Is the rhesus monkey, in your opinion, one that you can take data from it and apply it to human beings, in your opmion?

A: It depends on what the data are and it depends what the quesuon is.

Q: Is there any data on merungitis and when it, in fact. biologically occurs and how long it will be before inflammation rakes place on rhesus monkeys?

A: Yes.

Q: How long does it take place?

A: The answer to your question is the answer I just gave a moment ago. The answer I gave a moment ago is derived from rhesus monkey studies.

Q: But you didn't say this. So what you were referring to is the data from the rhesus monkey studies; right?

A: That's correct.

Page 291

Q: And Doctor. therefore, it can be different from animal to animal and from hours to days, and the outcome could be - no one knows the outer limit; right? As you said it?

A: What I said is what I said, yes.

Q: In that context, Doctor, in the hypothetical person that I was asking you to describe, a person of Mark's age, when I asked you, once the pathogen was in the spinal fluid, how long before an inflammation would take place, I take it are you t e h g me, therefore. as you sit here now, you have no opinion how long before the inflammation would take in a patient such as MarkTurner after the pathogen's in the spinal fluid? You have no opinion one way or the other?

A: I don't think an opinion could be expressed with any accuracy.

Q: So it wouldn't be reasonably certain? Is that what you're saymg?

A: That's correct.

Q: Do you have an opmion, based on a reasonable medical surgical probability in Mark's case how much time it was after that first biological moment when the pathogen entered the spmal fluid, occurred, until the inflammation occurred?

A: No. Again, I don't think that that can be known to the point that someone can testify to it with a reasonabie degree of probability.

Page 292

Q: Do you have any opimon as to when the pathogen entered the spinal fluid. Hemophdus influenzae type B entered the spinal fluid?

A: Idonotknow.

Q: Doctor, in carrying forward, in a patient in whom biologic menmgitis is present. do you have any opmion as to how long it would be before that patient would experience things - I'm talking about a child six months of age - that to a parent or to a physician or a nurse, symptoms to the seeing and learned eye would appear? Or would that also be variable and something which you couldn't be speclfic on?

A I don't know the answer to the question.

Q: Is there such a thing, Doctor. as a patlent in whom biologic meningitis is in existence from the moment that it occurs, and then however long it takes for the inflammation to appear, that could go on to that process taking place and givmg rise to death in which there would be no symptoms or signs to seeing learned, responsible caretakers who are watching from second to second? Could it be silent?

A: Well, now, you understand there are two kinds of findings. There are general and nonspecific findings on the one hand, and then there are those that are indicative of clinically overt meningitis on the other hand. I assume - well, I'm convinced that the person would have some general and nonspecific signs of illness, but I am assuming, without any

Page 293

overt signs would more probably than not follow the general and nonspecific symptoms?

A Yes, but the interval between the two of them must differ from person to person.

Q: Do you have any opinion as to why the symptoms, general and nonspecific within the definitions we've used, the

Page 294

A: The signs of clinically overt meningitis depend on biological processes that usually follow the induction of fever in a patient, and inasmuch as fever is a general and nonspecific finding, it would precede any of the more characteristic signs associated with meningitis.

Q: Do you have an opinion as to what it is about fever in that what it permits, or does that have anything to do with the development of meningtis taking place?

A: I don't believe fever itself, one way or the other, aids or abets the process of merungitls occurrmg.

Q: Why. then, does fever appear, nevertheless, in the context of your last answer?

A: Because fever is a general nonspecific biological response to the interaction between bacteria and white cells, and as such, that interaction would precede the formation of enough inflammation to cause the person to have signs that indicate meningitis.

Q: Is it your opuuon. and have you ever read or written on this point. that one generally would look to when a patient spiked a fever to try to determine when it was that the pathogen entered the meninges or the spmal fluid?

A: I have never written that.

Q: Have you ever seen it written?

A: I don't remember seemg it written, but it's an untrue statement.

Page 295

Q: It is? What is the true statement as to why the fever occurs in relation to this process?

A: The true statement is that fever is present prior to the appearance of clinical meningitis, but that a fever spike, per se, or the onset of fever is not necessarily a marker of when the central nervous system inflammation takes place.

Q: Is it a marker when bacteremia takes place? Have you ever seen or read that or wrote that?

A: Agam, if one defines bacteremia as the presence of bacteria in the blood stream, one could biologically argue that fever must come after bacteremia occurs. because it requires the interaction between those bacteria and white blood cells.

Q: In the context of biologically: correct?

A: That's correct. But of course, this is all suppositions based on biology of the disease. The thing has not and cannot be studied in human beings.

Q: In the context of the definition of biologic sense, look at page 695 of the article we just have been going through.

A: All right.

Q: You'll find where it says, 'To many, the application of biologic Sense seems persuasive."

A: I see it.

Q: Is that what you, in the writing that I have just read, mean to be the same biologic sense that you just talked about in the deposition? I mean. does biologic sense mean in this artlcle, in that paragraph, the same thing you mean, biologic sense in the way we're talking about it now?

A: Yes, it means arguing from a knowledge of biology without anv proof that what you have just said is true

Q: And that's the best we can do, isn't it?

A: In certain areas, it's all one has But it may be false.

Q: Or it may be correct

A: That's correct

Q: And Doctor, in thts article on page 695, it says, 'To many, the application of biologic sense seems persuasive 'There does occur in clinical medicine a feeling for the biology of the system. the geschstalt that the longer a disease goes on, the more severe it is and the more severe the sequelae'"

And I'm now gomg to end the quote of what I'm quoting from the article. Is that the kind of biologcal sense you're referring to, Doctor, a geschstalt that physicians come to have with experience and knowledge?

A: Well, it is in the context of the article. What you and I were just discussing was much more detailed than an intuitive feeling or a biological geschstalt. We were actually trying to put together a scenario based on biology as to how things actually happened. It's more detailed than just a general feeling.

Page 296

Page 297

Q: Well, dropping down, Doctor, it says, 'The argument to support this intuition includes the knowledge that a large quantity of organisms or antigens in the initial cerebral spinal fluid appears to correlate with a worse outcome in bacterial meningitis." You see that, Doctor?

A: Yes.

Q: The intuition includes the knowledge that a large quantity of organisms or antigen is in the cerebral spinal fluid. That is in keeping with what we're talking about, isn't it?

A: No.

Q: Aren't we talking about the offending organism being in the spinal fluid?

A: Yes, but we weren't talking about the quantity.

Q: No, I'm not - we're talking about like and like. We're talking about organism being in spinal fluid, and a response taking place; correct?

A: Well, that sentence doesn't have anything about the response.

Q: Well, is an antigen a response of the body, Doctor, to a foreign organism?

A: No.

Q: It is not? What is an antigen, Doctor?

A: An antigen is a portion of the bacteria whtch can be

Page 298

detected immunologically.
Q: And do you agree with this statement biologically bemg correct that I have lust read in this paragraph?
A: Yes. The quantity of organism does correlate with outcome. Not perfectly. but there is a correlation.
Q: And Doctor, the next sentence, "Also delayed sterilization of cerebral spinal fluid after 24 hours"? You see that?
A: Yes.
Q: What would one be able to do with that fluid? What would you do that you can get the response in 24 hours?
A: I'm sorrv, I don't understand the question.
Q: What does this refer to that has been done? Did they take a spmal tap after 24 hours to see whether or not the medication caused a sterdization?
A: That's correct.
Q: You see in the next sentence it says, "Cerebral spinal fluid that remains culture-positive at 24 hours"?
A: I see the sentence, yes.
Q: Droppmg down to the last four, five sentences of this same column and paragraph - or let me go back to the last full paragraph on this column, page 695. You see it reads, 'The pathophysiology of meningitis underscores the central role of inflammation in the production of clinical illness and in the vessel damage that precedes ischemic brain necrosis."

Page 299

Do you agree with that statement?
A: Yes.
Q: Is that in a biologic sense, Doctor, that you made that statement?
A: No. There are human data which support that.
Q: What is that wfuch supports that, Doctor!
A: The greater the inflammation and the earlier the inflammation takes place in the clinical illness, the worse the outcome. and that is known from human experunents - or from human experience, excuse me.
Q: The greater the inflammation and the what, Doctor?
A: And the earlier that the inflammation proceeds in the clinical illness, the worse the outcome.
Q: What causes the inflammation in that instance. Doctor?
A: The inflammation is caused by the body's response to the presence of the bacteria.
Q: And is it on a one-to-one basis?
A: No. It is dependent on two factors. One is the number of bacteria, but more importantly, it is the unique speed and vigor of the inflammatory response that a given individual has.
Q: What I'm asking is this, Doctor. And maybe you do not know this. But does the body's defense mechanisms cause white cells to come to the area of where the recognized

Page 300

pathogen is on a one-to-one basis. or does the body just call the army to come. regardless of the number of bacteria that are recogmed as foreign?
A: It's mainly the latter, that there is a general response. but the greater amount of organism, the more intense the response. Within the speed of response it is unique to the individual. So that every individual seems to have - and this [a] is true in animals - seems to have a speed of response and a vigor of response. Given that unique characteristic of the individual working within that, it is accelerated even more by the presence of large amounts of bacteria.
Q: Would it then be true and is that what this is saying, that it is better and we know that if you can get it before it has more numbers of organisms, you have a better chance of having less inflammation?
A: Well. if you'll read the next paragraph. that exact issue is addressed. That is the final link in the chain of logic that is not proven, unfortunately.
Q: Does this article in this paragraph say it would make biologic sense, then, that initially a larger number of organisms would result in more inflammation and that the greater the inflammation, the worse the vascular damage and ultimate outcome?
A: It says that, but the only two articles that exist that look at that issue actually disagree with that biological

Page 301

sense. So here's an instance in which biological sense is probably not true.
Q: Based on two articles.
A: Well, that's all one has to go on.
Q: So your basis for saying biological sense is correct are the two articles that are, I think, the only articles - are the - the two articles I don't have, that author Kallio? Is that what you're talking about?
A No, it's the article by - one article is by Wilson and the other article is by Feldman. Also the studies in the rhesus monkey did not demonstrate that.
Q: which article is the one by Wilson? Where is that? In the material you have given me?
A No, it is reference 36 in my article.
Q: And which one is Feldman?
A: Reference 39. And the rhesus monkey study was reference 40.
Q: Doctor, would you turn to the summary?
A: Sure.
Q: In the summary, Doctor, you wrote, and it was published, 'The prompt diagnosis and therapy of bacterial meningitis remain enduring clinical challenges, for no physician would normally delay appropriate therapy." Is that correct?
A: Yes.

Page 302

Q: You also on the next page, *697.* have written. "For severe" - and I have a punch here, Doctor. What's the word after "severe"?

A: "Infections."

Q: "For severe infections. the inexorable damage of untreated disease is presumed and antimicrobials properly are given without hesitation"; is that correct?

A: That's what I wrote.

Q: And droppmg down in that paragraph, you then write in that last sentence, "Although legal and medical implications may be contained in such an analysis, its relevance to any particular clinical case is only retrospective"; that's correct?

A: That's correct.

Q: What's that mean?

A: It means that despite the truth of what's written in this artlcle and subsequently confirmed, it does not alter the obligation that a physician has to treat promptly bacterial meningitis.

Q: And that is your opuuon as to the obligation the physician has; right?

A: Yes, it is.

Q: And that was true in *1970,* as well?

A: Yes, it was.

Q: 1971?

Page 304

paper, and the other two articles that you cited me to by Dr. Kallio and the other one, that I have given the number 17, have made such an analysis using all of the available data?

A: Well, references 36, 39, and 40 were articles which did not investigate this area.

Q: They did not?

A: No.

Q: Is that correct?

A: That's correct. The two articles you referred to. the one by Kallio and the one by Kilpi. generated specific study data which confirms what I wrote in this article, and those were, I think. the best possible study that is allowable, given the fact that you're dealing with human beings with severe mfections.

Q: That being the case - and I understand what you said - going back to this instance. 'To judge responsibly the strength of a causative link. all available scientific evidence must be analyzed by established criteria." Have you or these other articles used established criteria to establish a link?

A: I certainly used established criteria in mine, and the analysis of the data presented in the other two articles, Kilpi and Kallio, also used established techniques.

Q: Did they used the established criteria?

A: Yes, they used established criteria.

Q: What is the established criteria you opine in your

[2]

correct?

A: It's actually based only on a biological inference for which there is absolutely no clinical proof.

Q: The best you have; right?

A: It's all I have is the biological argument. I have nothing yet to gainsay it.

Q: And Doctor, on that same page, going to the paragraph that I was reading from, the top part, you see there's a sentence that says, 'To judge responsibly the strength of a causative link, all available scientific evidence must be analyzed by established criteria." Do you see that?

does it say in writing the conclusion you have given in this deposition?

A: I'm confused in the question, sir.

Q: Where does this article say in writing that in your opinion with a patient who falls in category 1, there is no effect as to when the antibiotics would be given that you're hypothecating in this case regarding MarkTurner? Where does it say that it wouldn't have any outcome or -

A: What I said in my article is that the timing of the dosing of antibiotics does not correlate with outcome when the syndrome is one of less than three to Eve days of general and

Page 306

The timing of the dosmg does not correlate with outcome. Does that mean - in any way are you suggesting that in some patients the giving of the antibiotic may not. nevertheless, prevent or reduce severe or permanent central nervous system damage?

A: Well, that's why I divided it up into three different groups, sir, because my readmg of the biological argument. for which there is no countervailing experience. is that if there's an inappropriate delay in clinically overt menmgitis, then that delay would influence outcome. That's why I divided up the syndromes into different types.

Q: But I want to stay with the question, Doctor. that I'm positing. Are you suggesting by the statement m category 1 that the timing of the dosing does not correlate with outcome, i.e., there being permanent central nervous system damage, that that means that in all patients that you in fact give the medication, it will not be again beneficial in any way to prevent that harm?

A: No, that's not what I'm saymg.

Q: That isn't what you mean, is it?

A: No, that's not what I'm saying.

Q: And as a matter of fact, in patients in category 1, you cannot prove as to whether and when the timing will or will not help that patient, but there are clearly certain patients in whom, in that category, they may be benefited by the giving

Page 307

of the medication; correct?

A: No. That's not what I'm saying.

Q: You're not saying that? Are you saying that in category 1, Doctor, that in all of those patients, it doesn't make a difference in any of those patients' outcomes whether or when the medication is given with any of them?

A What I'm saying is that when the medication is gwen and it's bemg given for a purpose, the timing of that giving of medication in the context of the illness does not correlate with outcome. That's what I'm saying.

Q: "Correlate" in that context means what?

A It means influences the outcome, making the outcome worse or better. It does not correlate.

Q: By "correlate," you mean what? Statistically you can t correlate it, that you can't come to a statistical association? Is that what you mean, Doctor?

A No. What I mean is, it does not influence the outcome.

Q: What does not influence the outcome? The giving of the medication, no matter when it's given?

A: The timing of the antibiotics in the context of that illness does not influence the outcome.

Q: It will not make any difference on the patient themselves in their outcome?

A: The timing does not make a difference in the outcome

Page 308

of the pauent.

Q: Does the givmg of the antibiotic make a difference?

A: Yes. Without givmg the antibiotics, the disease is 96 percent fatal.

Q: So are there patients, then, that the timing that you give it may, in fact. make a difference, and in some pauents when you give it, it won't make a difference?

A: I didn't understand the question.

Q: Well, Doctor. you're saying that the timing does not make a difference, but the giving of the medication does; correct?

A: You asked me about does giving antibiotics at all make a difference, and I said yes, because without antibiotics, the disease was 96 percent fatal.

Q: So what I'm asking you, Doctor, is this. If the giving of the antibiotics is and does make a difference. and if you are of the opinion that in clinically overt meningitis, inappropriate delays in commencing therapy incrementally increases the risk of permanent injury, isn't it also true that inappropriate delay in commencing therapy in the patients in category 1 would also, as to some of those patients. incrementally increase the risk of permanent injury?

A: Well, that's a tautology, because you used the words "inappropriate delay." In other words, in your question is already included the bias that the antibiotic should have been

Page 309

given at an earlier point and they were inappropriately withheld, and therefore, it would influence outcome. I would agree that if in the context of an illness antibiotics are inappropriately withheld in someone who has a clinical reason to get them because the child has clinically overt meningitis, it does influence the outcome. I would agree with that.

Q: Okay. So what I think I understand you to say in the context of the patients in category 1 is that it is your presumption in this statement itself that patients in category 1 who have general and nonspecific signs and symptoms for less than three to five days - that in and of itself is not a reason to give the antibiotic; correct?

A: One does not give antibiotics for no reason at all.

Q: But are you saying that in that specific category - are you presuming that for those patients there is no finding that has been established or demonstrated which would warrant the giving of an antibiotic, merely on the basis of general or nonspecific symptoms? Is that a premise that you're presuming?

A: I'm honestly not presuming anything. The whole thrust of the article is that someone eventually has a diagnosis of meningitis made at a point in time, and antibiotics are given.

Q: In category 1, Doctor, did those patients at some point in time have a diagnosis made of meningitis?

A: Yes.

Page 310

Q: Was it after it became clinically overt?
A: Yes.
Q: So isn tit true, by the categorization you have used. that all patients in category 1 eventually went on to become mto category 3 with clinically overt signs, by your definition?
A: Yes.
Q: And you can't tell me when and if, in any of those patients in category 1, before there were clinically overt signs - you can't disprove that they may have. in fact, and in truth had biologic merungitis?
A: No one can know when biological memgitis is present. other than by clinical **findings** or spinal tap.
Q: Right. So that these patients in category 1 may have biologic meningitis, but no one would know irwithoutthat being done: right?
A: That's correct.
Q: Is that a fair statement?
A: Yes.
Q: Okay. Let's go on to somethmg else. Doctor. With regard to the - I'm just getting my notes. Give me a moment. Give her fingers a rest.
(A recess was taken.)
Q: With reference to what we were just talking about in the context of correlation, does correlation mean that it would

Page 311

affect all the people within the category 1 the same way or not the same way? Or putting it differently, what do you mean by "correlate"?
A: I think I have already tried to explain what I mean by "correlation."
Q: Does it mean that it will affect all of them the same way or not affect all of them the same way?
A: It means that it will affect everyone the same way unless there is evidence against that.
Q: And how does one assess whether there's evidence against it?
A: Well, there may be some specific information regarding the individual patient. There may be - I mean, that would be it. some specific clinical or medical or microbiological dormation regarding a specific pauent which would take that patient out of the general group to which that general conclusion applies.
Q: Okay. Now. Doctor, in the context of considering altered level of mental status, would it be appropriate to determine and assess if a child was playful and later become not playful? **Is** that part of the picture?
A: Well, assessment of the level of activity and socialization in a child **is** one of the ways of getting at the level of consciousness, so those are important issues, yes.
Q: Doctor, would you agree that in children of the age

Page 312

three to **six** months, there may be subtle signs in these children regarding merungitis, and only subtle signs may be present?
A: Maybe you need to let me know what those subtle signs are.
Q: Well, the phrase you're not familiar with; correct?
A: I do not think that children with meningitis have anything subtle about them at all. They may have general and nonspeclfic symptoms in an illness in which meningitis is eventually diagnosed, and in retrospect, people may be calling these general and nonspecific symptoms subtle. But in actuality, general and nonspecific symptoms are exactly that, general **and** nonspeclfic for illness, and they do not imply meningitis.
Q: Doctor, is it your opinion that in clinically overt meningitis - strike that. I'll restate it.
When, in your opinion, does a patient have clinically overt meningeal **signs,** by your definition? When they, in fact, present. or when the observer sees them?
A: Well, I mean, here's the tree-falling-in-the-forest business again.
Q: Well, but I'm not doing it to be cute with you. I'm serious. You don't know for how long a period of time - for example, usmg the bulging fontanelle in the record regarding MarkTurner, you don't know for how long that was present, do

Page 313

you?
A: No.
Q: And let's just hypothetically - and **this** is a hypothetical. Are you with me, Doctor?
A: Sure.
Q: Let's assume it had been present eight hours before it was charted and observed by an observer. All right?
A: okay.
MS. McDONALD: The tender fontanelles or the bulging ones noted later?
Q: Whenever it would have occurred, that would be clinically overt, would it not?
A: The fontanelle findings which led to the spinal tap would lead to a spmal **tap** whenever they would be observed, yes.
Q: That's not my question, though, Doctor.
A: I thought that was your question.
Q: My question is **this.** I gave you a hypothetical, and I'm using just an example of bulging fontanelles. If it would have been present eight hours before someone finally came to see the patient, it **still** would have been present for eight hours, would it not?
A: Yes.
Q: And it still would be - if someone had looked at it, it would have been correct to call it clinically overt

Page 314

eight hours sooner; correct?
A: Yes.
Q: What makes it clinically overt - the word "overt" means chat some health care provider is seeing it; correct?
A: Correct.
Q: That's part of the definition of clinically overt. isn't it?
A: That's correct.
Q: So that if we take out the word "overt" and lust talk about clinically - cluucal signs, a sign may be in truth present before it becomes overt by that definition, being a medical health care provider seeing it; correct?
A: Correct.
Q: And in that context, Doctor. you would agree that the timetable when something is - a finding is present may have some bearmg upon the givmg of the antibiotic: correct?
A: Antibiotics are nor given unless somethmg is clinically overt in the way that we've talked about it.
Q: I understand. Doctor, but I think you'll be able to follow what I'm saying here, *so* let's do it this way. I want you to assume *two* patients. At 8:00 in the morning in one patient, there is a bulging fontanelle that is seen for the first time in a six-month-old child with all the signs and symptoms and history of MarkTurner; all right? But at 8:00 a.m., a doctor for the first time comes and sees the bulging

Page 315

fontanelle. okay?
A: Okay.
Q: And then in hypothetical patient number 2, everythmg is the same I have described, except that at midnight there's a bulging fontanelle. Are you with me?
A: Sure.
Q: Okay. Now. here's what I'm asking you. In a patlent - in both patients there is Hemophilus influenzae type B in a biological sense. Are you with me?
A: Sure.
Q: If you gave the antibiotic, the appropriate antibiotic, at 12:15 in the morning to the one, and you didn't give it until 8:15 in the second patient, all things else being equal, in a biologic sense, wouldn't you expect that the earlier the antibiotic would be given to a patient that had clinical signs of meningitis, the more likely that there would be a positive effect in reducing harm or injury, all things else being considered equal?
A: Just for clarification, in your hypothetical are you telling me that the child in whom the examination took place at 8:00 in the morning would have had the bulging fontanelle, had an exammation taken place at midnight?
Q: Yes.
A: Then the answer is to the best that is known, maybe right, maybe wrong, the best that is known. that interval of

Page 316

eight hours incrementally would worsen the outcome, but the degree of mcrement is not known
Q: Thank you
A: But of course, in the second case, there's no mappropriate delay That's obvious in your hypothetical.
Q: I understand. I understand what you're saymg. So the difference of when it is approprtate or mappropriate as to a delay would depend upon other circumstances and facts, correct?
A: Yes.
Q: Do you know, Doctor. what the staffing was at this hospital at the time in question?
A: No.
Q: Do you know on any given shift how many physicians there were at the unit thts patient was on the 2nd, 3rd. 4th, 5th. 6th. 7th or 8th?
A: No.
Q: What unit was this patient on on the 7th, doctor?
A: What specific unit in the hospital?
Q: Yes, sir.
A: I don't know.
Q: What unit was he on when he frrst came mto the hospital?
A: I don't know.
Q: Did he remain in the same unit throughout?

Page 317

A: I don't know for a fact. I assume *so.*
Q: With regard, Doctor, to the nurse/patient ratio, did you assume that it was the same at each day of the - at each shift of the day?
A I don't know one way or the other, sir.
Q: Do you know how frequently, at a minimum, nurses maderounds?
A: No, I don't.
Q: Do you know at a minimum how frequently nurses made notes?
A: No, I don't.
Q: Do you know whether the ratio of nurses was the same or different on evenings as compared to days?
A: I don't know that.
Q: On weekends compared to weekdays?
A: I don't know that.
Q: Do you know, Doctor, with regard to the residents, how frequently, if at all, the residents would make rounds?
A: I don't know for an absolute fact, no.
Q: Did you assume or make any assumptions how frequently residents would be there?
A: I assumed at minimum there would be daily rounds.
Q: Once a day, minimally?
A I said at minimum there are daily rounds, but I don't know how often the residents actually saw the patients.

Page 318

Q: I appreciate, Doctor. What I'm trying to do - and I'm not trying to argue with you. When you say "minimally," are you talking about at least once a day, once a shift, what?
A: Once a day.
Q: Once every 24 hours?
A: That's correct. I said minimally. but I don't know what the truth is.
Q: So you don't know, in this case, when or how frequently, if at all. the residents made rounds to this patlent: right?
A: That's correct.
Q: Or were expected to?
A: That's correct.
Q: Do you know minimally how frequently the residents were supposed to make progress notes?
A: No. I don't know.
Q: Do you know. Doctor. whether the residents were there weekends any differently than weekdays?
A: I don't know the staffmg patterns, no.
Q: Weekdays versus weeknights?
A: Again. I don't know the staffing patterns.
Q: Do you know minimally how often an attendmg was expected to be there?
A: I thmk Dr. Gotoff suggested that an attending was in the hospital each day and available at any time, but they

Page 319

did not round on each and every patient.
Q: Mark is not deaf, is he, doctor?
A: I do not think there's any evidence that he's deaf, no.
Q: Doctor, in the reference, in the context of histories, you read the history at Cook County, Municipal Contagious Disease and Rush Pres St. Luke; is that correct?
A: That's correct.
Q: And you did note differences in those; correct?
A: Perhaps you can point out to me what you meant by that.
Q: Well, Doctor, I'll say it different. Was the history concerning whether this child received antibiotics before admission to Municipal Contagious Disease Hospital the same in all three hospitals?
A: I'm sorry, which were the three hospitals?
Q: Cook County, Municipal Contagious Disease, and Rush Pres St. Luke.
A: Well, my understanding was the child received Polycillin at Cook County Hospital two weeks prior to the admission to the Municipal Disease.
Q: Is that the assumption you made?
A: That was contained in the notes of the Municipal Contagious Disease Hospital. I didn't see that gainsaid on other notes, no.

Page 320

Q: Did you assume that the patient received antibiotics for the entire two weeks?
A: I don't think he had a full two-week course, no. I don't believe he was taking antibiotics at the time of admission, so the answer is no.
Q: What was the amount of antibiotics, then, in that history that you assumed he was given? How and how long did he take it? Was it oral, was it parenteral, was it -
A: It was an oral antibiotic. It was begun two weeks prior to admission, and I don't know the duration of time that he took it.
Q: What was the dose?
A: I don't know.
Q: Did he take any of them?
A: I assume so, but I wasn't there watching him.
Q: Have you ever heard of partiallv treated merungitis?
A: Yes, I have heard of that.
Q: What is it?
A: It's a situation in which a child or a person, not just a child. has meningitis diagnosed who is already on an antibiotic.
Q: And what effect, if any, may that have insofar as signs and/or symptoms?
A: Well. no one knows for an absolute fact what effect it has, because no one knows whether the individual did or did

Page 321

not have meningitis at the time the oral antibiotic was begun. The best that is known about that is that if you look at children who have been on an antibiotic prior to the diagnosis of meningitis being made, and compare them to children who have not been on an antibiotic prior to the diagnosis of meningitis being made, the duration of illness is longer in the children on the antibiotic prior to the diagnosis than it is in the children not on the antibiotic.
Q: Does it have anything to do with changing or altering the otherwise clinical signs and symptoms that would be present, repressing them in any way?
A: Not meaningfully, no.
Q: Have you ever read that it does?
A: I just gave you my answer.
Q: I know. Doctor, I'm not unmindful of your opinions being your opinions. I'm asking, have you ever read, to the contrary of your opinions. that it does have an effect in the partially treating of meningitis to give oral - or parenteral antibiotics?
A: I don't have an exact memory of reading that statement. I can imagine that statement having been made, but it's just not true.
Q: Not true. Doctor, did this child, in your medical opinion. have pertussis?
A: This child had pertussis syndrome.

Page 322

Q: Doctor. I appreciate that. So what I'm asking is [a] did he have pertussis or pertussis syndrome? Which?
A: The most one can say is that he had pertussis syndrome because there is no bacteriologic confirmation of perrussis. If one looks statistically at pertussis syndrome. more likely than not it is due to pertussis. But it was not confirmed in this patient. which does not mean it wasn't there. It just wasn't confirmed.
Q: Can you say with a reasonable degree of certainty more likely than not that he did have the pertussis or merely had pertussis syndrome? Which?
A: I can say with absolute certainty that he had pertussis syndrome. it is my opmion he had true pertussis, not based on confirmatory studies in this patient, but what is known about patients who have pertussis syndrome.
Q: Do you have an opmion whether he had otitis media?
A: I have an opmon.
Q: What is your opmon?
A: My opmon is, in retrospect. he did not have otitis media.
Q: Did any of the physicians carmg for him indicate in their opinions in writing that they thought he had otitis media?
A: Yes.
Q: How many and who?

Page 323

A: Well, Dr. Dellatorre did on the admission, and I believe that most of the subsequent physicians who cared for the patient assumed that he had had an otitis media.
Q: Did Dr. Gotoff diagnose that he had otitis media?
A: To my knowledge, Dr. Gotoff did not make a diagnosis one way or the other.
Q: Did you read his deposition?
A: I read his deposition.
Q: And you're of the opinion that Dr. Gotoff did not opme that this patient had otitis media!
A: No. What you asked me was. did Dr. Gotoff make the diagnosis of otitis media, and I said no.
Q: Okay. You read his deposition; right?
A: Yes.
Q: Did Dr. Gotoff opine in his deposition whether he thought this child at any time had otitis media?
A: I don't remember.
Q: You don't remember? If Dr. Gotoff said it was his opmion that the child did have otitis media, you disagree?
A: I have a different opinion.
Q: Did any of the doctors at Rush Pres St. Luke diagnose otitis media?
A: I don't see evidence that they made a positive diagnosis of otitis media when the child was at Presbyterian St. Luke. They did note that the tympanic membranes were not

Page 324

normal, but at least in my quick review of my notes, I did not see that diagnosis being made. I'd be happy to look at the original records, however.
Q: And Doctor, if the doctors at Rush Presbyterian St. Luke were to be of the opiruon that the child at the time they saw him had otitis media, you would also disagree with them?
A: No. I would have to look at the physical findings that led them to that belief. It wasn't an issue that I addressed directly, because I did not think it was germane to my analysis. If you'd Like me to address it, I'd be happy to.
Q: All right. What I'm just saying - so from your viewpoint it was not something you looked at in this case for purposes of deciding one way or the other; correct?
A: That's correct.
Q: And it's not an opinion that you think has any bearing, one way or the other. in this case? That he had otitis media or not. I'm saymg.
A: No, whether he had otitis media or not at Presbyterian St. Luke is not an issue which I feel bears on the matters that concern this case.
Q: Well, is it of issue or concern whether he had otitis media at Municipal Contagious Disease Hospital?
A: No. I don't think it's an issue one way or the other.
Q: So is it correct you didn't look at this case with

Page 325

that in mind and you have no opinions one way or the other that you expect to give at the trial?
A: No. I have an opinion, but I just don't think that the issue is germane to the child's other clinical course. I have an opinion.
Q: Doctor, you said at Rush Pres St. Luke you would Like to look through the physical Endings that led them to believe that; right?
A: No, I think you asked me, sir, did anyone at Presbyterian St. Luke make the diagnosis of otitis media.
Q: That's correct. And you said you would need to look at the physical findings which led them to believe that?
A: Can I finish my sentence, sir?
Q: Yes.
A: What I said was, I do not believe that they themselves made a positive diagnosis of otitis media in their hospital. Now, I did not include that diagnosis having been made in the notes that I have off of the original records. If that is an issue that you would like me to review, I can look at the original records.
Q: What I'm trying to find out is - and I'll ask you to do that in a moment, Doctor - are you saying that to determine whether a child in this case had otitis media, you have to look at the data that's in the record?
A: Yes, of course.

Page 326

Q: What are the physical findings in the record that you'd be looking for to prove that otitis media was or wasn't present?

A: I thmk that the data that I would look at would be two. One would be a description of the tymparucmembraneand then a description of the natural history of the child's course with respect to the possible presence of otitis media.

Are you still there, sir?

Q: Yes, sir.

A: When you're quiet, I get nervous.

Q: I'm sorry. That's what I did with you a moment ago. You said you were thinking. I'm writmg.

Doctor, would you tell me of a reason or reasons why - and what you base it upon - you do not believe this child at Municipal Contagious Disease Hospital did have otitis media?

A: Yes. In the description of the ears contained in the admission history and physical examination by Dr. Dellatorre, the following was found. There was a white mucoid discharge, not foul, and the right tympanic membrane was injected, mearung red, and the left tympanic membrane was normal.

Now. in general, merely a red ear does not predict the presence of bacteria behind the eardrum and would not qualify for the diagnosis of otitis media.

Page 328

Q: Doctor?

A: Yes. That's what I'm saying. Yes, sir.

Q: And is that because the doctor didn't write it?

A: Well, no. He wrote about a mucoid discharge in the ear. But that mucoid discharge was cleared on its own after two days. and I'm not convinced that that was really pus in the ear. In the ear canal, excuse me.

Q: You're not convmced. right?

A: No, I'm not convmced.

Q: Did they do anythmg to rule it in or rule it out, Doctor?

A: Well. they did culture the ear discharge.

Q: And?

A: But I could never find the result of the culture.

Q: You couldn't?

A: No. I couldn't.

Q: So let me see if I understand you correctly. Is there an order for a culture to be taken of the ear discharge?

A: Yes.

Q: What is the date of the order?

A: The 28th of December.

Q: Read the order.

A: It says, "Culture of ear discharge."

Q: Is that what you consider to be an order which should be executed and filled?

therapy.

Q: Rescinded, yes.

Page 330

routine. dit was done. it would become an official part of the chart, wouldn't it?

A: Normally, yes.

Q: Normally, yes. Correct?

A: That's correct.

Q: And you don't have any reason to believe that if it was done. it wouldn't be reported. do you?

A: I have no reason to believe that, sir.

Q: And you don't have any reason to believe, if the doctor ordered it, it wouldn't be done, do you?

A: I have no reason to believe that, sir.

Q: And the order was gven for a reason, wasn't it?

A: Yes. it was.

Q: What was the reason, as you opined, that the order to culture the discharge of the ear was given?

A: Presumably, it was given for two reasons. One **is** to decide whether, in fact. that discharge had origmated from the middle ear and was part of a ruptured eardrum: and the second was to find out whether there was a causative agent that would have defined the best choice of antibiotics.

Q: So that, Doctor, it is true that one of the **things** that such a culture mght indicate is that it might turn out to be Hemophilus flu type B; correct?That's a possibility?

A: Anything is a possibility, It could have grown anythmg. But you know, statistically, we know that Hemophilus

Page 331

influenzae type B is not a common cause of ear infections, ***so*** that would be unlikely.

Q: Well, Doctor, I have the literature in front of me and I'm going to get to that. So you tell me how uncommon you **think** it **is** for HIB to be part of an ear infection associated with otitis media.

A: Less than 5 percent.

Q: Isn't it correct, Doctor, it's 5 to 15 percent?

A: No. That's Hemophilus mfluenzae. But it's not type B.

Q: All right. So Hemophilus influenzae is 15 percent, type B **is** 5 percent; right?

A: No. I said less than 5 percent.

Q: How much was it. Doctor?

A: I'm guessmg, sir. You know, you have the advantage of being on the telephone, lots of learned books all around you. and ***so*** on and ***so*** forth. My recollection is -

Q: I need some advantage in life.

A: My recollection is that it's rare, ***so*** less than 1 percent, 1 percent, 2 percent. Very rare.

Q: Okay. Now, nevertheless, in the 1 to 2 percent, would that be the case that it is in those patients that when it occurs **it's** 100 percent for them, right?

A: As you say, sir.

Q: Right?

Page 332

A: As you say.

Q: Okay. Now, what is there, Doctor, that would be important to know if the discharge **is** from the middle ear? Why is that important?

A: Well, presumably, it would have helped them make the diagnosis of **otitis** media.

Q: And hypothetically in a patient in that time frame reference that **otitis** media was diagnosed, what was the standard treatment for that?

A: I would imagine it would have been either Amoxicillin or penicillin and sulfa. Excuse me, ampicillin. because Amoxicillin was not available. Ampicillin orally, or penicillin plus sulfa.

Q: Ampicillin for ten **days;** correct?

A: Yes.

Q: The reason I say ten days, I read your article. You wrote an article dealing with the issue of why and how it came to be that various **drugs** were given for the duration; right?

A: Only with regard to bacterd meningitis.

Q: Right. But I'm saying you wrote an article about something related to why and how long **drugs** are given; right?

A: Yes.

Q: Okay. I do read what I get, Doctor. Now, is it your opinion. Doctor, that a culture of the ear that would show the HIB organism present would then suggest the giving of -

Page 333

you change it to ampicillin for at least ten days; correct?

A: No. As I said, I believe at that time ear infections were being treated with ampicillin or with penicillin plus sulfa.

Q: Plus sulfa. How long would the ampicillin be given? Ten days? At what dosage? How many milligrams per kilogram?

A: The usual recommendations ranged between 30 to 50 **milligrams** per **kilogram.**

Q: With reference, Doctor, to otitis media, can you rule out that it was not present?

A: No, **I'm** just **trying** to express an opinion based on probability.

Q: Okay. And with regard, Doctor - do you know whether, in the discharge diagnosis, otitis media, **at** Contagious Disease Hospital was diagnosed?

A: I believe **it** was included in the discharge diagnosis.

Q: May I ask you, Doctor, respectfully, what then you feel you can do and why you feel you're correct and they're wrong?

A: Well, you know. they were of **two** minds, evidently, because although they made the diagnosis on the one hand, they didn't treat it, on the other hand. ***So*** they may not have been entirely convinced that their diagnosis was correct and wanted

Page 334

to have more corroborating information. As it turns out. the darned thing went wav five or six days later anyway. which is all you can hope for even with antibiotics, and therefore. I thmk it's really a nonissue.

But based on a retrospective review of the look of the eardrum. of the natural history, and the fact that they themselves chose not to treat it. my feeling is that more likely than not. it was not present.

Q: Doctor, did you ever read and have you ever come to learn that otitis media may go from one site, one ear, to the other?

A: Well. I don't think otitis media goes from anywhere to anywhere else. People can have unilateral or bilateral otitis media. That is true. But nothing sloshes from one place to another place.

Q: I should have used the word "present." I'm sorry. Can it present in more than one ear?

A: Yes.

Q: Can it, Doctor. re-present. occur, with the same orgarusm?

A Can you tell when it's re-presenting?

Q: Within days after what appears to be the - in other words. Doctor, without examining the middle ear, can you - just because you don't find an injected ear or reddened ear, can you rule out the presence of otitis media being in

Page 335

existence?

A. Yes.

Q: You can?

A: *Yes.* If someone has a normal tympanic membrane, they do nor have otitis media.

Q: And in a patient who has otitis media, Doctor, can it recur?

A: Oh, yes.

Q: Can it recur with the same organism?

A: Sure.

Q: Can it recur with a new or different organism?

A: Sure.

Q: Can it recur within a matter of **days?**

A: **Yes.**

Q: And how long have you known that?

A: Forever.

Q: What relationship is there reported in the literature, Doctor, between otitis media and HIB meningitis?

A: None.

Q: None? Does that mean you have made a search of the literature and you found that it's never been reported?

A: No. You're asking me, as I sit here - you didn't ask me in the intervening time to make a search, sir. As you sit here, my opinion, based on the literature that I think is relevant. is there is no association.

Page 336

Q: Is it reported in any of the literature in Pediatrics or infectious Disease or Pediatric Lnfectious Disease, by people that you think are respectable and of learning, quoted people, that it is somethmg which there is a statistical association reported in the literature?

A: I have never seen that proven, sir.

Q: I didn't ask you if you saw it proven. Have you ever seen it published?

A: I don't know.

Q: You don't know? Is otitis media, Doctor, something which you **think** requires treatment?

A In general, otitis media is treated. Whether it requires treatment is another issue. and there's even a contemporary debate as to whether it requires treatment.

Q: Why is it treated?

A: Because the presumption is - and again, this is one of those clinical areas in which the clinical actions are based on sometimes an incomplete knowledge of a disease in human beings - the presumption is that in most cases, the treatment enhances the recovery and, therefore, avoids the **loss** of hearing in an ear that is filled with pus, and to some degree secondary infections in and around the ear.

But between 60 and 80 percent of otitis media gets better without therapy, and there are even new recommendations now to alter the duration of therapy or whether otitis media

Page 337

should even be treated.

Q: That wasn't the case in 1970, was it. 1971?

A: Again, then as now, most clinicians treated otitis media when they made the diagnosis.

Q: Do you know whether these residents had a residents' manual, Doctor?

A: I don't know what they had. sir.

Q: I'm switching in a moment, Doctor. Just getting my notes together, so bear with me.

A: Well, you don't mind if I go to the bathroom, do you?

Q: No. Let me ask you. We have been rude. I apologize. What's your thoughts about lunch?

A: My thoughts are that lunch is a good thing.

MR. GOLDBERG: Well, Ms. Court Reporter, what [is] **about** you?

THE REPORTER: I love lunch.

(A discussion was held off the record.)

Q: Let's do this. Before you leave for lunch, would you just put in the record, ma'am- Doctor, would you, at least as to the articles that you didn't - and I'm not suggesting anything wrong, intentionally - that you didn't send to Ms. McDonald that you have in your office - would you make sure you get those to Ms. McDonald, and if you could do it today, I'd appreciate it. while the dep is on. But if not,

Page 338

I'll just have to reserve my right. if there's nothing in there I think is mportant. I won't resume it. If there is. I'll act accordingly.

With that in mind, it's now 2:00 here. Let's resume the deposition to give you adequate tune and go to the washroom, at a quarter to 3:00 our time, quarter to 2:00 your time.

(A discussion was held off the record.)

(The deposition recessed at 1:00 p.m., and resumed at 2:00 p.m., as follows:)

Q: Back on the record. Doctor. in your notes. Exhibit 4A, my copy of 4B. on page 13, would you turn to it for a moment. please?

A: All right.

Q: You have selected notes, date 1/15.

A That's correct.

Q: In doing this, did you write down exactly what was in the Rush Pres chart or did you paraphrase?

A: I tried to write down what was in the chart. although not necessarily using the abbreviations that were used. I usually try to write out the words, but I did not add anythmg of my own, to my knowledge.

Q: All right. What I'm calling your attention to - you see it says "Summary of the positive findings." Positive findings?

Page 339

A: Yes.

Q: Do you see it says, "TMs, decreased light reflex"?

A: Yes.

Q: What did you assume that to mean?

A: The light reflex is the quality of the reflection of the examining light off the tympanic membrane. and one of the soft and nondtagnostic findings in infected ears is an alteration in the light reflex.

Q: Does that mean you considered that the person who wrote this was including within his differential otitis media or not?

A: No, I only concluded that they're describing what they saw.

Q: Would a doctor be reasonable in assuming that within the differential, by reading this, the differential diagnosis of otitis media?

A: Not by decreased light reflex alone, no.

Q: Plus the hstory.

A: Again, not by decreased light reflex alone.

Q: How about if you add to it the history?

A: No.

Q: No? Okay. Next, Doctor, do you have an opinion as to what is or was the cause or causes for the temperature rise between the morning of the second night until the third?

A: My opmon is that the temperamre rise was because

Page 340

the child developed mfectious gastroenteritis.

Q: And what do you base that upon?

A: I base that upon the fact that the child did have a temperature rise, one; did not have a physical finding which provided an alternative explanation, two; was not clinically significantly ill, three; and had diarrhea, four.

Q: Has diarrhea been associated with otitis media?

A: No. although children do develop diarrhea in the context of mfections sometimes, but not clinically significant diarrhea.

Q: Was this, in your opinion, clinically significant diarrhea?

A: It was, because they thought so.

Q: Well, tell me something, Doctor. How many bouts of diarrhea did she have?

A: I don't know how many bouts of diarrhea she had in all. There's a progress note from the 4th that said three loose stools, and Dr. Gotoff's note says that the child had diarrhea for two days.

Q: Do you see anything in the record to indicate in writing diarrhea for two days?

A: Yes, Dr. Gotoff said that.

Q: I say other than Dr. Gotoff, do you see anything to indicate that?

A: Well, let me review the nursing notes to see if the

Page 341

nurses have anything to say about it. The nursing note from the 3rd, 6:15 p.m., says "loose stools times four," and that's the only nursmg note that I see that comments on the quality of the stool.

Q: With regard, Doctor, to the 7th, do you find an order for a culture?

A I find an order for a culture on the 4th. I find an order for a stool culture on the 7th.

Q: A stool culture on the 7th; right?

A Yes, and also an order for a stool culture on the 4th.

Q: What other culture was done on the 4th, Doctor?

A: A blood culture.

Q: Now, do you find the specific order for the culture on the 4th, the blood?

A: I have the doctor's orders having a stool culture, blood culture, CBC in a.m., Pedialyte and no milk.

Q: That's on the 4th?

A: That's correct.

Q: And that's on page 6 of your notes; right?

A: Yes.

Q: Would you tell me, Doctor, please, where the lab microbiology record is regarding that blood culture?

A: I'm sorry, where it is physically in the records?

Q: Turn to it.

Page 342

A: In the records?
Q: Yes, sir.
A: Because I have it on my notes.
Q: All right. Where is it on your notes?
A: It's *two* entries below the doctor's order on the 4th.
Q: Now. will you turn to the actual laboratory slip?
A: This is going to take a moment.
Q: Please. I can give you the page. It's **L42.**
A. Yes. it's easy for you because you have it right in front of you.
Q: I'm sorry.
(A discussion was held off the record.)
A: All right. I have it in front of me.
Q: Okay. Now, Doctor, you see the staphylococcal present, **gram** negative?
A: Yes, I see it.
Q: It says H. influenzae type B present: correct?
A: That's right.
Q: What was the medium that was used for this culture, Doctor?
A: Well, I don't know specifically, sir.
Q: What mediums did you assume, or medium did you assume was used?
A: Oh, there are a number of liquid media that were

Page 344

A: That was the general procedure in those days. To my knowledge, no one was directly plating blood onto solid media.
Q: What time was the specimen received?
A: There's a stamp on the slip that says 7:45 a.m., January 5.
Q: *7* what?
A: 7:45 a.m., January **5,** and what is probably the time that the blood culture was logged in, but the blood culture itself origmated from the 4th.
Q: So **this** indicates to you **it** was logged in on the 5th; right?
A: That's right.
Q: At 7:45?
A: That's correct.
Q: What tune was it drawn?
A: Having a deposition with you is hke a scavenger hunt, trying to find **thmgs** that you want me to find.
Q: Okay, Doc. I want to make sure you're going to be an A pupil.
A: I don't know.
Q: There's nothing in this record to indicate when the blood was drawn for the culture? **Is** that what you're saying?
A: It was drawn on the 4th. but I don't know when it was drawn on the 4th.
Q: And you have no idea when that would be, according

Q: Have you ever used a chocolate media?
A: Not for a primary blood culture, no.

the 1970s, primarily?
A: Well, I'm giving you the information as I remember it from those days. Solid media, of which chocolate auger is an example, was not used for a primary blood culture.
Q: Was **this** a primary blood culture?
A: Yes, it was.
Q: How do you know that?
A: Because it was taken from the patient and put into a bottle of blood culture media which **is** always liquid.
Q: Where does it indicate to you that's what was done there?

culture would be drawn, and the nursing staff or the physician **staff** or perhaps the one lone laboratory person would put the

when the microbiology team arrived, they would log in the blood culture and begin the processing.
Q: Now, would you describe for me that processing step by step?
A: Well, I can only give you a general description, because I don't know the policies and procedures of the Municipal Contagious Disease Hospital. But *in* general. in those days, blood cultures were looked **at** twice **a** day, visually. The technician would look for any haziness or opacity of the fluid, any visible **growth** on the surface, or any lysis of the red blood cells. If any of those things were

Page346

present, an aliquot of the blood culture would be plated out on solid media and there would be a direct examination of the blood culture material by gram stain under the microscope. Following plating out on the solid media, an identification would take place. and susceptibility testing would be performed.

Q: And that generally is how you understood it to be done routinely:correct?

A: That's correct.

Q: Now. why would it be looked - if this doctor received - we'll assume that you're reading 7:45 on the 5th. a.m., that we're talking about is correct. would it then be done and looked at twice during the next 24 hours?

A: Yeah. I would assume it would have been looked at at the time of the log-m. and it would have been looked at some time that later afternoon or early evening.

Q: Now, that's visually looked at; right?

A: That's correct.

Q: And what you're lookmg for is to see if there's any visible growth on the surface; right?

A: You're looking for the three things that I described.

Q: Haziness, opacity and visible growth on the surface or lysis?

A: That's correct.

Page 347

Q: What would one expect to see in the way - if there is visible growth on the surface or lysis, what do you actually see?

A: Well, the lysis would be a change in the way that the culture bottle looked. Normally, in blood cultures, the blood cells will settle to the bottom of the blood culture. Above the blood cells will be a clear straw-colored fluid made up of the serum of the blood and the growth broth. In opacity, that clearness wouid be obscured, and you wouldnolongerhave clear fluid, but you'd have hazy fluid. Now, if there was visibie growth, you would oftentimes see colored white or yellow material growing at the interface between the blood cells and the broth, or on the surface of the broth. And finally, if there was lysis of red cells, you would have a uniform reddish appearance to the entire blood culture bottle, rather than the blood/broth interface.

Q: Now, what is the significance - let's take them one by one. Let's talk about - what's the significance within the first day and first 24 hours, if you see haziness? What's the significance?

A: The haziness is a sign of presumptive growth of a bacteria in the blood culture bottle.

Q: Have you finished?

A: Yeah, I'm finished.

Q: What's the significance if you see opacity?

Page 348

A: Haziness and opacity are the same thing.

Q: So you use them the same; is that correct?

A: Yeah. I mean, haziness is light opacity. Opacity is heavy haziness.

Q: What's the significance if you see visible growth on the surface?

A: Same thing.

Q: What's the significance if you see lysis?

A: Same thing.

Q: How frequently, Doctor. from your experience. is it that with a - knowing what the organism was, I mean knowing what the end result was that was reported. what's the likelihood of what you would have seen? What do you opine would have been seen?

A: Haziness.

Q: When?

A: At some pomt on the 7th.

Q: You would expect to see the haziness on the 7th?

A: I believe that's when they first identified the positive blood culture.

Q: Is it your opinion that what they identified, the blood culture, is the organism, or any of these signs being present?

A: Normally they would have seen the haziness. They would have then taken an aliquot of the broth and examined it

Page 349

A: It could be, depending on a number of factors.

Q: What are those factors?

A The number of bacteria present in the inoculum, the presence or absence of antibiotics in the blood, the condition of the bacteria given host defenses. In other words, have they been so-called stunned, or are they rapidly growing bacteria? Those seem to be the factors involved.

Oh, I'm sorry. The last factor is the size of the blood culture sample. In other words, the larger the sample,

Page 350

Q: What was the size of this sample?
A: I don't know.
Q: Are you able to form an opmion as to whether these orgmsms were stunned?
A: I don't know.
Q: Or the presence - there was no presence of antibiotic, was there?
A No.
Q: So that wouldn't be a factor: right?
A: Correct.
Q: And what was the number of inoculum? Was there any way to tell?
A: No.
Q: With regard, Doctor, then - how is it. using those as criteria, that one looking at the petri dish or the specimen could see evidence of visible growth? Why or what takes place? What is that which actually occurs?
A: The visible growth is an interference with the clarity of the media by bacteria which have grown in the blood culture bottle.
Q: And when that does occur, describe for me visually what you would expect to see.
A: You would hold the blood culture bottle up to a light. Actually, you hold it up to a dark surface with a light shining through the side of the bottle, and you ask the

Page 351

quesuon. "Is this bottle perfectly clear, or is there any haziness to the broth?"
If the answer is haziness, then it's a positive blood culture visually, and you begm to process the positive culture along the lines that I have suggested.
Q: Looking at this report, Doctor, that's here, the L42 which is the time that's stamped 7:46 on the 5th, can you tell when, if at all, any of these things were seen or observed one way or the other. from it alone?
A Well. there's a stamp that's on the right side of the slip, which is in a position superimposed on the word "reported."
Q: Right.
A: And it reads, "11:00 a.m.," and I cannot see the date.
Q: I have 1971, January 11. Okay?
A: Okay. So it must be that it was reported 10:00 a.m. on January 11, and I assume that that was the time in which the final identification took place, not the time of the first reporting. We know from the progress notes that the positivity was reported on the 7th. That's the only information I have.
Q: So you can't be any more specific; correct?
A: That's correct.
Q: Yes?
A: That's correct.

Page 352

Q: And Doctor. with regard to this particular organism, HIB, was the rapidity or the speed with which it would grow sufficient to be seen visibly with the naked eye, depending upon each of those things you just described?
A: That's correct.
Q: And without knowmg the answers to those things, you couldn't be more accurate; right?
A: That's correct.
Q: Doctor, have you, in fact, ever had a blood culture ordered where, within less than 24 hours, you visually saw evidence of growth on the specimen?
A: Yes.
Q: Have you ever had that occur with HIB?
A: Yes.
Q: What was your explanation for that?
A: The explanation was that there were a large number of bacteria in the initial inoculum and. therefore, the interval between inoculum and visible growth was short.
Q: Is there any way that you could determine the amount of inoculum that was in the specimen that was drawn in this case?
A: No.
Q: Is there any way, having and knowing what was in the cerebral spinal fluid on the 7th, the tap that was done, that you could use that and determine what was present on the 4th?

Page 353

auger independent of the presence of visible growth. I don't know what the procedure was at this hospital.
Q: With the first procedure, Doctor, what. in your opinion, on a probability basis would have occurred?
A: It would have been a negative gram stain.

Page 354

accelerated by approximately a day.
Q: Why is that?
A: Because of the fact that you may be able to recover small numbers of organisms on the subculture that would not have given rise to opacity or haziness on the visual mspecuon.
Q: In the instance. Doctor, where you observed the blood culture specimen within 24 hours to see what you opmed to be growth. all right, did you undertake or order in that instance a spinal tap?
A: It would depend what the gram stain showed. and it would depend on the clinical condition of the pauent.
Q: If the patient were other than life-threatened because of any other cause, or there was no - let's restate that. Strike it.
if there was no contraindication to a lumbar puncture, did you order one in those patients?
A: As I said, it would depend on the nature of the gram stain. In other words. the presumptive diagnosis of the orgarusm. as well as the patient's condition. If the patient were entirely well and the gram stain suggested that the orgarusm was a contaminant, then a spinal tap would not be performed. If the child was entirely well and the gram stain of the spmal fluid revealed presumptive pneumococcus, then a spinal tap would not normally be performed. If the child were

Page 355

sick. you would do a spinal tap whether you found out anything from the blood culture or not, anyway.
Q: Fine.
A: And finally, if the gram stain showed either presumptive Hemophilusinfluenzae type B or meningococcus, you would perform a spinal tap independent of the child's condition.
Q: Tell me why you would do it if the child were sick.
A: Because sick children with fevers, with positive blood cultures, deserve spinal taps independent of what the reading of the gram stain is, because gram stains can be false mformation. So you have a sick child now who has a positive blood culture of some sort who has a fever. That child deserves a spinal tap, period.
Q: If one such as yourself. when you did it, saw visible growth within the first 24 hours and the child was sick, would the visualization by you of that culture be a positive blood culture?
A: Yeah. It was a positive blood culture. Whether it was a true positive or a false positive you couldn't tell. But it would be a positive blood culture.
Q: So seemg haziness, opacity, or visible growth or lysis would make it positive? Any one of those?
A: That's correct.
Q: Now, you said if it was presumptive HIB, lumbar

Page 356

puncture would be done. What would make it presumptive HIB?
A: Gram negative pleomorphic rods seen on the gram stain.
Q: And how long would it take on a gram stain under the circumstances to determine the presence of pleomorphic rods?
A: Five minutes, ten minutes.
Q: And if within five to ten minutes one noted pleomorphic rods, then you would say a lumbar punctureshould be done: correct?
A: That's correct.
Q: Okay. I take it, Doctor. you have no idea of what was seen by the person who did these at any of the times that were mvolved: correct?
A: Correct.
Q: With reference, Doctor. to this child, did this child at any time, in your medical opinion, ever have sepsis?
A: No
Q: Is it your medical opinion. Doctor. that he had meningitis?
A: Yes.
Q: Is it your medical opinion that one generally can have - strike that. Did this child at some time become bacteremic?
A: Yes.
Q: Is it your medical opinion, Doctor, this child went

Page 357

from being bacteremic to then becoming meningitic without having any evidence of sepsis?
A: Yes.
Q: Define as you're using sepsis.
A: Sepsis is a child who has bacteremia and is clinically ill with an illness that is global and is, to the examiner, one of serious import.
Q: Does it require all of the things you just said, Doctor?
A: Yes.
Q: Have you ever seen and recognized a different definition for that, for sepsis, Doctor?
A: Well, you know. there are probably as many variations on that definition as there are people who write about it. But most people will seize on the two key elements, which is bacteremia plus a child who is significantly ill.
Q: Was this child, in your opinion, at any time ever seriously or clinically ill?
A: Yes, he was. but by that time, he had clinical meningitis.
Q: Does the presence of clinical meningitis rule out there being sepsis?
A: No. but what happens is that it makes the diagnosis of sepsis not a useful diagnosis. Many people will lump them together and say meningitis and sepsis. But if one wants to

Page 358

say chcal sepsis in a chdd who ha5 meningitus as well, one would look for other findings more characteristic of sepsis. For example, poor perfusion, prolonged capillary refill, cold extremities, clinical shock.

Q: Did anyone in the records anywhere, one way or the other. indicate that was done as normal. or does it indicate whether it was done or not done, one way or the other, lookmg for what you just described?

A: Well. there was no specific notation one way or the other for those particular items, but the **usual** way of doing these things is to not write down the negative findings. so that the absence of any commentary regarding those issues is a sign that they were not present.

Q: Doctor, in your deposition on page 143 -

A: Just a moment, sir. Let me find that thing. All right. Go ahead, **sir.**

Q: Line 10 through 12, "My opiruon is that if antibiotics had been gven at an earlier time for a **similar** indication, that the outcome would have been the same?

Page 359

meningitus, does one withhold the giving of the antibiotics on the basis of thinking it won't make a difference?

Page 360

or death?

A: That's correct

Q: And correlated Does that mean on a statistical basis?

A: Well, the analysis that I used, as you know, from readmg the article, does not mvoke numerical statistics What it looks at **is** a way of judging causatron or causative links between events and outcomes usmg an epidemiologic techmque that **is** used in many other mstances for **tlus** particular purpose

Excuse me. sir I'm not done. In that sense, it s not statistical for the reason - or in the common use of the word "statistics," meaning a certain relative risk was not calculated. an odds ratio was not calculated, and the conclusion was not represented with a quantifiable degree of certainty based on a beta value In that sense, statistics were not used, but it was a recogmzed epidemiologic techmque for making the judgment

Q: Tell me the recognized epidemiologic techmque bv

Page 361

A: I see If you'll see on page 694, under the heading, "Criteria for the assignment of causatron "

to

Page 362

many more studies in order to try to see if there were a countervailing argument that could be based on biology alone. I think you and I have already discussed that. And then, of course, I reviewed the animal studies, of which the rhesus monkey studies were the most Important.

Q: Would you agree that only 9 percent of the studies that you used. reviewed. met preestablished minimal experimental design criteria?

A: Well. now, you understand that the minimum design criteria was a creation of my own. in which I sought to in some way judge each arhcle based on the presence of important dormation or analytic techniques.

Q: That's why I'm asking you.

A: I understand. That was my preface.

Q: Okay.

A: And in the studies that I reviewed, those 22. only 9 percent of the studies actually met all three of the minimum design criteria that I posited as being important in conducting such studies.

Q: And only 50 percent of them used any statistical analysis to evaluate results; right?

A: That's correct.

Q: And isn't it correct, Doctor, that the four concomitant cohort studies that were reviewed found no relationship between durahon of symptoms of bacterial

Page 363

meningitis and either hearing deficits or neurological sequelae?

A: That's correct. The four prospective studies, so-called, did not find any relationship.

Are you still there?

Q: I'm just looking at my notes. Now, with regard, Doctor, to - I'm reading my notes. Just bear with me.

Is there any relationship, Doctor, between category 1.2, and 3 and the results that will be found on blood cultures?

A: I don't understand the question.

Q: Is there any relationship between the three categories that you have used to define your article that we've talked about and what will be found on early blood cultures?

A: What do you mean by an early blood culture, sir?

O: Before the lumbar puncture. What would you expect to Find on blood cultures done hours or days before on those patients before the confirmation by a lumbar puncture?

A: In the type of meningitis that we're dealing with, which is hematogenous memgitis, all of the patients in all of the groups would have a positive blood culture.

O: Why is that, Doctor?

A: Because the process by which meningitis occurs requires a bacteremia first.

Q: Now, hematogenous, just so we're on the same

Page 364

wavelength, means spread by the blood; is that right?

A: That's correct.

Q: And therefore, once the bacterema takes place. if you take a blood culture, you would expect it to be positive for the disease; correct?

A: That's correct.

Q: Now, Doctor, maybe this sounds different or silly, but I'm going to ask a question. If one. in dealing with cancer, does a histological slide and takes a piece of it and puts it under the microscope, that parhcular pathological slide may or may not have a cancer cell in it; correct?

A: Correct.

Q: Is the same thing true with the drawing of the blood?

A: The answer is no. It's not the same as drawing of blood.

Q: Why?

A: But I must add to that that a person can be bacteremic and have a false negative blood culture mainly because of technical reasons. In other words, too small a sample was obtained, there was some difficulty in the processing of the specimen, something like that.

Q: Leavmg aside false negatives or false positives, leaving those aside for the moment. once there is bacteremia where the HIB organism enters the blood, the MB, once it

Page 365

enters the blood, Doctor, any drawing of the blood, would you expect that organism to be found in a cell?

A: I'm sorry, what was the last part of that sentence?

Q: Would you expect that organism to be found in a droplet of the blood?

A: Well, no. And I'll tell you why. Bacteremias can be described based on the density of organisms in the blood, and it's usually described as a number of organisms per cubic centimeter of blood, per cc of blood. And there are bacteremias of a very low grade in which you may have between one and ten organisms per cc of blood. If the sample you obtain is one drop or a half a cc or whatever, you may not have an organism in that particular sample. Even though the organisms are dispersed throughout the blood, the concentration is low.

Q: Therefore, with that knowledge or forethought, is there an amount of blood which is routinely drawn to make sure you have adequate amounts of blood so that you can pickup the organism as a matter of routine in the 1970s?

A: Yes, as a matter of routine in the 1970s and now, there were some general guidelines as to the amount of blood.

Q: What were those guidelines required?

A: In general, more is better, but a minimum of 1 cc of blood was usually recommended.

Q: And that would be so that you could attempt to get

Page 366

whatever organism was in the blood: correct?
A: That's correct.
Q: Is [here. Doctor. with regard to bacteremia, a clinical picture of signs and symptoms that are associated with it?
A: Well. one can have bacteremia without any findings at all.
Q: It can be silent; correct?
A: That's correct. In general, the first alteration in health in someone who has a bacteremia is fever. and the bacteremia may only have fever as a footprint of its presence.
Q: Is it kind of like a red flag waving when you have fever?
A: I call fever a clinical stop sign. as you'll see in the article that you have in your hands.
Q: Clinical stop sign; right, Doctor?
A: That's correct. I like that better than "red flag."
Q: Well, I like "clinical stop sign" better, myself. It's the first time I have ever seen it written. What were you trying to convey by that statement. Doctor?
A Well, you know that the article was written for clinicians who encounter young children with fever as part of their daily practice, and what I tried to suggest is that fever, in and of itself, is not dangerous, does not in and of

Page 367

itself cause injury, but it can act as a cautionary note in a child so that the cluucian does stop, look, listen and proceed

Page 363

Doctor?
A I have many thrusts in my article. sir.
Q: Well. Doctor, in your summary, you have certain particular statements that you make that you want to bring to the attention of the physician: correct; right?
A: Sounds like you have an infectious disease, Mr. Goldberg.
Q: I do. It's called working too hard and not getting enough sleep.
A: Yeah, I have some summary points which are listed on page 404 of the article.
Q: And among others, Doctor, does one of them say that compulsive follow-up provides the only safety net for febrile children with occult mfection?
A That's correct.
Q: What does that mean?
A: It means that since all approaches to children with fevers are imperfect in a world which itself is imperfect, only keeping in touch with the family and the child's condition over time provides the safety that one would like to have with regard to this issue.
Q: And in one of the concluding summary remarks it says, "In the end, fever acts as a clinical stop sign, a warning to stop, look and listen and proceed with caution." Correct?

Page 369

A: Yeah, I said that.
Q: And that's your opinion, isn't it?

Q: And there is a greater association between fever and bacteremia and HIB than other meningitics; right?
A: In general, children who have fever are unlikely to have HIB disease. as opposed to other organisms, and most

meningitis, Doctor, do not have bulging fontanelle reported or associated with it?
A: Greater than 50 percent.
Q: Do you know exactly how high it is in the

Page 370

A: I think that order of magnitude is correct. sir.
Q: Let's go on to the next part of this. Doctor, in one of your arttcles that you wrote, you were talking about bacterial meningitis being one of the leading causes of malpractice: correct? Failure to diagnose that?
A: No. I think I suggested that the alleged failure to diagnose meningitis is one of the leading causes of alleged malpractice.
Q: Accepting that as the statement. Doctor, may I ask where you got that data from?
A: The alleged data.
Q: I don't see a -
A: Right. It was, I believe, a - well, there is a reference which is reference 5 on the 1994 article, and I believe that the information is derived from that article.
Q: I think. Doctor. it cites footnotes reference 1 and 2.
A: Now, I may be looking at a different article than you, sir.
Q: Okay. Well, I'm looking at the one that sites W.O. Robertson, "Meningitis: Cutting your legal risks." Did you read that artlcle?
A: Can you tell me what reference in what article of mine you're referring to?
Q: Article number 14, 'The effect of a recent previous

Page 372

involving failure to diagnose meningtis?
A: No.
Q: Do you believe that some of those claims are meritorious?
A: I don't know from any personal experience. sir.
Q: You have no opinion one way or the other; is that correct!
A: I have no way of knowmg the totality of the cases brought and the factual situations of each.
Q: Do you think, Doctor, that this or any of your articles and any of your thoughts have been used as a vehicle by lawyers in an attempt to defeat causation in a malpractice action?
A: Since my 1992 article. sir. is probabiy the best summary and analysis of what was known at that time regarding the issue of causatton, and smce those conclusions have been validated by subsequent articles, I would hope that it is used in order to shed light on the entire question of causation in individual cases.
Q: Doctor, you believe it's one of the best - let me ask you, other than the two that you cited, can you cite any others?
A: Any other what, sir?
Q: Articles that support your position.
A: I don't think there has been anything else written

Q: Okay. And you cite number 5. All right. Now I see what you're talking about here. D.A. Talan, Guterman, "Emergency department management of suspected bacterial meningitis," Annals of Emergency Medicine; right?
A: Annals of Emergency Medicine; that's correct.
Q: Did you read that article?
A: Yes, I did.
Q: And Doctor, do you know where the underlying dormation from that was obtained?
A: I don't recall now, no.
Q: Have you ever been sued, Doctor, for failing to diagnose meningitis?
A: No.
Q: Have any of your colleagues?
A: No.

hterature ended up with no sequelae of any kind?
A: Before answering that, I'm going to look at a copy of the Baraff article that I sent to Ms. McDonald.
Q: 83.6 percent. It's the first page, to save you some time.
A: Referring to page 392.
Q: 389.
A: Well, I'm referring to page 392 to answer your question.
Q: Okay.
A Table 3, looking at outcomes and percentages, and you can see in that table it's broken down by organism. There does not seem to be any dormation on the percentage of normality of streptococcus pneumonia. 90 percent of children with meningococcal meningitis are normal, and 73.9 percent of

Page 374

Q: And Doctor, on front of the article, does it indicate and state that in 83.6 percent there were no detectable sequelae?

A: Can you tell me what you're reading from? Oh, you're reading from the abstract, are you?

Q: I'm reading from the actual footnote or the heading of the article, Doctor.

A: That's what it says in the summary. but of course, if one actually wants to know what an article says. it's better to look at the text of the article, and I think table 3 conveys the information gathered by Dr. Baraff.

Q: Who is Dr. Baraff?

A: He's a pediatric emergency medicine specialist who works at UCLA Medical Center.

Q: Someone you consider to be recognized in the field?

A: He's had a number of publications regarding febrile children. and has collected a large amount of information and has presented it in very cogent form. This is an example of such a collection.

Q: Doctor. do you consider the Feigm and Cherry Textbook of Pediatric Infectious Diseases to be one of the better known and recognized works in the field of infectious disease?

A: It's certainly the heaviest.

Q: Is that by weight, or by the value?

Page 375

A: Well, it weighs the most, costs the most, and has the most words in it.

Q: How about the value of the words?

A: I think that it's probably the most complete compendium of information in a textbook form in Pediatric Infectious Disease.

Q: Do you know, Doctor, from your own experience or from any of that published in the literature, what the percentage of H. B. influenzae accounts for otitis media being a causative relationship?

A: I don't understand the question.

Q: Have you ever read literature indicating otitis media. Doctor, was caused by H. influenzae?

A Yes, if you look at nontypeable Hemophilus influenzae, depending on the study, somewhere between 15 and 25 percent of cases are caused by that group of organisms.

Q: How about the typeable, Doctor?

A Of the typeable ones, they're rare causes of ear infections in general. That's types A through E

Q: And do you know what percentage of typeable - not the nontypeable, but typeable - Hemophilus influenzae type B are reported to be that which is related to otitis media?

A: Again, I believe you asked me this earlier on, and I would say less than 5 percent, and maybe even less than 1 percent.

Page 376

Q: And if it was to be reported in the literature to be as high as 9 percent, you would disagree with that?

A: Well, I'd certainly like to see who gathered that information and what their population was

Q: What's your population and experience been, Doctor?

A: My population and experience has been that it is a rare cause of ear infections

Q: How many cases that you have diagnosed. managed and treated otitis media were caused by HIB type B, typeable type?

A: I understand You know, we don't do tympanocentesis routinely in ear infections, and therefore, the etiology of the ear infection in the vast majority of the patients that we see go on to be undiagnosed with respect to the causative agent

Q: Well while You were at Colorado, did you ever speak with or read any works or studies done by Roger Barkin as to what was the percentage of otitis media seen at the various centers in the university setting, where otitis media was involved, and type HIB, the typeable type, was related to the otitis media? Was that center reported, that you were at?

A Yeah. Again, if you could refer me to the article, it would certainly help me out

Q: But you don't remember?

A: I don't remember specifically that article, and studies of the causative agents of ear infections must be looked at in the aggregate, because the organisms that colonize

Page 377

children and therefore lead to ear infections can have peculiar community differences, so that one can see a resurgence of a certain organism in one community that's not reflected in other communities, and it's very treacherous to draw global conclusions based on a single study.

Q: Well, Doctor, you're assuming I was referring to a single study.

A: As I said, I wasn't inferring anything. I was making a general statement. What I asked was the particular reference that you were referring to.

Q: It would be dangerous to rely on a single study for that purpose: correct?

A: That's correct. One has to look at this information in the aggregate, knowing that there are community differences.

Q: And wouldn't you think that would also apply, Doctor, with diseases other than otitis media?

A: Such as what, sir?

Q: Meningitis.

A: Yes. To some degree, that's true. And that's why if one has information regarding the prevalence of organisms and their relationship to disease in the very community in which a case arises, that's obviously the superior information. Lacking that, one has to look at more global information, but the most treacherous of all is to look at one community and compare it or try to draw conclusions regarding

Page378

another community.
Q: Can you cite me any article, journal, literature text or study that you have read or done or been involved with dealing with what is reported globally to be the relationship percentagewise of otitis media being caused by the HIB typeable type?
A: Gee, if I knew you were gomg to ask this question. sir, I would have brought some of that with me. I can't do it off the top of my head.
Q: Where would you look, Doctor?
A: Well, I would probably first go to my files and find out in the published mformation that represent global prevalence rates what is known about it. And if I couldn't find out the information there, I would probably begin my search with one of the recognized textbooks and use the bibliography of the textbook to go to the original articles. And if that wasn't helpful, I would do a Medline search.
Q: And Doctor, wouldn't you assume that if Drs. Feigin and Cherry wrote an article on the subject itself, that they would do what you just described, go to the footnoted articles and then come to the more reliable and correct decision, conclusion. before they published?
A: Well, as you know, Dr. Feigin and Dr. Cherry didn't write every word *in* their textbook. and I don't know who wrote the chapter on otitis media in their textbook, *so* I would have

Page379

to actually go look at their newest edition of the textbook in order to answer your question.
Q: Whoever wrote **it** would do that which you **just** descrtbed, wouldn't they, if they were reasonable?
A: **Again,** I'd like to see what mformation they were providing and what the sources of that information was.
Q: Well, let me ask you something, Doctor. **Is** Dr. Feigin a person who you believe would be qualified to write about otitis media?
A: Yes, I believe he'd be qualified.
Q: How about Dr. Mark W. Wine?
A: Jerome Klein Mark Wine?
Q: I'll get to Jerome Klein in a minute.
A: You mean K-L-I-N-E?
Q: Yes, sir.
A: Well, he certainly has been trained in pediatric mfectious diseases. I'm sure that if he put his mind to it, he would be capable of writing an article.
Q: How about Gerson Specter?
A: I do not know Dr. Specter.
Q: Doctor, is it your personal experience that madequate treatment of otitis media whch is caused by H influenzae type B can directly influence the likelihood of the development of meningitis?
A: I don't think that there is any information on whch

Page 380

to make any pronouncement of that.
Q: You don't? What kind of information would you need for you to believe that such a pronouncement would be correct?
A: Someone would have to have made **an** etiologic diagnosis of the cause of the otitis media, and then have subsequent clinical mformation regarding those individuals with such a disease who remained untreated, as compared to children who were treated, and to calculate a relative risk or an odds ratio of progression to meningitis to answer the question.
Q: Do you know if that was done in any of the articles?
A I doubt very much whether it has been done.
Q: Nevertheless, if it hasn't been done, do you believe that doctors would not be reasonable and qualified *in* rendering conclusions as to the relationship of their study?
A: I can't speak for other doctors, **sir.** I try to answer questions to a reasonable degree of medical probability. And there's no mformation on which I can base any opinion to **try** to answer the question that you just asked.
Q: **Has** it been your experience, Doctor, that in relation to meningitis - influenzae type B we're talking about - that **signs** of meningeal inflammation may be minimal in the infant?
A: If one defines meningeal inflammation and the signs of it to indicate the clinical findings of nuchal rigidity and

Page 381

other maneuvers to elicit spine pain, the answer is yes.
Q: Well, nuchal rigidity, Doctor. is something whch may occur late in the young child? Isn't that true, under those circumstances?
A Late with respect to what, **sir?**
Q: Late in terms of the progression of the disease.
A: Well, I have to disabuse you of all of **this** early and late business, you know. Early and late is really a fabrication of people who try to **look** at children with general and nonspecific findings prior to a diagnosis being made, and attributing the entire disease to meningitis. That's just frankly not true.
Q: I see. *So* anyone that would write such a statement, you would say you have a better reason to say they're wrong and you're right; correct?
A: I certainly **have** the reasons that I can represent well, and I would certainly like to hear the reasons that the other people have for coming **up** with **their** particular scheme.
Q: Eventually you shall. With regard, Doctor, **to** Fildes for blood cultures - I'm **talking** about Fildes or Leventhal media -
A Yes, those are **two** other media that have been used for blood cultures. My understanding **is** that they would both need to have H and V factors added to them in order to **grow** Hemophilus influenzae type B

Page382

Q: How about a chocolate agar,
A: Again. chocolate agar is not a media which is used for the primary culturing of blood. but it woutd be used for subculture of blood, because it is chocolate agar that is agar, blood agar which has been heated. it has H and V factor in it already
Q: Now, there have been articles that reported the long-term outcome of patients that had bacterial meningitis that were treated. Doctor, besides the ones vou have cited?
A: Yes. there have been many arucles of that sort. I think most of them are referred to in Dr. Baraff's review article which vou have in your hands.
Q: Have vou ever heard of Dr Sell?
A: Yes. Dr Sarah Sell. yes
Q: Is she a recogruzed person in the field of mfectious disease,
A: She has done follow-up studies on chddren with a recogruzed person in that field?
A: Again, she pubhshed arucles with regard to

Page 383

follow-up, yes

Page 384

Q: No At any time up until the 7th, before the hospital. in the hospital, I'm just looking - did he receive a DPT inoculation? Vaccmation, excuse me
A: I don't know for a fact, because I don't remember seemg a review of the immunization hstory in the clinic notes.
Q: Did this pauent receive anv vaccmahons for anything?
A: Yes. On the 27th of December the chdd received a measles immunization.
Q: Do you know why that was given?
A: I don't know for a fact whv it was given. I presume it was bemg gven because the chdd was gomg to be admitted to a contagious disease hospital in which there was measles present, and they wanted to trv to protect the chdd
Q: Did this child ever develop, in your opmon. or have measles?
A: Five to ten percent.
Q: And isn't that fever something which should be known

Page 385

that might or could occur?

Page386

Q: Have you ever heard of Jerome Klein?
A: Yes. I have.
Q: Who is Jerome Klein?
A: He's a professor of pediatrics and the chief of pediatric infectious diseases at Boston City Hospital.
Q: And is he a recognized member in the field of pediatric mfecuous diseases?
A: He's a recogmzed member in the field. yes.
Q: How would you describe his reputation in the community?
A: I thmk that most people feel Dr. Klein is a very knowledgeable. honorable person who has been doing infectious disease for many years.
Q: Is he someone you would expect, when he would write on a given subject. would footnote and give references to his sites or statements in his arucles?
A: It depends on the vehicle in which his writings appear.
Q: The vehicle?
A: That's right. In textbooks, for example. footnotes and references are usually absent or very minimal. In review articles and primary publications in peer review journals, they're usually there in abundance.
Q: Do you know whether any of the articles that were contained and written by Dr. Klein in textbooks were also the

Page 387

subject of articles initially that were published in peer review journals?
A: I don't know. because I don't know what you're referring to in Dr. Klein's bibliography.
Q: Well, would you expect a lot of times that people don't like to reinvent the wheel and if they write a good arucle. they mght use it as a chapter in a book, as well?
A: Typically they don't, because the format is entirely different between a published article, on the one hand, and a textbook chapter, on the other.
Q: Is Dr. Klein someone that you would say has a high degree of stature in the pediatric infectious disease community?
A: I thmk as an individual he has great stature and admiration from people. Regarding specific viewpoints and conclusions in infectious diseases, he's there with all the rest of us.
Q: So he's no more or less than any of you; is that correct, in your opinion?
A: It depends on what the issue is, sir.
Q: How about memgitis? Is that somethtng that he's well-recognized as one of the world's leading authorities?
A: Well, again. it depends what area of meningitis. Dr. Klein has been taking care of children for a long period of tune. and he has published review articles and primary articles

Page 388

in the field of meningitis. But you have to define the circumstances in which his expert opinion is being represented in order to know whether Dr. Klein's opinion comports with what is known and what is accepted and reasonable conclusions.
Q: Have you ever heard of Dr. John Nelson or Wayne Koontz?
A: I have heard of Dr. John Nelson, and I have not heard of Dr. Koontz.
Q: Who is Dr. John Nelson, and what have you heard of that physician?
A: He's a professor of pediatrics at the University of Texas Southwest Medical Center, and he is one of the coeditors of the Pediatric Infectious Disease Journal.
Q: Recognized authority in the field?
A: Again, same answer as with Dr. Klein. He's very respected. He's a very honorable man. He's been doing infectious disease for a long period of time.
Q: How about Dr. Edward Shaw? Did you ever hear of him?
A: No, 1 have not heard of Dr. Shaw.
Q: Have you ever heard of Dr. Stuart Levin?
A: Yes, I have seen the name of Dr. Levin, but I don't know in what context.
Q: Do you think he would be someone that would be a recognized authority involving fevers and bacterial meningitis?

Page 389

A: I don't know the context in which I know Dr. Levin's name, and therefore, I cannot answer your question.
Q: Do you know, Doctor, or have you read anything that would indicate what the policies were in 1968, 1969, 1970, and 1971 with the Municipal Contagious Disease Hospital?
A: Policies with respect to what, sir?
Q: What they would do on their initial workups.
A I do not know anythmg about the policies and procedures at that hospital.
Q: If you were to be shown information concerning what their policies were regarding, in fact, this case at the time in question, you would take that into consideration if it was from a reliable source, wouldn't you?
A Depends what it is I'm seeing, sir.
Q: If it was from a physician that was on the staff that was there.
A Well, again, it's hard for me to know what I would say if I were given something to look at, until I see it.
Q: Would that hold true for the chart, as well, Doctor?
A I don't understand the question.
Q: Well, if you accept what's written, you have accepted what's written in the chart; correct?
A: I accept that it was written at the time, yes.
Q: Would you expect, Doctor, that this child would have looked sick to the observer on the 7th?

Page 390

A: The child did look sick to an observer on the 7th.
Q: And would you expect that he would have known what he should do?
A: Yes.
Q: What does the phrase "look sick" mean. Doctor?
A: Well, It means exactly what it says, sir.
Q: What does it mean to you?
A: It means that to the clinician, the child does not look well. the child looks toxic. the child looks significantly ill. To quote Dr. Sidney Gellis, another old-time pediatrician. the child **looks** and acts damn sick. There are a number of ways of trymg to phrase what it is that you see in a child that, as a clinician, you're convmced that the child is not normal and worrisomely so.
Q: Can a child look bacteremic?
A: A child can look sick. and bacteremia or septicemia can **be** a cause of the sickness.
Q: Have you ever written or published where you used the phrase "the child looked bacteremic"?
A: I don't recall doing that. no.
Q: If you, Doctor, were to see a child that looked bacteremic, would that conjure up a picture in your mind?
A: Yes.
Q: What would a chdd who looked bacteremic conjure up in your mind?

Page391

A: The child would have a significantly altered level of consciousness, the chdd would have a diminished level of activity, would not be interactive with its environment and its loved ones. and could. in fact, have signs of clinical shock, cool extremities, mottled skin, poor peripheral pulses, poor capillary refill, rapid heart rate, and rapid breathing.
Q: Doctor, would you be good enough to turn to Exhibit 10 the "Clinical Evaluation of the Febrile Infant"? Page 400. The third paragraph on the page. Or the second paragraph on the page. When you find it, let me know.
A: The second full paragraph beginning with the height?
Q: No, beginning with "reliable."
A: Yes, I see it.
Q: Dropping down about three-fourths of the way, do you see where it says, 'Table 4 illustrates that a child who 'looks' bacteremic –"
A: Yes, I see it.
Q: Turn to table *4*, Doctor.
A: Yep, I see it.
Q: Where in the article on page *400* or table *4* do you find written what you just described as the pomts or things that a child that **looks** bacteremic would be?
A: You notice that I put "look in quotation marks.
Q: Yes, sir. I do.

Page 392

A And then two lines down, I have also in quotation marks. 'looks" good. which **is** to imply that clinical impression that a chdd **is** significantly ill or not sigruficantly ill, and that goes to the issue of clinical judgment in trymg to decide how to manage a chdd So that on table 4, when vou look at the modality column. which is the 5th column over – and "CJ" stands for clinical judgment – what I was trymg to get at is that the clinical judgment **is** of that sort To the clinician, the chdd looks well or looks significantly ill, and based on that differentiation, how good are they at predicting who has bacterema versus laboratory tests,
Q: And how good were they, Doc?
A They were better
Q: So then one should be able. by looking at a chdd, to tell pretty rehably when they're bacteremic; correct?
A: No. that's not what I said
Q: Oh
A: I'll try it again When one tries to decide whether to do further testing or to embark on a therapeutic option hke antibiotics or hospitaltzation. the clinical thought process is one of trymg to estabhsh the risk of illness in the patient You start off with a general impression of what that risk may be, depending on the clinical circumstances, height of the fever. and age of the patient
You then do a physical exammation, and based on

Page 393

that physical examination, you will raise or lower your likelihood of the child having a serious illness or not having a serious illness, and that clinical judgment, which raises or lowers the risk of mfection in your mind, is the most important single thing that you can do in deciding what to do next. The information in table 4 corroborates the usefulness of the clinical impression.
Q: Doctor, do you agree that the global impression of health or illness is best obtained by initial observation of the undisturbed child?
A **It** is best obtained that way, if one can actually do it. Sometimes that's not feasible. But it **is, I** think, the optimal way of **trying** to make that assessment.
Q: And Doctor, do you agree that one should observe the **child** in the parent's arms, if possible?
A Yes. If possible, I think that's probably the best place to observe the child for making **this** judgment, but it's not always feasible.
Q: And do you agree that the physician should listen and take into – should become aware of the parents' impression of the child's illness?
A: Yes, I believe ***so.***
Q: And do you agree that the unclothed child, Doctor, should be examined, particular attention being paid to the state of alertness and playfulness and the degree of eve

Page 394

contact?
A: I think I said the clothed child, didn't I?
Q: Unclothed child. Unclothed child.
A: Well, the child should be looked at unclothed, yes, and the child should be assessed. To the extent that you're deciding on whether the child is interactive with the environment, makes direct eye contact, responds to social overtures and the like, I agree with that.
Q: What is, Doctor, a localized sign?
A: A localized sign, for example, would be a focal infection which explains the illness. Otitis media, acute pharyngitis, a rash which explains the illness, a disuse of an arm or a leg, respiratory symptoms which might imply a pneumonia, diarrhea. These are all focal findings which can explain an illness.
Q: How about a septic arthritis?
A: Again, that would be pain and disuse of a limb, and that is a focal finding.
Q: So an arthritis or a septic arthritis can be a local finding; correct?
A: That's correct.
Q: Have you ever heard of Heinz Eichenwald?
A: Yes, I have.
Q: Is he one of the recognized figures in infectious disease?

Page 395

A: Well, I believe Dr. Eichenwald has been practicing pediatrics since the mid-1950s. He's also a professor of pediatrics at University of Texas Southwest Medical Center. He's, again, as an individual, respected and honored.
Q: Would you expect he's the kind of individual, Doctor, that would carefully review his sources of reference before he would publish articles in the literature?
A: I would assume Dr. Eichenwald would take care before he published things, but you understand, of course, that many of these articles that are written are conclusionary articles, meaning that the writer then draws a particular conclusion. It may or may not be based on actual research data. Most of the things that are done in common pediatric practice have no bona fide research data on which to guide individuals, so there is a limit to what a person does based on published literature, and to that end, much of what one reads is the opinion of the person who's writing it.
Q: Doctor, speaking of research, there is clinical research in a laboratory, scientific research on animals, or on humans, and then there's research of the literature: right?
A: Those are all different ways of trying to answer questions, yes, sir.
Q: The one that you did for purposes of the conclusions that you reached in this case was the review of the literature; correct?

Page 396

A: No. It was a review and analysis of literature
Q: Excuse me. A review and your own analysis of the literature
A: That's correct
Q: Do you believe that other doctors, in writing, articles, review the literature and make their own analysis of the same kind of literature you did?
A: I have not seen another article which reviews the totality of the published information regarding the timing of antibiotics and outcome in bacterial meningitis.
Q: You haven't, have you, Doctor?
A: No, sir.
Q: Have you seen in any other field of medicine such an analysis done by any other physician on any other subject that you can cite me to?
A: Yes.
Q: What?
A: I think the first one of those studies that was done was done regarding the treatment of strep throat published in the early 1950s, and they were looking at the timing of the dosing of penicillin in strep throat and the risk of developing acute rheumatic fever.
Q: Who is "they"?
A: The authors there were Dr. Rammelkamp - and I'm trying to think of the other lead author in that series - Dr.

Page 397

Wannamaker were the two lead authors. Dr. Floyd Denny was also involved in that research.
Q: And did they do the same kind of study you did, Doctor?
A: No. What they did is actually conduct - well, in a way, they did, but they were dealing with patients of their own that they were following both at an Indian reservation as well as an Air Force base, and what they did was to look at the duration of illness prior to the dosing of penicillin, and then the outcome with regard to acute rheumatic fever.
Q: Was that a prospective or retrospective or both?
A: That would be a - they gathered the information prospectively, so it would be a concurrent prospective study.
Q: And did they do a meta-analysis of the literature or an analysis of their own research, Doctor?
A: They were the first to ever do that kind of investigation, and theirs was the only information on which they could then draw a conclusion.
Q: Did they do a meta-analysis, Doctor?
A: No, they did not.
Q: How long are you aware of meta-analyses being used in medicine, the type of which you did?
A: No, I did not do a meta-analysis.
Q: Or that was done by the Scandinavians.
A: Again, I did an analysis using epidemiologic tools

Page 398

that I have already referred to. Meta-analysis as a way of drawing conclusions from published information, I believe. is a technique approximately ten years old. I may be erroneous in that. but I think that it's relatively recent.

Q: Have you ever heard of a Richard Behrman?

A: Yes.

Q: Who is he?

A: He is now, I believe. the director of the Packard Foundation in Palo Alto. California.

Q: Is that a research center?

A: No, it's a charitable foundation that funds research.

Q: I see. And the research is in what area. Doctor?

A: I don't know, sir.

Q: Do you know that he had been a dean of a school of medicine?

A: Yes.

Q: Do you know a Victor Vaughn, III?

A Yes. I don't know him, but I know the name.

Q: Do you know of Waldo Nelson?

A: Yes. I know the name. I never met Dr. Nelson.

Q: Are those recogmed people in the field of pediatric infectious disease and in pediatrics?

A: No, I don't believe so. Dr. Nelson. Dr. Joe Vaughn and Dr. Behrman I do not believe were mfectious disease

Page 399

specialists. Dr. Nelson and Dr. Vaughn I believe were general pediatricians at Temple University, if I'm not mistaken, and Dr. Behrman is a neonatologist.

Q: Have you, Doctor, ever made use of any of the books written by Dr. Roger Barkin or others with him?

A: We use Dr. Barkin's pediatric emergency medicine textbook in our office, and we refer to it. It's quite a good book.

Q: By the way, Doctor, one of the things I had asked for the last time we were together was the white paper, the physician paper. Do you remember that?

A: No, I don't remember that, sir.

Q: You referenced a physician paper called the white paper.

A: Well, I don't remember specifically referring to that, no.

Q: Do you know what the white paper is?

A: Well, there are many things called the white paper. I believe the one you're referring to is a 1986 publication in Pediatrics which was a compendium of information regarding bacterial meningitis. It was then updated in 1992.

Q: Right. That's the one. The last time we met, you had referred to it, and I asked, would you bring it, and you said you had it in your office. You do have it in your office still?

Page 400

A: Yes, I do.

Q: Along with, Doctor, the article, number 17, which I wasn't sent, would you this time be sure to gather those and give it to the court reporter to send to me?

A: I will send them off to Ms. McDonald.

MR. GOLDBERG: Ms. Court Reporter, will you just make a reference to the place where I have asked for this article and number 17, so it's referenced in some way?

THE REPORTER: Yes, sir.

Q: Do you know, Doctor, who was the author or authors of that position paper in 1986 and 1992?

A: Again, it was not a position paper. It was a-- compendium of dormation.

Q: Who was the author or authors?

A: Dr. Ralph Feigin, Dr. Jerome Klein, and Dr. George McCracken, Jr.

Q: Those are two of the very people I asked you about earlier; correct?

A: That's correct.

Q: Do you know why they were selected to write the compendium or author it?

A No, I do not.

Q: Do you have any idea?

A: No, I do not.

Q: Would you believe the compendium to be a reliable

Page 401

source of information concerning bacterial meningitis?

A It depends which aspect of meningitis you're referring to.

Q: In either of those compendiums, Doctor. did they ever make reference or cite you in any footnote or refer to any of your articles?

A: No.

Q: What was the formal title of that Compendium, if you recall?

A: I don't recall.

Q: Was the subject matter primarily bacterial meningitis?

A: Yes.

Q: Are you a member of the American Academy of Pediatrics?

A: No.

Q: Have you ever heard of it?

A: Yes.

Q: Did you ever read any of the reports put out by that particular organization?

A: What reports are you referring to?

Q: Of the task force on diagnosis and management of meningitis. Did you ever read it?

A: Well, are you referring to the so-called white paper that we've just been talking about?

Page 402

Q: Well, Doctor, is the report of the task force on diagnosis and management of merungitis what you consider to be a white paper?
A: I believe that that was the 1986 white paper.
Q: And then it was reviewed or reupdated in 1992?
A: It was revised and updated in 1992.
Q: Do you know if it's put out by the American Academy of Pediatrics. Doctor?
A: No. it is not.
Q: Was this a position paper?
A: Not to my knowledge.
Q: Is it somethtng that you would have read in the routine course of events?
A: Yes.
Q: With regard, Doctor, to Dr. Dellatorre, is it correct that you do not know anything about her specific educational background, training, experience, other than what's reflected in the deposition?
A: That's correct.
Q: And you did read her deposition: correct?
A: That's correct.
Q: Hello. Are you looking? I can't tell what you're doing.
A: I'm waiting for your next question.
Q: You did read her deposition?

Page 403

A: That's correct.
Q: I didn't hear the answer. I'm sorry, Doctor. Would the same thing hold true for Dr. Zarif?
A: Yes.
Q: Dr. Shastri. Did you read that deposition?
A: I believe I did. I didn't bring all those depositions as a list with me. They're in the car, if you'd like me to go get them. I can tell you which ones I have read. but I believe they have already been read into the record.
Q: Do you recall reading Dr. Suhs' deposition?
A: Well, maybe I should just refer to my original deposition, in which a list of those depositions are contained. There were a very large number of depositions to read, as you know.
Q: Right. And you haven't - the amount of reading you did did not change from the beginning of the deposition; correct? From part 1, you haven't read anything in the way of depositions after that, as I understand it.
A: That's correct. Would you like me to look up the list of depositions contained in my part 1 deposition?
Q: I have it, Doctor. I just wanted to make sure you haven't read anything since then. That's all. Have you ever been, Doctor, in Chicago?
A: Yes.
Q: Have you ever practiced medicine here?

Page 404

A: No.
Q: Have you ever lectured here?
A: Yes.
Q: Where and when?
A: I lectured there I think once or twice at meetings of the American Academy of Pediatrics.
Q: Do I understand that's the same organization. when I asked you a moment ago, you never belonged to?
A: That's correct.
Q: What were you speaking on?
A: I don't recall.
Q: What years was it?
A: I don't specrfically recall.
Q: Well, what was the audience that you were speaking to?
A: Pediatricians who belonged to the Academy.
Q: Have you ever been an examiner, Doctor. for any of the board certifications that you are mvolved with?
A: No.
Q: Have you ever been an editor of any journal?
A: Yes.
Q: Are they all contained on your CV?
A: Yes.
Q: Have you been a reviewer for any journal?
A: Yes.

Page 405

Q: And is that contained on your CV?
A: I'm not sure which edition of my CV you have, but I have reviewed for a number of journals. The most recent of which is the Journal of Pediatrics. If that's not contained on my CV, then it should be added.
Q: I'm getting your CV, Doctor, so just one second. By the way, Doctor, have we now covered all the opinions that you expect to give at the trial of this cause and the bases for them?
A: As far as I can tell, yes.
Q: Okay. I'm looking at your CV, Doctor. Let's just take a five-minute break. We'll resume. I'll call you back in five minutes.
(A recess was taken.)
Q: Doctor, have we now covered all the articles that you relied upon in the formulation of your opinion, specifically relied upon in the formulation and bases of your opinions that you're going to give in this case? I think yes.
A: I believe so, with reference to the -
Q: We're going to be here a lot longer. I don't care. Just let me know.
A: With reference to the questions that you have asked me, I think the answer is yes.
Q: Well, for purposes of the testimony you expect to give, have we done that?

Page 406

A: Yes.
Q: Okay. And as I understand it, you do not keep time sheets, so you have given us all the records you have on that; right?
A: That's correct.
Q: All the notes you have, you have turned over to us; correct?
A: That's correct.
Q: You have seen your answers to interrogatories, and the subsequent ietter. Exhibit 3. which gave the bases for your opmion and we've covered those: is that correct?
A: Let me just pull that exhibit out for a moment. What was the Exhibit 3 you referred to?
Q: A letter whch was written January 8. 1996.
A: Right.
Q: We covered that: right?
A: Yes.
Q: Looking at the answers to interrogatories, Doctor, would you turn to the section dealing with you, where it says "Dr. Radetsky"? When you get there. let me know.
A: Well, I may not have that answers to interrogarories with me here. It's probabiy in the car.
Q: I'll read it.
A: That's all right.
Q: Number 1, "MarkTurner first had clinically apparent

Page 407

meningitis on January 7." That is what you're referring to as chcally overt; right?
A: Yes.
Q: So clinically apparent, clinically overt mean one and the same here, right?
A: Yes.
Q: In number 3, which I will read, I take it this is because of the inflammation - the question is. it's because of the inflammatory process. It reads as follows. "Mark Turner's brain damage was due to vascular injury caused by the meningitis of whch a stroke on January 25, 1971, was an example. This vascular injury was due to the vulnerable vascular architecture of the child and the inflammation which is associated with meningitis."
This vascular injury was unrelated to the antibiotic treatment of the disease which was successful; correct?
A: Correct.
Q: And so what that means, in light of what you have said here earlier today and the other part of your deposition, that there is an inflammatory response which, in the areas mvoived. would be an explanation as to what, in fact, gave rise to the central nervous system deficit, rather than the disease directly itself! It's the response to the disease?
A: That's correct. It's the response to the mfecuon.

Page 408

Q: Right.
A: Disease is both the mfection and the response.
Q: Okay. Thank you. In number 4, Doctor, it says, "Oral antibiotic therapy, whch is used for the treatment of otitis media, has not been shown to prevent meningitis." Is that 100 percent correct?
A: Based on the most cogent study that was performed and which included almost 1,000 children. that was their conclusion.
Q: It wasn't the conclusion that it didn't and wasn't effective in most all of the cases. Doctor?
A: I'm sorry, I thought that's what I said.
Q: Well, no. All is not - the greater percentage, but not all.
A: Based on their analysis. there was no difference in the antibiotic and nonantibiotic group.
Q: Now, Doctor, that isn't true of the parenteral W administration of ampicillin, is it?
A: Well, intramuscuiar or intravenous ampicillin is not used in the treatment of otitis media.
Q: What in 1971 was used. Doctor. for the treatment of otitis media? I thought you said there was two choices, penicillin and sulfa. or ampicillin.
A: That's correct. But both of them were given orally, neither was gven by injection.

Page409

Q: Are you stating that in 1971 it would not be within the appropriate standard of care to give any of those antibiotics parenterally via IV?
A: Not for conventional otitis media, no.
Q: What do you mean by conventional otitis media?
A: Common otitis media in a normal child. If a child was an immunodeficient host. an unusual organism, it was compiex disease involving the mastoid bone or associated complications, then it's a different answer.
Q: If it was found to be HIB organism that was causing the otitis media, it would be IV, would it not?
A This is a hypothetical?
Q: Yes.
A You know, I have never run up against that situation, so I don't know the answer to the question.
Q: Is there a stronger result or effect using ampicillin parenterally via the N route than there is orally, Doctor?
A: Not in otitis media, no, sir.
Q: Not in otitis media; is that correct?
A: That's correct.
Q: So are you saying that ampicillin is then not effective against otitis media?
A: No, I'm saying that the intramuscuiar or intravenous route offers nothing by way of cure of otitis media that is not

Page 410

already present with the oral drug.
Q: All right. Did Mark have otitis media prior to being admitted to the Contagous Disease Hospital?
A: I don't have any information to suggest that he had otitis media prior to 12/27/70.
Q: Did anyone diagnose that he had otitis media before he was admitted to Municipal Contagious Disease Hospital?
A: I don't have anv information to say so, no, sir.
Q: if it was diagnosed in any other hospital, would you rake that mto consideration in your opmions?
A: It depends what opmion I was bemg asked.
Q: If he had it diagnosed at an earher time, Doctor. would it make him more or less likely for a recurrence?
A: There is information to suggest that children who have multiple episodes of otitis media under six months of age, are anatomically predisposed towards getting otitis media and would be at risk for further episodes.
Q: Was that known by you in 1970, 1971, 1969?
A: Well, it wasn't known by me, because I was not in medicine in 1970.
Q: In the medical community.
A: I don't know the answer to that. Oh, by the way, sir --
Q: Yes. sir.
A: - in the admission history and physical examination

Page 411

on 12/27/70, I just noted that Dr. Dellatorre did, in fact, record that the child had had three DPTs and two oral polios.
Q: Of what significance does that have in the formulation - formation, rather, of this child getting pertussis?
A: The protective efficacy after three DPT immunizations is probably 85 percent, and therefore, it decreases the chance, without eliminating it, of getting pertussis.
Q: So certainly on a probability basis he would not have had it?
A: No. It decreases the chances of getting it. The fact that he comes in with pertussis syndrome without another good explanation still suggests that he had pertussis.
Q: Is that pertussis syndrome that he had - that it suggests pertussis syndrome?
A: Well, now. I think we talked about that before, that there was no confirmatory culture or culture of another causative agent in the studies of pertussis syndrome. I believe 80 percent or greater were caused by Bordetella pertussis based on that study alone. More likely than not this child did have pertussis, based on that study alone this child -
Q: Why?
A: Because of the fact that the child had pertussis

Page 412

syndrome and the leading cause of pertussis syndrome is, in fact, Bordetella pertussis
Q: Do you know why they never did the tests in this pauent to confirm it?
A: No, I don t know why
Q: Was it attempted to be done?
A: Not to my knowledge Excuse me There was a doctor's order that said, 'Work up for pertussis," but I don't have any results of that workup
Q: Doctor. in the Exhibit 3, part number 4, as a basis for your opuuon. you state, "Otihs media is not a risk factor for bacterial meningitis "
Isn't it correct, Doctor, that there is reported in the hterature that otitis media has been and is reported to be associated with HIB of the typeable kind and there's a staustical association in that regard?
A I'm sorry, are you telling me, sir, that it is your contenhon that otitis media is a risk factor for Hemophdus influenzae type B meningitis?
Q: The reverse
A Oh The reverse' What do you mean by "reverse"?
Q: That Hemophilus mfluenzae type B meningitis is reported to occur from a patient having otitis media where the offending or the biologcal organism is the Hemophdus influenzae type B kind

Page 413

A Yes, there have been *case* reports of that.
Q. And you have already told me what your understanding of the percentage of those reports is: correct?
A: No. What I said is two things. One is there have been case reports of children with HIB meningitis in whom a tympanocentesis wasperformedwhich showed HIB in the middle ear.
Q: Do you know with what frequency that occurs, Doctor?
A No, because they're case reports.
Q: Do you know if anyone has done a study on the case reports and from university settings as to the percentage of patients with otitis media that went on to get meningitis that it reflected or showed was the percentage that was from HIB of the typeable kind?
A I'm confused by that sentence, sir.
Q: Doctor, meningitis can occur from otitis media; is that correct?
MS. McDONALD: From *otitis* media?
A No, that's not true. That's not true.
Q: With regard, Doctor, to otitis media, otitis media, when it's caused by HIB, has been reported to give rise to patients in whom that has occurred, ending up with bacterial meningitis of the HIB type; correct?
A: The only studies I'm aware of, sir, are studies which showed that in children who had HIB meningitis and who

[16] **Q:** But the organism, in being present when that does
[17] occur. can give rise to the bacteremia section correct?
[18] **A:** Yes. but it's the presence of the organism on the
[19] mucosa, not its presence in the middle ear, that is the event
[20] which conspires with other factors to lead to the bacteremia.

[16] Q: Would **that** include the thenar area of the hand?
[17] **A:** No. It wouldn't include the thenar area. which **is** a
[18] **soft** tissue, but it would include the metacarpal phalangeal
[19] joint of the thumb.
[20] Q: Did this patient, Doctor, while in the Municipal

[25]

you'll rule out

Page 418

A: Only by way of the descriptions of the doctors and nurses taking care of the child.
Q: Doctor. as you sit here now, Qd you make any notes in your materials as to what opinions you read of Dr. Livingston that you agreed or disagreed with?
A: No.
Q: As you sit here now, do you have any memory of what opinions he gave and you agree or Qsagree with?
A: Well. as I recall, he suggested that large numbers of mdividuals - or a certain percentage of individuals will carry Hemophilus. I don't believe that's the case. I believe that he suggested that the otitis media was the source of the mfection. I disagree with that. I do believe he suggested that had the Hemophilus - had the ear mfection been treated with antibiotics, the ear mfection that he perceived was there been treated with antibiotics soon after the admission. that the child would not have gone on to develop meningitis, and I don't agree with that. And I believe he had some notion of the meningitis beginning at some point prior to the 7th. and he had some, I think, very specific idea of when it began, and I don't agree with that.
Q: Why, Doctor, don't you believe or agree with him when he says if the otitis media had been properly treated, the patient would not have gone on to get meningitis?
A: Because the treatment of otitis media is done with

Page 419

oral antibiotics, and the best large-scale study which has been published does not suggest that oral antibiotics can eliminate or decrease the risk of meningitis.
Q: Have you read any study that indicates the giving of parenteral antibiotics can eliminate that?
A: Parenteral antibiotics are not used for the treatment of otitis media. Therefore, there are no such studies.
Q: I'm not asking you that. Have you read any articles that say parenteral antibiotics, if given, can prevent memgitis from occurring? Have you ever read that?
A: In what context? In **otitis** media, you mean?
Q: No. In the context of bacteremia or septicemia, or any number of - or of any number **of** circumstances where the doctor chooses to give it.
A: Well, yes, there are articles which show that if a child has bacteremia and if the bacteremia **is** treated with antibiotics, prior to the development **of** bacterial meningitis, there is a decreased risk of developing meningitis.
Q: So if a patient is given such antibiotics, it may prevent totally or a certain percentage of harm from the bacterial meningitis: correct?
A: If a child has bacteremia and based on the fact the child had bacteremia **is** treated with parenteral antibiotics, and does not have meningitis, then the chances of developing

Page 420

meningitis are reduced.
Q: Doctor, if a patient has bacteremia. if you can kill off the orgmsms or make the body sterile of the organisms before the meninges are, in fact, infected, and prevent the meninges from being infected. will that prevent meningitis?
A: if a child **has** bacterema and does not have meningitis and is treated for the bacteremia, you will prevent or decrease the risk of developing meningitis.
Q: Can you prevent it totally by the giving of proper antibiotics by the right route and dosage? Have you read articles that suggest that?
A: No, you cannot prevent it totally.
Q: What is the percentage that you believe *is* prevented or can be reduced?
A: It's a high percentage. I believe it's probably greater than *75* percent.
Q: Would it be correct that it would be at least 92 percent?
A: It certainly - well, that order of magnitude, yes.
Q: Have we covered the opinions that you disagree with, with regard to Dr. Livingston and the bases -
A: I believe ***so,*** yes.
Q: When you say you disagree with him that a certain number of patients carry HIB, what is the basis for your disagreement?

Page 421

A: There have been a number of surveys of children and adults done in which throats were cultured for Hemophilus influenzae type B, and it showed that the normal carriage of that organism is less than 1 percent, except in circumstances in which there has been a known exposure, in which case the carriage rate is much higher.
Q: Carriage rate being 1 percent nevertheless means 1 percent can carry it, Doctor?
A: I **said** less than 1 percent.
Q: But it means **that** a certain percentage can carry it, does it not?
A: No. What it means is that it is not part of the normal flora. but that you **will** occasionally find the organism in the throat from someone who has had an unwitting exposure to someone who has the organism. They do not carry **it for** a long period of time, meaning they'll lose it in weeks to months, and so it's a transient organism in the throat, not part of the normal flora.
Q: Did you read what the basis was, why he said there's a certain percentage of patients that carry **this** in their natural flora?
A: I don't remember, no, **sir.**
Q: When you used the phrase a moment ago, "carriage," do you mean as a carrier of?
A: **That's** correct.

Page 422

Q: Do you recall any opinions of Dr. Charash that he gave?
A: As I recall, Dr. Charash had some very certain ideas as to the moment of the development of meningitis and its preventability based on hours or days prior to when the diagnosis was made, and I disagree with that timetable.
Q: That's because you believe no one can tell when memgitis occurs; correct?
A: That's correct.
Q: But if no one can tell when it occurs, no one can tell that it didn't occur at a gven moment, either. Isn't that true?
A: It cuts both ways. doesn't it, **sir?**
Q: Is the answer yes?
A: No one knows when meningitis begins.
Q: So that the other part of that is, therefore, you can't say it wasn't there, or it was there. Both sides are correct; yes?
A: Yeah. All you can know **is** when meningitis is clinically evident.
Q: Do you recall any of the opinions given by Dr. Tomasi?
A: I did not read his deposition.
Q: And as I recall, Doctor, from my notes here, you did not do an Index Medicus or a Medline search on any of the

Page 423

issues in this case specifically; right?
A: That's correct.
Q: Hello?
A: I said that's correct.
Q: I'm sorry, Doctor. I didn't hear an answer. I didn't hear any response. You may have nodded your head. but neither Ms. McDonald nor myself heard the answer. So bear with us.
Other than, Doctor, my requests previously having been made for the white paper - which I'm asking you again to get - and the fact that there were two articles which I requested and thought I would have, and don't -
MS. McDONALD: Just one.
Q: One additional article which I thought I would have. No, two. The Killio articles.
MS. McDONALD You have one.
Q: Other than the Killio article, which I don't have, and the white paper that I asked for earlier, other **than** that, Doctor, at **this** time I ask you, we have covered all your opinions and bases that you believe and expect to give at the trial of **this** cause; correct?
A: Yes, **sir.**
Q: And with that and based on that representation, other than my reserving of the right *to* having those articles and deciding whether I want to have follow-up on them, at **this**

Page 424

point in time I have no further questions. Thank you, Doctor.
MS. McDONALD: I have a few questions for clarification.
(A discussion was held off the record.)

EXAMINATION

BY MS. McDONALD:

Q: Okay, Doctor. In the first part of your deposition, you talked about the fact that it would be helpful in your job as an expert witness to have a richer description of the condition of the child at certain points. Do you recall that testimony?
A: Yes.
Q: In giving that testimony, did you intend in any way to criticize the way in which the chart was kept in this case?
A: No.
Q: What did you intend by that remark?
A: I thought the charting in **this** case was very reflective of charting that was common and acceptable in its time, and what I was referring to **was** the position that I **am** put in, which **is** one in which I **try** to recreate the events of a situation which occurred **25** years ago, and the more information that **is** provided to me, the easier it **is** for me to do that.
MR. GOLDBERG: Show an objection. Move to strike.
Q: Now, I want to look at one page **of** the records that

Page 425

Mr. Goldberg had you **look** at earlier. And that was the nurse's note that we had some trouble finding. Remember January 7?
A: Yes, **I** have it.
Q: **Okay** Now, that reference there, "very irritable when disturbed." *Can* you tell there whether that notation was ma& after the diagnosis of meningitis?
A: It **was** made on the 7th. The time, the beginning of that line is sandwiched in between **two** times, one approximately 8:00 in the morning, and one at 10:30 in the morning. It could have been made contemporaneously with the diagnosis of meningitis actually being made, but there's no specific time **written** on the first line in which that notation appears.
Q: **Is** that 8:00 and 10:30 - are **you** reading that **as** a.m. or p.m.?
A I assume that's a.m.
Q: Do **you** see the **remark** above that, "IV **running** well"?
A Yes, I do see "IV **running** well." That **suggests** that - thank you for pointing that out - that all of **those** times, 4:00, 8:00, and 10:30, were all p.m., because the child did **not** have an IV before the diagnosis was made.
Q: Okay. So was there any reference to the word "irritable" - I mean, did the word "irritable" appear in the chart anywhere that you saw by anyone prior to the diagnosis of meningitis?
A: No.

Page 426

Q: Now. there was a discussion earlier in the deposition about diarrhea the child had. And you were looking at the nurses' notes of January 4. Do you recall that?

A: Yes.

Q: And you indicated that that was the only one you could find which noted or commented on the quality of the child's stool. And I just wanted to refer you - was there another note regarding his stool on January 2?

A Let me flip to that. On the 2nd. there is a notation that says, "Large soft yellow stool."

Q: Okay. So there was another notation about the quality of his stool?

A: Yes. and the notation that I referred to seemed to be a shift from that large soft yellow stool to a loose stool.

Q: Just one last thing. Mr. Gotdberg asked you about the diagnosis on discharge, and I would just ask you to look in the record and see what the diagnosis was on discharge.

A: *Are* you referring to, "Final diagnosis: Pertussis with memgitis"?

Q: Is that what you would consider the diagnosis on discharge?

A That's contained in the doctor's summary, pertussis with meningitis.

Q: Okay. So there's no mention in the discharge diagnosis of otitis media; is that correct?

Page 427

A That's correct.

MS. McDONALD: That's all I have. Thank you.

FURTHER EXAMINATION

BY MR. GOLDBERG:

Q: Doctor, you were asked to look at that note where it says irritable. You recall that?

A: Yes.

Q: Would you find it?

A Yes.

Q: What's the page number, Doctor?

A: That's that page 45. I think, was the page number.

Q: Now. Doctor. what is the time to the left of that?

A: As I said. there are three times. 4:00, 8:00 and 10:30.

Q: And did you assume that to be 4:00 a.m., 4:00 p.m., which-

A Well, I had initially assumed it to be a.m., but having looked at the prior entries that my attention was being drawn to. in which you have an intravenous line running, I thmk that the better interpretation is that those are p.m. times, particularly because you go directly into 1/8/71 without any more p.m. entries. Therefore, it would suggest that those are all afternoon and evening entries.

Q: Where are the nurses' notes from the 6th, Doctor?

A: There are nursing notes - I'm looking at page L90.

Page 428

Q: Yes.

A: And I have on that page both nursing notes from the 6th, and nursing notes from the morning of the 7th.

Q: Right. Now, Doctor, let's look at the times together. On the 6th, are the only notes that you see in the nurses' notes from 11:00 to 7:00?

A: I have a note from 11:00 to 7:00 and a note 3:00 to 11:00.

Q: Does that cover 24 hours. Doctor?

A: No. There's a 7:00 to 3:00 gap.

Q: Right. Look on the 6th, Doctor. Let's start with the 6th. Tell me the nursing notes and times that you see any nurse wrote a note.

A: As I said, I have a note from the 6th. 11:00 to 7:00. it's not specified any more accurately than that, and then I have notes written on a notation of 3:00 to 11:00, not specified any more accurately than that.

P: You assume the note to the right, then, with 1/6 below it refers to the 6th?

A: Yes.

Q: Then you see a note, 1/7; correct?

A: Yes.

Q: And then you go to the time, it says a.m., 11:00 to 7:00; correct?

A: Well, I have a note from the 7th that is marked

Page 429

11:00 to 7:00.

Q: And if you look straight up, that refers to the a.m. column; right?

A: Yes.

Q: Now, what other time during the date of the 7th did any nurses write notes?

A: There's a note from 9:00 a.m., a note from 11:30 a.m., a note from 2:00 p.m., and then we switch to page 45, all pointed out. in which there are some more p.m. notes.

Q: Well, let's go back, Doctor, to the 7th. Isn't the first note there 11:00 to 7:00 a.m.?

A: It's 11:00 at night on the 6th to 7:00 in the morning on the 7th.

Q: And Doctor, right below that, on 1/7, it says "11:00 to 7:00," doesn't it?

A I'm sorry, there's a note on the 6th that says "11:00 to 7:00." That would be -

Q: On the 7th it says "11:00 to 7:00."

A: Well, there are two notes, one on top of the other. There's one from 11:00 to 7:00 on the 6th, and one from 11:00 to 7:00 on the 7th.

Q: Now, Doctor, where are the nurse's notes from 7:00 a.m. in the morning to 11:00?

A: On which day, sir?

Q: On the 7th.

Page 430

A: They are right below the note that is entitled 11:00 to 7:00 on the 7th.
Q: Now, Doctor, you're assuming that the notes went out of order. aren't you?
A: No.
Q: No? Let's go through it again, Doctor. 11:00 to 7:00 would be the 11:00 p.m. shift on the 6th until 7:00 a.m. in the morning of the 7th; correct?
A: Correct.
Q: Now we're at 7:00 a.m. on the 7th. Where is the note? The next note is 11:00 to 7:00 on the 7th, below it.
MS. McDONALD: I object.
A: No, no. Sir, I think you're interpreting it wrong. The note that says 1/7/71, 11:00 to 7:00 -
Q: Yes.
A: - that is 11:00 on the 6th to 7:00 in the morning on the 7th.
Q: That's your assumption; correct?
A No, that's the conventional way it's done.
Q: You think so?
A You got it.
Q: Okay. Now, Doctor, where is the number of shifts or nurses that examined this child evident from 11:00 to 7:00 on the 5th, the 6th, or the 7th?
A: I don't understand your question.

Page 431

Q: Tell me when nurses examined this child other than between 11:00 to 7:00 on the 5th.
A: There are no - I don't know about when nurses examined the child. All I know is when nurses wrote the notes.
Q: All right. So let's start in with the 4th, Doctor. On the 4th, do you see it as 11:00 to 7:00?
A Yes.
Q: And then below it, it says 7:00 to 3:00 doesn't it?
A: Yes, it does.
Q: Now, taking that logic, Doctor. you see it would be 11:00 to 7:00, which would be the 11:00 p.m. of the 3rd until 7:00 a.m. of the 4th: correct?
A: The one that says "1/4/71, 11:00 to 7:00," that is correct.
Q: And then the next note is 1/4, would be 7:00 to 3:00, would be the shift that follows it; right?
A: Correct.
Q: Now, where is from 3:00 to 11:00 on the 4th?
A: There are no notes written between those times.
Q: Where are the notes - the next one would be 11:00 to 7:00 on the 5th; right?
A: The next note is 11:00 on the night of the 4th to 7:00 on the morning of the 5th.
Q: You see any other nurse's notes from 7:00 a.m. in the morning until midnight of the 6th - or rather, 11:00 of the 5th?
A: No, I do not.
Q: And now we have 11:00 to 7:00 which is 11:00 of the 5th to 7:00 of the 6th, right?
A: That's correct.
Q: Are there any other notes the rest of the day of the 6th?
A: Yes. There are notes between 3:00 in the afternoon and 11:00 at night on the 6th.
Q: So where are the notes from the second shift from the 7:00 until 3:00?
A: There are no notes.
Q: All right. Now we've got 3:00 to 11:00, which is the 7th, right?
A We have 3:00 to 11:00 on the 6th.
Q: And then we have something that wouid indicate that would be 9:00 a.m.; is that right?
A: No, then you have a note from 11:00 at night on the 6th to 7:00 in the morning on the 7th.
Q: Then you have a note that says 9:00; correct?
A: That's correct.
Q: Did you assume that to be 9:00 a.m.?
A: That's correct.
Q: And then 11:30 a.m.

Page 432

Page 433

A: That's right.
Q: And then 2:00?
A: 2:00 in the afternoon, yes.
Q: Now, Doctor, do you note that on the note 11:00 to 7:00 next to the date 1/7 - you see that word?
A "Had a fair night."
Q: "Fair night"; correct?
A That's correct.
Q: "Fretful at times"?
A That's correct.
Q: And then, Doctor, going from there, 2:00, you turn to the next page and you have 4:00, right?
A: Let me turn to that page 45. And it begins on 1/7/71 and the first notation is 4:00 in the afternoon.
Q: And then you have 8:00 p.m.?
A That's correct.
Q: And under the 8:00 p.m. note it says, "Very irritable when disturbed?
A: Well, between the 8:00 note and the 10:30 note, yes.
Q: All right. And then on the remarks side, Doctor, dropping down, you see it says "Fretful at times"?
A That's correct.
Q: Now, Doctor, with regard to irritable, are you saymg that the first time this child became irritable is after

Page434

the IV was placed?
A: The first tune the word "irritable" was used by the nurses was on the evening of the 7th.
Q: That's not my question. though. Is that when - in your opuuon. the first time this child became irritable was actually when it became irritable. was when that note was written?
A: I wasn'r there, sir, so I can't answer your question. other than when the word is used.
Q: And Doctor, with reference to a more rich description, you are not presently givmg any opinions one way or the other, as I understand it, on standard of care; is that correct?
A: To my knowledge. I was retained in order to give an opmon regarding the issue of causation.
Q: Now, Doctor. with regard to the diagnosis on discharge, do you agree that generally, the diagnosis at time of discharge should include the diagnoses at the tune of admission?
A: The diagnosis at the time of discharge includes the final diagnosis made and authenticated during the hospitalization. so that oftentimes you will have a working diagnosis on admission, and a final diagnosis on discharge. And they may differ.
Q: Doctor. if a patient comes in with one disease

Page 435

ongoing, that for whatever reason is no longer present during the stay, and the patient is discharged, isn't it correct operating procedure which is normally to be followed would include in the discharge diagnosis all the diagnoses which were confirmed as being present while the pauent was at the hospital?
A: In general. that's true.
Q: Thank you. With regard, Doctor, to the diagnoses on discharge, do you know why this patient left the hospital?
A: My understanding is that the parents requested a transfer.
Q: Do you know why the parents requested a transfer?
A: Not specifically, no.
Q: You don't recall reading that in the deposition; is that correct?
A: Well, they were dissatisfied with the care that they were receiving at the one hospital.
Q: Do you remember specifically what they were dissatisfied about and with?
A: Not specifically, no.
Q: And Doctor, this case mvolves a patient who did not have - let me restate this. This patient did not have meningitis when he entered the hospital on the 27th, did he?
A: Not in my opinion, no.
Q: So that the meningitis this patient acquired or

Page 436

contacted was while the pauent was in the hospital under their care; correct?
A: That's correct.
MR. GOLDBERG: I have no further questions, subject to my reservations.
MS. McDONALD: I'm afraid I have to clarify somethmg else about the records.
A: Could you move closer to the microphone, ma'am?
MR. GOLDBERG: Yes, she's coming
FURTHER EXAMINATION
BY MS. McDONALD:
Q: If you could look again, Doctor, at the nurse's notes, the page which has the 3rd and the 4th and the 5th and the 6th and some of notes of the 7th on them.
A: Just a moment, please. That's L90; is that correct?
Q: Yes.
A: All right, I have it.
Q: Now, Mr. Goldberg was taking you through the date, and he pointed out the note for January 4, 11:00 to 7:00, the note for January 4, 7:00 to 3:00. Now, if you look at the right-hand side of the page, at the top, you see there a note for January 4?
A: Yes, I do.
Q: Now, do you know when that note was written?

Page 437

A: I presume it was written on January 4, but I don't know the time.
Q: Now, on that side of the page there is a p.m., isn't there?
A: That's correct.
Q: Would it be reasonable to assume that that was written in the p.m. on January 4?
MR. GOLDBERG: Objection, what would be reasonable to assume.
Q: Go ahead.
A: It was written in the column p.m., yes.
Q: Okay. And actually! that indicates, doesn't it, three loose green stools; correct?
A: Yes, it does.
Q: That would be another note referring to the stools?
A: Yes, that's correct.
Q: Now, Mr. Goldberg was pointing out to you on January 5 there was a note 11:00 to 7:00. Looking in the right-hand side of the page again, isn't there another note for January 5?
A: Yes, there is.
Q: Okay. And that's again in the p.m. column?
A: Yes, it is, and there is included in it a time of 8:20, when stool was sent to the laboratory.
Q: That would indicate it was at the p.m. note.
A: And in fact, it says 8:20 p.m.

Q: So that would be on *the* 3:00 to 11:00 shift?
A: Yes. it wouid.
Q: Okay. Thank you. That's **all.**
MR. **GOLDBERG:** No further questions, subject **to** the reservation of my rights that I have described.
MS. **McDONALD:** And we'll reserve signature.
(Exhibits 10 through **15 marked** for identification.)
(The deposition concluded at 5:00 p.m.)

IN THE CIRCUIT COURT OF COOK COUNTY ILLINOIS
COUNTY DEPARTMENT, LAW DIVISION

NO: 91 L 21091
WARK TURNER, a disabled person by his :o-guardians. DIANE TURNER and WILL TURNER,

Plaintis,

v.

CITY **OF** CHICAGO. a municipal corporation. d/b/a MUNICIPAL CONTAGIOUS DISEASE HOSPITAL, et al.,
Defendants.

CERTIFICATE OF COMPLETION OF DEPOSITION

I, MARY ABERNATHY SEAL. New Mexico CCR #69, DO HEREBY CERTIFY that on February 8, 1996, the deposilion of MICHAELS. RADETSKY, M.D., was taken before me at the request of, and sealed original thereof retained by:

Mr. Barry Goidberg
Attorney for Plaintiffs
33 North Dearborn Street. Suite 1930
Chicago, Illinois 60602-3197

I FURTHER CERTIFY that copies of this certificate have been mailed or delivered to the following counsel and parties not represented by counsel appearing at the taking of the deposition.

Ms. Barbara A. McDonald
Attorney for Defendants
30 North LaSalle Street, Room 800
Chicago, Illinois 60602

I FURTHER CERTIFY that examination of this transcript and signature of the witness was required by the witness and all parties present.

I FURTHER CERTIFY that the cost of the original and one copy of the deposition to the PLAINTIFFS is $.

I FURTHER CERTIFY that I did administer the oath to the witness herein prior to the taking of this deposrlion that I did thereafter reoon in stenographic shorthand the questions and answers set forth herein and the foregoing is a rrue ana correct transcript of the proceeding had upon the taking of this deposillon to the best of my ability

I FURTHER CERTIFY that I am neither employed by nor related to any of the parties or attorneys in this case and that I have no interest whatsoever in the final disposition of this case in anv court

Mary Abernathy Seal
Certified Court Repotler #69
License expires 12-31-96

(5229-3)MAS

TURNER v CITY OF CHICAGO et al

If there are any typographical errors to your deposrlion indicate them below

PAGE LINE

_____ Change to _____
_____ Change to _____
_____ Change to _____
_____ Change to _____

Any other changes to your deposltion are to be listed below With a statement as to the reason tor such change

PAGE LINE CORRECTION REASON FOR CHANGE

I, MICHAELS RADETSKY, M D., do hereby certify that I have read the loregoing pages of my testimony as transcribed, ana that the same is a true ana correct transcript of the testimony gwen by me in this deposition, except for the cnanges made.

MICHAELS RADETSKY, M D

(5229-3) February 8, 1996 MAS