Doc 15

THE STATE OF OHIO : S.S.: Terrence
COUNTY OF CUYAHOGA : O'Donnell, Jr.

HELEN KUBACH, etc.,
Plaintiff,

VS. : CASE NO. 153602

UNIVERSITY HOSPITALS OF CLEVELAND, et al.,
Defendants.

DEPOSITION OF JUAN CARLOS AYUS, M.D.

Called as a witness by the Defendants Kursh, Nearman and Welch, taken before Peggy Ann Antone, a Certified Shorthand Reporter in and for the State of Texas, on the 11th day of July, 1989, beginning at 11:10 a.m., at the Marriott Hotel Medical Center, Board Room 1, Houston, Texas, pursuant to Ohio Rules of Civil Procedure and the following stipulation and agreement of counsel:

A P P E A R A N C E S

CHRISTOPHER M. MELLINO, of the law firm of Charles Kampinski Co., L.P.A., 1530 Standard Building, Cleveland, Ohio, 44113, appearing for the Plaintiffs.

JOHN V. JACKSON, II, and J. RICHARD LUDGIN, of the law firm of Jacobson, Maynard, Tuschman & Kalur Co., L.P.A., 100 Erieview Plaza, 14th Floor,, Cleveland, Ohio, 44114, appearing for the Defendants Drs. Elroy D. Kursh, Howard S. Nearman and Michael Welch.

JOHN R. IRWIN, M.D., Reminger & Reminger Co., L.P.A., The 113 Building, 113 St. Clair Avenue, N.E., Cleveland Ohio, 44114-1273, appearing for Dr. Alan H. Angell and University Hospitals.

P R O C E E D I N G S

MR. JACKSON: Well, this is a discovery deposition of Dr. Juan Carlos -- pronounce your --

THE WITNESS: Ayus.

MR. JACKSON: Ayus. Okay. I'm assuming formalities regarding notice, et cetera, are waived? Are we going to *go* through this again, Chris?

We play this game with these guys, Doctor. They play with us. It's kind of a game on formalities. Nobody knows quite what that means, but my understanding is they're waived, and if you have something to the contrary, tell me.

MR. MELLINO: I don't know what you want to waive.

MR. JACKSON: Okay. Can we assume that if you don't have any specific objections which you're going to make here, that whatever formalities there are, are waived?

MR. MELLINO: Sure. I can say that.

MR. JACKSON: Okay. Fair enough.

JUAN CARLOS AYUS, M.D.,

was called as a witness by the Defendants and,

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

EXAMINATION

QUESTIONS BY MR. JACKSON:

Q. Dr. Ayus, we're here, as you know, for purposes of taking your deposition. You have been identified to us as an expert witness who will testify on behalf of the plaintiffs in this case. Have you been deposed before, sir?

A. Yes, sir.

Q. All right. You understand, then, that when questions are asked of you by whoever asks the questions, you have to respond orally with a yes or a no if that's appropriate, rather than making a gesture, shaking your head? You do understand that?

A. Yes, sir.

Q. If I ask you a question which you do not understand for any reason, I may use a word you don't understand, the question may be poorly phrased, but for whatever reason, if you don't understand the question, please don't answer it until you've asked me to explain it. Is that fair enough?

A. Yes, sir.

Q. I will assume, then, that if you answer a question for me, Doctor, that you've understood the question and that you're answering it honestly and completely. Fair enough?

A. Yes, sir.

Q. As we started here, we met you just a few moments ago, you handed me a C.V. and you made an indication to us that there are some publications which are not included in that C.V. Is that correct?

A. Yes.

Q. Are you able to cite those for us or would you need to send us that?

A. I can tell you now.

Q. Would you, please.

A. Yes. One is in the July "American Journal of Medicine." It's an editorial I was asking to write. The name is "The Effect of Bicarbonate in Cardiac Function."

And the second is going to be published, also in July, in the "American Journal of Physiology," renal and electrolyte section, and it's "Treatment of Symptomatic Hyponatremia in Rats."

MR. LUDGIN: Symptomatic treatment of hyponatremia?

THE WITNESS: In rats.

MR. LUDGIN: Okay.

Q. (BY MR. JACKSON) With those additions, is this C.V. current?

A. No. I also become professor of medicine as of May, 1989.

Q. Okay. Congratulations.

A. Thank you.

Q. With those exceptions or additions --

A. I think so, yes.

Q. -- then, we have a complete C.V.; is that correct?

A. Yes, sir.

Q. Doctor, it's our understanding that you are going to render some opinions that some of the doctors who cared for Mr. Kubach deviated from accepted standards of medical care in their treatment of Mr. Kubach. Is that a correct understanding?

A. Yes, sir.

Q. And it's further my understanding that the April 14th letter of 1989 from you to Mr. Kampinski sets forth the opinions which you're going to state

in that regard; is that also correct?

MR. MELLINO: You mean exclusively?

MR. JACKSON: That's what I mean to say.

A. This letter points out the immediate cause of death and, you know, of the complication that we saw eventually in Mr. Kubach's death, yes.

Q. (BY MR. JACKSON) Okay. Doctor, our understanding is, and what we're relying upon in being here today in this inquiry is that you have set forth the specific criticisms of the specific doctors against who you're going to render opinions in this letter. Is that a correct understanding or is that an incorrect understanding?

A. No, it's an incorrect understanding. 1 was asking to -- let's see. No, I'm sorry. It's a correct understanding, yes.

Q. Okay. Very good.

A. No, I'm sorry.

Q. All right. In your letter, Doctor, you indicate that, as it relatess to Dr. Kursh, that you believe Dr. Kursh failed to recognize hyperammonemia in Mr. Kubach and that he failed to treat that with early intubation and mechanical ventilation. Is that one of your criticisms of

Dr. Kursh?

A. Yes.

Q. You also indicate that the opinion you're going to state as it relates to Dr. Kursh is that he failed to monitor and treat the hyperammonemia that developed in Mr. Kubach. Is that also a criticism of Dr. Kursh?

A. Yes.

Q. Now, as it relates to Dr. Angell, your report indicates the same two criticisms that you had for Dr. Kursh: One, that he failed to recognize hyperammonemia and treat it with early intubation and mechanical ventilation; is that correct?

A. Yes.

Q. And, two, that there is a failure by Dr. Angell, also, to monitor and treat the hyperammonemia; am I correct?

A. Yes.

Q. The only other doctor you mention is Dr. Nearman, and you have the same two criticisms in your letter of Dr. Nearman. You indicate that you believe Dr. Nearman also failed to recognize hyperammonemia and treat it with early intubation and mechanical ventilation; correct?

A. Yes.

Q. And you also indicate that you believe Dr. Nearman failed to monitor the hyperammonemia and to treat it appropriately. Is that -- those your opinions?

A. Yes, sir.

Q. Okay. It's my understanding that other than what we've just outlined as set forth in your April 14th, 1989, letter, you are not going to state any other opinions regarding the care and treatment rendered by health care professionals to Mr. Kubach. Is that a correct understanding?

MR. MELLINO: Objection.

A. It is not.

Q. (BY MR. JACKSON) It is not a correct understanding? What other opinions, Doctor, do you intend to state that are not set forth in your April 14th, 1989, letter?

A. I intend to make an opinion about the nurses' care.

Q. What opinion do you anticipate rendering as it relates to the nurses' care?

A. I anticipate to render an opinion about the care of one of the nurses who was on duty the night of Mr. Kubach's respiratory arrest, and in my

opinion, she failed to have a close supervision and to relay this to the medical personnel.

Q. Who was that nurse, Doctor?

A. Roper, I think.

MR. MELLINO: Lamb?

A. Lamb. I'm sorry.

Q. (BY MR. JACKSON) What was the first name you mentioned?

A. No, no, no, I was confusing it with -- with -- there were two nurses. One was Roper, I think, and the other was Lamb, Right? I think it was Lamb.

Q. When did you formulate your opinion as it relates to the nurse?

A. After I had the opportunity to review the deposition.

Q. When was that?

A. After that letter.

Q. Okay. When was that specifically?

A. I cannot tell you for sure, but probably in the last month and a half.

Q. Do you keep records of the time that you spend in these matters in reviewing?

A. More or less, yes.

Q. Okay. So somewhere we would have a

record -- or you would have a record --

A. Yes.

Q. -- that you could produce for us that would indicate when you reviewed those things?

A. Absolutely.

Q. With that exception, Doctor, the -- as it relates to the nurses' care, are you going to render any other opinions regarding the care and treatment received by Mr. Kubach?

MR. MELLINO: Objection. He doesn't know what questions he's going to be asked at trial.

Q. (BY MR. JACKSON) Have you been asked to render any other opinions other than those that you set forth in your letter and the opinion you just indicated about the nurse?

MR. MELLINO: Has he been asked? What's your --

Q. (BY MR. JACKSON) Did you understand my question, Doctor?

A. No, I don't, sir.

Q. Doctor, you know that -- you've been through this before?

A. Yes, sir.

Q. You know that we've come a long way to

explore with you the opinions which you are going to render in this case and the opinions which we understood you were going to render as you set forth in your April 14th, 1989, letter. You understand that?

A. Yes, sir.

Q. Now, today, we discover that in addition to the letter, you have additional -- an additional opinion relating to the nurses, of which I personally was not aware, because all we have is what I read from the letter. You understand that?

A. Yes, sir.

Q. Now, I am inquiring of you as to whether or not you intend to state any other opinions which are not set forth in either your letter of April 14th, 1989, or which you did not just tell me about as it relates to the nurse? There's no way we can explore your opinions unless we know what your opinions are going to be.

MR. MELLINO: Well, you can ask him questions about specific areas you want to know answers to whether the doctor has an opinion on or not.

Q. (BY MR. JACKSON) Are you or have you been asked, Doctor, to render any opinions other than

what is set forth in your April 14th, 1989, letter, and your opinion regarding the nurses' care?

A. Well, in order to be absolutely truthful, I was asking a lot of questions. I would have to get your help for you to ask me specific questions about, you know, a lot of things. I cannot pinpoint exactly at this time -- you know, I review a lot of material, a lot of information, and I just cannot tell you exactly --

Q. Doctor, were you asked to render -- you were asked to render an opinion regarding Dr. Kursh's care; am I correct?

A. Yes, sir.

Q. You were asked to render an opinion regarding Dr. Angell's care; correct?

A. Yes, sir.

Q. You were asked to render an opinion regarding Dr. Nearman's care; is that correct?

A. Yes, sir.

Q. And I assume that you were asked to render those opinions at some time before you wrote your letter of April 14th, 1989; is that correct?

A. Correct.

Q. Now, before your letter of April 14th, 1989, were you asked to render any other opinions

regarding the care and treatment received by Mr. Kubach at University Hospitals?

A. Before?

Q. Before the April 14th, 1989, report to Mr. Kampinski --

A. No.

Q. -- were you asked to render any other opinions regarding the care provided to Mr. Kubach at University Hospitals?

A. I don't recall, no.

Q. Okay. Well, those are different answers, Doctor. Either you don't recall or no. Were you asked or do you not recall?

A. I'm just trying to be --

Q. If you have some correspondence or something you need to refer to, Doctor, please do.

MR. MELLINO: You're not intending to limit any questions he might be asked at trial about any opinions he might have regarding this case?

A. Unless, honestly, I have the thing with me --

MR. JACKSON: Yes, I am.

A. But I don't -- I don't recall at this time, but I would have to go and refresh my memory, but I

don't recall.

Q. (BY MR. JACKSON) Well, certainly, I would assume, Doctor, that if you were asked to render additional opinions when you wrote your report to Mr. Kampinski of April 14th, 1989, you would have included the opinions you were requested to address; correct?

A. Yes, sir.

Q. So we can assume, can we not, in all fairness, that in that letter you set forth all the opinions you were asked to render before April 14th of 1989. That's a fair assumption, isn't it?

A. Yes,

Q. Okay. Now, apparently, at some time since April 14th of 1989, you have been asked to consider or render some additional opinions; correct?

A. Yes.

Q. When were you asked to render any additional opinions?

A. At the time that I was asking to review the other depositions.

Q. Okay. Do you have a recollection as you sit here today as to when that occurred?

A. I -- again, I think it's probably within the month and a half ago, but I cannot tell you

precisely.

Q. Okay.

A. But I'm sure I can find out, because I have the correspondence.

Q. Now, I'm assuming that in preparation for this deposition, you met with either Mr. Mellino or Mr. Kampinski or both at some point in time; is that correct?

A. I met today for the first time with Mr. Mellino.

Q. Would it be fair to assume that since you wrote your letter of April 14th, you've had telephone communications with Mr. Mellino and/or Mr. Kampinski?

A. I have telephone conversation with Mr. Mellino and I believe one time with Mr. Kampinski.

Q. Since April 14th of 1989, have you had any written correspondence with Mr. Kampinski and/or Mr. Mellino?

A. Only my secretary bills to them.

Q. Now, in terms of any other opinions other than the nurses, were you asked to render any other opinions regarding the medical care rendered to Mr. Kubach since April 14th, 1989?

A. No.

Q. You are, therefore, not going to state or have no opinion relating to Dr. Welch; am I correct?

MR. MELLINO: Objection. He may have other opinions as additional facts become known to him.

MR. JACKSON: What additional --

MR. MELLINO: Has the transcript of Dr. Welch been transcribed yet, to your knowledge?

Q. (BY MR. JACKSON) Do you have an opinion regarding Dr. Welch's care?

MR. MELLINO: Well, wait a minute. Before -- I thought we had an agreement at the pretrial that he was not going to comment on Welch until he had an opportunity to review the -- his deposition,

MR. JACKSON: I don't remember an agreement like that.

MR. MELLINO: Well, it was discussed.

MR. JACKSON: I don't believe it was, Chris.

MR. MELLINO: Well, it was.

MR. JACKSON: I don't believe it

was. I think we're here today for purposes of exploring this doctor's opinions. Now, you have refused to answer direct questions put to you in interrogatories. We have requested those answers in at least three different times in --

MR. MELLINO: Interrogatories aren't directed to attorneys.

MR. JACKSON: You're saying that attorneys don't assist their clients in answering interrogatories so we can explore the claims of the plaintiff?

MR. MELLINO: Well, you --

MR. JACKSON: I don't want to get into that argument with you, but that's a clear -- there's no question about that. We have -- we have a report from the doctor which purports to set forth the opinions he is going to state in this case, and we've come a long way to take his deposition for discovery purposes. Now --

MR. MELLINO: It's been a long time without asking any questions about what his opinions are.

MR. JACKSON: I haven't -- I don't want to play games with you, but I have been trying to get to what those opinions are.

MR. MELLINO: That's all you've done since the deposition started.

MR. JACKSON: Exactly, because I don't know what to explore because I don't know what his opinions are, do I?

MR. MELLINO: Why don't you ask him what his opinions are?

MR. JACKSON: I just did.

MR. MELLINO: No. So far you've asked him what his opinions aren't.

Q. (BY MR. JACKSON) Doctor, as it relates to Dr. Welch, are you going to state any opinion that Dr. Welch deviated from accepted standards of medical care?

MR. MELLINO: Objection.

A. Dr. Welch, if I recall correctly, is an anesthesiologist?

Q. (BY MR. JACKSON) Yes, sir.

A. For the information I was able to gather from the medical record, I don't believe that he deviated from the medical care.

Q. Okay. So as far as he is concerned, you're satisfied he gave this man good medical care, from what you reviewed in the records?

A. From what I reviewed, yes.

Q. And I assume that you reviewed the entire medical chart as it relates to Dr. Welch and to the care of Mr. Kubach?

A. I review all the information that was provided to me. I don't know if this is entire chart, but whatever was provided to me, I review.

Q. Tell me what it is you reviewed.

A. Well, I review the records that were sent to me from Mr. Mellino, the depositions, the -- all the -- all the ancillary information that was coming with that.

Q. Do you have handy here today, Doctor, some indication by way of a file or by some listing of the materials that you specifically reviewed in preparation for opinions in this case?

A. No, I don't. I was not asking to bring that. I didn't.

Q. Were you asked not to bring that with you today?

A. No, no, no. Nobody asked me to bring it. Nobody told me not to bring it. I -- you know.

Q. All right. We need to know what you reviewed. What medical records did you review?

A. The medical record, again, that copies of the medical record that I think were from the

University Hospital.

Q. Okay. What depositions did you review?

A. I review the deposition of Dr. Angell, Kursh, Nearman, two nurses, and I believe another doctor which, with an Indian name. It escapes --

Q. Jayanthi?

A. Yes.

Q. What other materials did you review?

A. As I said, the material that was brought to me, but I don't recall exactly, you know --

Q. Do you maintain some file as it relates --

A. I do.

Q. And where would that file be?

A. My office.

Q. Where is your office as it relates to where we are located at this instant?

A. Oh, close, you know, to the medical center.

Q. Okay. Would you please call your secretary and ask her to bring over your file as it relates to that?

A. She is sick today. But, you know, if you want to -- we can --

Q. Must be someone there that could bring that over.

A. No, there's not.

Q. All right. How long would it take you to get there and back, Doctor?

MR. MELLINO: Too long.

Q. (BY MR. JACKSON) How long would it take you to get there and back, Doctor?

A. 30 minutes.

Q. How long?

A. 30.

Q. 30 minutes to get to the medical center and back?

A. No, no, to my office. But I go. It's no problem.

Q. Okay. And there's no one at your office now who could bring the records that you reviewed?

A. No, because I got -- that I have in a special place.

Q. Well, help me, Doctor, because we don't know what you reviewed. We're entitled to know that.

A. I'm telling you.

MR. MELLINO: He's just told you what he reviewed.

Q. (BY MR. JACKSON) What is the ancillary material that you reviewed, other than the medical records and the depositions you just outlined?

A. The ancillary material is, I think, is a

review of the -- was like a summary that was done by somebody else, that helped me out when -- you know, with the lab values. That's what I'm talking about. These people were constructing the values from the medical chart, putting the table, and I was -- allow me to go this in a -- in a more quickly way, if you want it.

Q. So someone had prepared a summary which extracted certain information from the medical records and put it into a table or some flow chart or something?

A. Not information, but, basically, times of what the blood was draw, you know, something like that.

Q. Okay. Were there any other materials that you reviewed, other than the sheets you just described to us?

A. I don't recall. No, I don't think so.

Q. Okay. Would that be what you'd describe as a flow sheet?

A. I believe so, yes.

Q. Okay. You reviewed the depositions you've outlined for us, you reviewed the medical records that were provided to you, and you reviewed a flow sheet; correct?

A. Yes.

Q. With that exception or with those exceptions, I'm assuming you reviewed no other materials in formulating these opinions. Am I correct?

MR. MELLINO: Are you asking him about medical literature, too?

MR. JACKSON: I didn't get to that.

MR. MELLINO: Okay.

A. Again, just want to be absolutely -- I think that that's probably -- yes.

Q. (BY MR. JACKSON) Okay. Did you have to do any medical research to prepare you for the opinions which you've rendered, either in the deposition or orally?

A. I --

Q. Excuse me. In the letter or orally?

A. I did.

Q. What research did you do?

A. Oh, I -- well, I'm do -- this is my basic area of expertise and, basically, I did a search on the syndrome of hyperammonemia after transurethral resection, and I just find the pertinent articles and send it to Mr. Mellino and Mr. Kampinski.

Q. Okay. Would you cite for me the articles

which you believe are pertinent to this particular case?

A. Well, I cannot tell you by name, but it was published in the "Journal of Urology" in 1983, I believe, was the original description of this syndrome, and subsequent are probably two other articles, one in urology, I believe, and the other is also in the "Journal of Urology,'' which describes specifically the hyperammonemia as a complication of the TURP, and it's a recent paper, I think, in 1980 -- I think it's in 1988 or 1989.

And, in the "Green Journal," which addresses hyperammonemia as a complication of chemotherapy, you know, but, also, emphasizing the fact that these patients tend to have respiratory depression as the hallmark of the syndrome.

Q. Okay. Other than the -- can you cite for us any of the authors of these articles?

A. No.

Q. You would have somewhere a list of the --

A. Oh, I do.

Q. You do have those?

A. Oh, yes.

Q. Would those be included in this file that you have maintained?

A. Some of them, because I -- others, I -- in another office, where I have the other articles, yes.

Q. Okay. Would this flow sheet that you have, that you reviewed, would that also be included with your file?

A. I don't know. Probably.

Q. Well, tell me what would be in the file that you have as it relates to this case.

A. I don't have any idea, because I'm -- actuallyly reviewing several case and it's -- everything there, but I cannot tell you. Sometimes I take things at home to do my, you know, and I don't know if I took things at home in preparation for this deposition or not.

Q. Doctor, did you review your file before you came here today?

A. No.

Q. Did *you* review it within the last couple of days?

A. Yes.

Q. When did you review it last?

A. I think I did it some -- yesterday afternoon, after talking with Mr. Mellino.

Q. Okay.

A. Yes.

Q. Why did you not bring your file with you today?

MR. MELLINO: He's already answered that.

A. I never do.

Q. (BY MR. JACKSON) You never bring your file with you to these matters?

A. No. Unless somebody, the lawyers or somebody, request in advance that I do.

Q. Doctor, in what areas of medicine do you consider yourself to be an expert?

A. Internal medicine and nephrology.

Q. Would you tell me what your understanding of Mr. Kubach's condition was when he was admitted, his status when he was admitted to University Hospitals was?

A. He was a male patient that was suffering from lower urinary symptomatic obstruction, and he was felt by Dr. Kursh, which I believe was the attending urologist, to have enlargement of the prostate, which was responsible for his symptom, and he was scheduled to have an elective operation for relief of the obstruction.

Q Is that the extent of your understanding as

it relates to Mr. Kubach's status?

A. In relation to what?

Q. In relation to how this man presented, what his medical history was, what his status was when he presented? Have you just described your understanding, the extent of your understanding in that regard?

A. From the urologic standpoint, yes.

Q. Okay. What is your understanding, Doctor, of Dr. Kursh's role as it relates to Mr. Kubach?

A. He was his doctor. He was the attending physician who supposed to do the operation and was in charge of the case.

Q. What is your understanding of Dr. Angell's role as it relates to Mr. Kubach?

A. He was the urology resident who will assist Dr. Kursh in the operation and the follow-up and I think he also did the initial evaluation of the patient.

Q. What's your understanding of the role of Dr. Nearman in Mr. Kubach's care?

A. He was the director of the surgical ICU.

Q. Have you, in any of the writings that are set forth here in your C.V., done any writing or research as it relates specifically to the

hyperammonemia?

A. No.

Q. Do any of your publications which are set forth in your C.V. relate directly to any of the criticisms that you have against any of the doctors here?

A. Yes,

Q. Which of those would they be? Would you just put a mark by them on the C.V. for us?

A. 16, 33.

Q. Okay.

A. And if I may, when you said if I did some work in relation to hyperammonemia, I believe that we were -- while we didn't describe the syndrome, as such, in the two publications regarding hyponatremia, we encounter similar complication in which patients develop the hyperammonemia.

Q. These are the two articles that you've marked?

A. This is.

Q. 16 and 33?

A. 16 dealing with hyponatremia associated with transurethral resection and both patient also have complication with hyperammonemia.

Q. Okay. So that we have it on the record, the

number 16 is "Rapid Correction of Severe Hyponatremia with Hypertonic Saline Solution," and that's in the "American Journal of Medicine," volume 72, pages 43 to 48, 1982; correct?

A. Uh-huh. Well, let me go exactly what -- of the seven patient that were described there, we have one patient who developed hyponatremia after transurethral resection, and that individual, in addition to the hyponatremia, also had respiratory problems and needed intubation and was find to have a high level of ammonia.

Q. What was the level of ammonia in that patient?

A. I don't recall.

Q. Article 33 is an article authored by you entitled "Treatment of Symptomatic Hyponatremia and Its Relation to Brain Damage: A Prospective Study," published in the "New England Journal of Medicine," volume 317, pages 1190 to 1195, in 1987; am I correct?

A. Yes, sir.

Q. With those two exceptions, the rest of your articles do not directly relate to your criticisms that you have against the doctors in this case; is that correct?

A. Yes.

Q. Would you explain to me, Doctor, as it relates to those two articles, how you believe they relate to the criticisms you have to these doctors or against these doctors in this case?

A. Well, basically, specifically, in the "New England Journal of Medicine," we emphasize the importance of early intubation of, you know -- of the prevention of the respiratory problems in patient with hyponatremia, and I believe in the -- in our series, we have, I think, two or three patients who develop hyponatremia secondary to transurethral resection and, again, one of them, in addition to the low sodium, had a high ammonia, and he was intubated for that.

Q. Okay. What did you understand Mr. Kubach's general medical condition to be when he was admitted to the hospital?

A. That he was a 76-year-old male who has an inability to walk and he is questioned by the history to be somehow senile dementia.

Q. What was your understanding of his general medical history?

MR. MELLINO: You're asking him as it's reflected in the medical chart from University

Hospital?

MR. JACKSON: I think the question was what his understanding of it was. Wasn't that the question?

MR. MELLINO: Well, how would he have an understanding? He never saw this guy.

MR. JACKSON: Why is he rendering opinions? I'm asking what his understanding of the medical --

MR. MELLINO: It's basically out of the medical record. If you want him to read the medical -- you have the history out of the medical record.

MR. JACKSON: I'm asking him his understanding, whether that came from you or the medical records or whatever source. I'm entitled to know his understanding.

Q. (BY MR. JACKSON) Do you understand my question to you, Doctor?

A. Yeah, but I don't believe that it's, with all respect, well phrased. I was asking to render an opinion what happened to Mr. Kubach after surgery, and in that regard, I'm confident that I have all the information for me to do that.

Q. Okay.

A. With regard to his previous medical condition, I just cannot do that because I was not entitled to his entire history, neither to have an examination done by myself.

Q. When were you first contacted as it relates to this matter, Doctor?

A. Several months ago.

Q. When, specifically?

A. Again, I cannot tell you about that, but I can find out.

Q. That would be reflected in your file and your time records?

A. Yes, sir.

Q. Okay. I'm going to ask you to do that and we're going to make a request that you provide that information to us. Okay?

A. Yes, sir.

Q. Now, before you wrote your report of April 14th, 1989, did you give an oral report to Mr. Mellino or Mr. Kampinski?

A. I believe that we discussed the case over the phone, yes.

Q Did you give any other written reports other than your letter of April 14th, 1989?

A No, sir.

Q. Did you render any other opinions in writing in any way other than that report of April 14th?

A. No, sir.

Q. You did render some oral opinions after your letter of April 14th, 1989; is that correct? That's relating to the nurses, specifically.

A. Yes, sir.

Q. That was the only additional opinion after that letter which you rendered either orally or in writing; correct?

A. Yes, sir.

Q. Doctor, are there -- are there any specific texts or journals to which you as a practicing physician would refer for information regarding the medical topics which are the subject of this case?

A. Without being presumptuous, my own articles will serve.

Q. You would --

A. I --

Q. If you had to make a reference to either -- medical literature --

A. Yes.

Q. -- either texts, journals, or whatever source, relating to the topics, the medical topics involved in this case, you would go to your own

articles and the research that was done in your own -- you would rely upon that? Is that what you're telling me?

A. No, I'm telling you that part of that -- my articles are dealing with the subject of hyponatremia, acute and chronic, the animal studies and the human studies, articles by other people, and textbooks.

Q. Okay. What textbooks would you refer to, would you rely upon?

A. Specifically for hyponatremia in transurethral resection?

Q. That and hyperammonemia.

A. I think any general textbooks on nephrology will address the issue of hyponatremia after transurethral resection. However, I think the hyperammonemia, as such, is not well described in the textbooks. We are putting one now, but it's well known in urologic. It's more -- it's more known to urologists than to nephrologists or to internists in general, because was described initially in the urologic literature. And I believe that the original article in 1983 was published in the "Journal of Urology.'' And this is from a group of Michigan.

Q. Now, other than what you've just described, would there be other texts or journals -- you said, generally, urology texts. I'm wondering if you can cite any for us, that you would rely upon or refer to.

A. You know, I don't have it in mind, but, as I said, I rely in the articles that would describe the original syndrome.

Q. What authors would you look to, if you can't cite specific texts? What authors would you look to for reliance upon issues as it relates to hyperammonemia, hyponatremia, other than yourself?

A. Well, people who work in the field, Dr. Allen Arieff, which is one of the co-authors.

Q. What's his name?

A. Arieff.

Q. Can you spell it?

A. Let me see I can. Okay. It's A R I E F F. Arieff is a co-author in some of my publications, and Dr. Krothapalli, which is also co-author.

Q. Would you spell that for us?

A. It's tough for me to. He's another co-author in my work.

MR. LUDGIN: Which reference number are you pointing to, Doctor?

THE WITNESS: I point to several doctors.

MR. MELLINO: 33. 33.

MR. LUDGIN: Just give me one so I can spell it later.

THE WITNESS: 33.

MR. LUDGIN: Fine. That's all I need.

A. Other people who work in the field in hyponatremia, has done some work, is Dr. Robert Anderson.

Q. (BY MR. JACKSON) ANDERSON, I assume?

A. Yes.

Q. Okay.

A. Dr. Frank Epstein.

Q. Can you spell that? Give it your best shot.

A. Let me see. I think it's ESPTEIN.

Q. Epstein?

A. Epstein.

MR. LUDGIN: EPSTEIN?

THE WITNESS: Yes.

Q. (BY MR. JACKSON) Epstein. Okay.

A. Frank.

Q. Where is he located?

A. He's the chairman of nephrology at Beth Israel in Boston.

Q. How about Anderson? Where he's located?

A. Robert Anderson, I think, is in University of Colorado.

Q. And how about Arieff? Where is he?

A. University of California in San Francisco.

Q. Anybody else?

A. Not that I consider --

Q. Expert in the field?

A. -- expert in the field of hyponatremia and, you know -- and I think -- I'm sure there's a lot of other people, but, you know, people who I just relate the most.

Q. Now, would those individuals who are authors also be individuals who would have written and you would consider experts in the area of hyperammonernia?

A. No, I don't believe that -- none of these people has written specifically on the issue, hyperammonemia.

Q. Would you consider any of those people experts in the area of hyperammonemia?

A. I don't know about that. I thought that you

were asking me about hyponatremia.

Q. That was -- that was my first question.

A. Okay. Okay. I'm sorry.

Q. That was my first question. I'm asking hyperammonemia now.

A. Okay. The hyperammonemia issue, I would have to rely on the people I just mentioned is in the urologic literature, but I can tell you that it's people who have done work in metabolics of the ammonia production, and among them is Dr. Halperin. I think it's Mark Halperin from Toronto.

Q. A L P E R, something like that? Oh, Halperin. H A L P --

A. Yes. P E R I N.

Q. Okay.

A. And I think a Dr. Richard Tannin has done, also, work. He is in the University of Michigan. And these are people who have done work on metabolics of ammonia; okay?

Q. Specific studies in that area?

A. Specific metabolic studies.

Q. Okay.

A. The issue, again, of hyperammonemia after transurethral resection is mostly in the urologic

literature and I'm more than happy to bring the article to you or send you a copy of the original description.

Q. Doctor, what is hyperammonemia?

A. Is an increase of ammonia level above the normal values.

Q. And what would the normal values be?

A. I think it depend on the lab, but I think up to 40, at least, what I, you know -- Methodist, I think, the high level is 35.

Q. 35 what?

A. 35 expressed in nanograms, I think.

Q. In terms of Mr. Kubach, what would an increased level -- what would normal be, first of all?

A. In him?

Q. In Mr. Kubach.

A. I don't know what was normal, because I didn't see a normal value. The only thing I saw was a value of 94, I believe, and subsequent, something in the 300's, 350, something like that. I don't know. If I would check the ammonia level random, depend of the, you know, normal. When you define normal, you define the upper limit. Okay? Many people would have two, three as a -- as a

value; okay?

Q. Hyperammonemia is, as you indicate in your report of April 14th, 1989, a well-known complication after a TURP procedure; is that correct?

A. Is well known in the literature of related to this syndrome, yes, sir, related to this syndrome of --

Q. The syndrome being --

A. Being --

Q. -- hyperammonemia?

A. Yes.

Q. What, in general, causes hyperammonemia? Physiologically, what causes it?

A. Well, an increase in ammonia production. Related to this specific case or in general?

Q. First, in general.

A. Well, when you have an example is a liver failure problem, okay, a patient with hepatic problem, which cannot handle the normal metabolites of urea because the liver is impaired. Rather than have the normal cycle of urea, which is one of the metabolites that take place in the liver, that goes into ammonia and increases the ammonia level; okay?

The other source of ammonia production is the kidney, and the kidney takes that as a mechanism to get rid of the hydrogen production. That's one of the ways that the kidney can get rid of the normal hydrogen production is through normal excretion.

Means, in patients, the most common cause of ammonia toxicity that I will see as an internist will be patient who have liver failure and are subject to increased protein load, increased protein intake, or has GI bleeding. Any source of loading, you know, the liver with an extra amount of protein that cannot be handled through the normal pathway of urea can increase ammonia production.

Q. What was the specific cause of hyperammonemia in this case, in Mr. Kubach's case?

A. Well, the solution that is conventional -- let me -- if you don't mind, let me give you background of what to understand. When you do a TURP, the surgeon introduce a tube and have to have an open field to visualize the resection that is going to take place. In order to do the resection, he is using an electric tool. He's using electricity to, you know, and in order to keep the

field open, he have an irrigant solution. That solution, by definition, have to be nonelectrolyte solution, cannot have any electrolytes. If you have an electrolyte solution and you have electricity, you remember from physics, you have conductivity of electricity and you would kill --

Q. They couldn't do the procedure?

A. No, you could do the procedure, but you have two deaths, have the patient and the surgeon. That's not very healthy for either one.

Since that became a problem, many things were interchanged. Among them was the use of distilled water. For some, like myself, that came from the old days, I remember when I was medical student in Argentina that people who got what is called TURP syndrome, because you used distilled water and distilled water will prevent this thing to happen, but we have another problem, which is swelling of the red cells because you have a problem with hypotonicity and the red cell will swell, have a significant hemolysis, and the patient will have either acute renal failure or pulmonary edema.

At that time, people were -- thought how can we prevent this problem, and trying to come

out with a solution that will have an osmolarity -- I don't know if you're familiar with that term -- that will prevent red cell to swell and to break down. I think in 1988, if I'm not mistaken, people come out with idea of using glycine. Glycine is a nonessential amino acid, and the solution that we conventionally use is 1.5 percent glycine. That solution has an osmolarity, I think, around 220, 235. I'm not -- don't hold me that. Will prevent the hemolysis to occur, but, nevertheless, is a hypotonic solution with regard to the normal osmolarity of the individual, which is around 280.

Q. You're talking about the blood?

A. Right. If you have a situation in which a vessel is ruptured or the capsule of the prostate is perforated, you have theoretically the possibility of infusing significant amount of glycine into the body. If a person is able to excrete that glycine after the obstruction is relieved, what we see, and we did some study, we never published that, we did a large study when I was chief of nephrology at Ben Taub and we find out that you have a transient deterioration of the renal -- the sodium. The sodium will come out from 130 to 134, 135, after surgery and eventually will

come back to normal. Not very common, but, nevertheless, well-known complication. Patient can develop what is called water intoxication, acute water intoxication, which is the result of significant amount of glycine be absorbed and dilute the serum sodium into the body, and as a result of that the brain will swell and the patient will have, you know, obtundation, convulsion, coma.

That's the -- hyponatremia is one of the complication of the TURPs. Interesting enough, what many people began to notice, however, that some patients who develop hyponatremia began to deteriorate neurologically after the hyponatremia was been corrected, was a disassociation, and that alerted people, said, wait a minute. That must be something else besides the conventional thinking of this old hyponatremia. What could be the problem? And from metabolic studies has suggest the glycine can shunt into metabolic pathway and can increase ammonia production, and that's what I'm just trying to refer, that when you infuse glycine, you can have two complications. One is the hyponatremia, as I described, and the other is the hyperammonemia, and what Mr. Kubach have is the

hyponatremia that was properly treated, and I don't have no problem with that. Actually did it by the book, by what we recommended.

But interesting enough, when the patient is begun to have a serum sodium which is reaching the level at which you don't see any problem, but the patient should begin to improve, he began to have neurologic deterioration, and at that time, I believe that the people failed to recognize that what happened to Mr. Kubach is that he began to have the other complication which was hyperammonemia.

Q. At what point in time do you believe the hyperammonemia should have been recognized?

A. Well, I think it -- as I said, the most important thing will be to the doctor should become aware why a patient when the sodium began to be corrected -- I think it was around 4:00, and please, don't hold me, but the sodium began to be around 121, 124, in the afternoon, why, at that time, the patient is getting more obtunded, and I think it was the level of ammonia at that time, which I think it was around 94. I don't know was done at that time or before that.

Well, again, I think the treatment of

this symptom is very simple. Just prevention is the only thing you can do, because you need to be sure that you will give enough time for this ammonia to be metabolized, and the only thing you need to be aware is the respiratory complications, and since respiratory complication can occur abruptly, what you need to do is to intubate the patient to prevent that.

Q. At what point in time do you feel that they should have recognized the hyperammonemia? Was that 4:00? Is that your statement?

A. Oh, maybe earlier. Again, I -- if you can give me the data, go over that, I will more -- but I think --

Q. Do you have a copy of what you reviewed in rendering your opinions here?

A. No, I don't, but do you have the record of the hospital? I'm more than happy --

MR. JACKSON: Do you have a copy of the chart here?

MR. MELLINO: Didn't you bring one?

MR. JACKSON: I don't have a complete copy of the chart here, no, If you have one, we'll let him -- I assume you have what you sent him.

(Discussion off the record.)

MR. MELLINO: What do you want him to look at?

MR. JACKSON: Whatever he needs to look at to be able to answer that question.

MR. MELLINO: What's the question?

Q. (BY MR. JACKSON) Do you remember the question, Doctor?

A. Yes. At what time we think that the patient probably need to be intubated.

Q. What time do you think they should have recognized the hyperammonemia?

A. Well, let me -- let me -- I think --

MR. MELLINO: He already answered that question.

A. Yes. Any time that you see hyponatremia resulting from transurethral resection, you know there is another complication that can occur, because by the fact that you have a significant amount of glycine that will produce hyponatremia, is over -- is a possibility that that same glycine can go have a shunting pathway and produce ammonia toxicity. Means the source of the problem is there, and I think it's good practice just to be

aware of that problem and to follow the patient very, very closely and to decide at what time the patient should be intubated. That is -- most likely reflects when you see that the patient is not getting better, but is getting worse, at the time that the sodium is going up.

Q. Okay. Doctor, that is a clinical judgment -- correct? -- as to when the patient should be intubated?

A. Not really, sir. Everything is a clinical judgment.

Q. Well --

A. But --

Q. That's not true. Everything isn't a clinical judgment in medicine. You would agree with that? You're not saying everything in medicine is a clinical judgment based upon the opinion of the physician and his clinical observations, are you?

A. Rephrase that question, John, please.

Q. Okay. As it relates to what you were describing here, there's -- there is some point in time, in your opinion, in the course of this patient's care that he -- that Mr. Kubach should have been intubated. Am I understanding you

correctly?

A. Yes, sir.

Q. Now, the determination of that point in time, in your opinion, would rely upon certain information that is available to the physician, his observations, what he's seeing, things of that nature; am I correct?

A. Putting all together; yes.

Q. Okay. Now, one of the most important things would be the observation of the doctors that are there with the patient as to how the patient's condition is; would that not be correct?

A. Unfortunately, no, in this syndrome. Let me explain why.

Q. Okay.

A. It's nothing more frustrating to try to make a judgment or a clinical diagnosis of respiratory failure. Respiratory failure is a diagnosis that you make by blood gases, means, when you -- when you have somebody which, you know, you don't know the status of the blood gases, you don't know if the guy's becoming apoxic or hypercapnic. You know, you can have some clinical hint, but the definite diagnosis relate in checking the oxygenation with blood gases, you know. In my

experience, I have patients who by one just -- just a moment, the patient will be breathing normally and five minutes later goes into respiratory arrest, and when you look the blood gases, what the people were describing breathing normal were blood gases didn't agree completely. Means, this is one of the clinical condition in which, unfortunate, clinical judgment cannot do the job alone.

Q. Doctor, as it relates to Mr. Kubach, he had a healthy liver, did he not?

A. I cannot make an opinion about that.

Q. We have no indication that he had liver disease or a liver problem.

A. Again, you know, you can have -- I can tell you that I have patient who has normal liver function tests, and during routine surgery, when a biopsy is done of the liver, find cirrhosis. Means, by history, it's very important. I don't recall if we have any evidence that Mr. Kubach have any history of liver disease.

Q. Okay. Do you, as you sit here today, can you indicate any evidence in this file that would indicate to you that Mr. Kubach had a liver problem, a liver disease?

A. I would have to review again the thing, but,

you know --

Q. Certainly, that would be an important consideration for you, would it not? I mean, you would have picked that up if -- if --

A. I'm sure, yes.

Q. Okay. Is there anything that comes to mind, Doctor, that indicates to you that he had a liver problem?

A. I don't recall at this time. No, I don't --

Q. Okay.

A. -- think so.

Q. And it's also clear that he had no kidney problems that we're aware of. Isn't that also true?

A. No, wait a minute. That's maybe not true. Let me see the admission BUN and creatinine.

MR. MELLINO: The labs?

THE WITNESS: Yes.

MR. MELLINO: These are all the labs.

THE WITNESS: Let me -- when the patient was admitted? Could you remember the day?

MR. MELLINO: It was the 27th.

MR. IRWIN: 26th.

MR. MELLINO: 26th?

THE WITNESS: 26th.

Q. (BY MR. JACKSON) You're looking for the BUN and creatinine tests?

A. Yes. Okay. Well, he was admitted the 26th?

Q. (Counsel indicated by nodding head.)

A. Okay. I have a BUN of 19 and creatinine of 1.3. I know we have a physician here, he's a lawyer, too, and let me address.

Q. Nephrologist, Doctor.

A. Nephrologist. Good. He would understand that. The issue of a normal BUN, a normal creatinine, is not by no means extrapolated or equal to normal glomerulofiltration rate. Give an example. You can lose 50 percent of your renal reserve, 50, because you can go from theoretically 120 to 60, okay, and you can have normal serum creatinine, normal BUN. Moreover, in elderly people, okay, elderly people, serum creatinine is reflection of the muscle mass. When you become older, your glomerulofiltration rate goes down, because you have obliteration of the glomeruli, and you can predict by age what would be the creatinine, age 80, say, around 30 to 40 percent normal.

Nevertheless, the serum creatinine in the elderly people doesn't go up, and the basic mechanism is, because your muscle goes down and since serum creatinine is a reflection of body mass, in elderly person with a normal serum creatinine can have, nevertheless, significant degradation of glomerulofiltration rate.

Q. That's possible, you're saying?

A. It's not possible. It's very likely.

Q. Okay.

A. In other words, we did the study of older people and elderlies who comes to the hospital, just for routine surgery, and has normal serum creatinine, normal, quote, by standards, you measure the creatinine clearance and these people are 70 percent from normal. That is a very important information that everybody should be aware, not only in this situation, but in the handling of drugs, specifically, antibiotics, because one of the complications that we encounter in the elderly is when we began to give the routine dosage that everybody is getting, you can get into trouble.

Means, answer to your question, I'm sorry, sir, that the 19 and 1.3 does not assure me

that the patient has normal renal function in terms of glomerulofiltration rate.

Q. Now, this is when he was admitted; correct?

A. Yes, sir.

Q. And we know that he was admitted with an obstruction; correct?

A. Yes.

Q. Now, would you look to the value on the morning of surgery?

A. Yes.

Q. What was the value on the morning of surgery?

A. 10 and .8. That's exactly my point, sir. That's exactly what I was telling. You see what it is? It's very interesting. You pick up. That's good. By the following day, he drop 50 percent, 50 percent from the BUN and 75 percent from the creatinine. Means that in this guy, 19 and 1.3 was significant in terms of renal function abnormality, because when the obstruction was relieved, the renal function improved.

Q. Are you stating, Doctor, that it is your opinion that Mr. Kubach had a kidney problem, a kidney disease?

A. No, sir. What is my opinion, is that

Mr. Kubach has obstructive uropathy, who by going into the later numbers, have this number where definite compromising the glomerulofiltration rate. I don't know if Mr. Kubach has intrinsic renal failure, and that's different things. You know, one is a plumbing business, which all in this room, except for the lady, one time in another, we live longer, we're going to get. Three things you can be sure: Taxes, death, and obstruction if you live longer. Means, that's what you pay.

What I'm trying to tell you is that is a very interesting thing that just mentioned, which prove my point, that in 19 and 1.3 at the admission, in a patient with a structural obstructive uropathy, being elderly and muscle wasted, probably, does not exclude the fact that the glomerulofiltration rate in this gentleman was significant decreased as result of the obstruction. The fact that he recovered would suggest to me that he didn't have intrinsic renal disease.

Q. Okay. Now, the -- his renal or kidney situation did not play any part in the hyperammonemia. Would that be correct?

A. No.

Q. It is not correct?

A. His obstruction -- let me put it that way. If you look who are the people who will develop hyponatremia and consequence have the potential for develop hyperammonemia, if you take a hundred patients who come to a study with an obstructive uropathy and you want to predict from this a hundred patients who are the persons who most likely will develop hyponatremia, the most single factor will be -- well, actually, there are three factors -- will be delaying of surgery, related, you know, go, and it's more than one hour; the second, the ability of bleeding during the surgery. The more you bleed, the more chance you going to infuse. And, third, is the preexistent renal function.

The more -- the higher the BUN and the higher the creatinine, the more chance are that you can develop this, and it's simple. Because patient who have this problem, if you infuse a tremendous amount of this hypotonic solution, will not be able to get rid of that, will retain, and that is a chance. Means, in our experience and others' experience, you know, when you have somebody who comes with a significant elevation of

BUN and creatinine and will have a TURP, these are the people that we'll monitor very, very closely for this complication.

Q. Are you stating the opinion that that is what is involved in this case?

A. No. I just said that among other factors, I think we already know what happened. The guy has a -- I'm expecting a long distance call from Argentina. Want to be sure that is, you know.

Q. Let's take a moment.

A. You know, can I use this call?

(Short recess.)

Q. (BY MR. JACKSON) Doctor, at what point in time, now that you have the records in front of you, do you believe that Mr. Kubach should have been intubated?

A. Okay. We have -- we start with the sodium of -- let me see. 102. We go to Friday, 28th, 102, I think is after -- immediately after surgery. Went to 112, 117, and 123 and is around 4:20 and you can see that while the sodium correction is progressing well and the patient should be getting better, the patient is having

obtundation, progressive obtundation, and I think that should alert the physician that something else was going on. And in my opinion, I think that maybe is the time that I would probably, with the information about the ammonia level, I would definitely intubate this patient at that time.

Q. Okay. We are talking about 4:20 p.m. on the --

A. Yes. Sometime.

Q. And the time 4:20 comes from the lab values? Is that --

A. Yes, that's the -- that's what the value is, yes.

Q. At what point in time would the physicians be aware of that 4:20 lab value?

A. All depend if this was done stat. My hospital, we wait around 10 minutes, 10 to 15 when it's in a stat.

Q. From your review of depositions and the records here, at what point in time do you believe the doctors were aware of that 4:20 lab value? Lab values?

A. I know they were aware in the afternoon.

Q. At what point in time?

A. I cannot precisely tell you without looking

into that.

Q. What role, if any, would the clinical observations that they are making of the patient play in the decision of intubation?

A. Well, again, you have the clinical scenario of having somebody who you know develop this problem, that is, the transurethral resection hyponatremia. That's -- the people already know that. That's the reason why he's getting hypertonic saline. Despite that the correction to sodium is taking place appropriately, the patient is not getting better, and to me, knowing that complication besides hyponatremia can produce this syndrome, like hyperammonemia, should alert the physician about that complication and should take measures to prevent the lethal complication.

I just want to emphasize to you that hyperammonemia, per se, the level of the ammonia, the only significance it has is the respiratory depression, because the treatment is to allow the ammonia to be metabolized and to be excreted. It's nothing else you can do and the only thing you need to do is to prevent patient having the respiratory arrest or the respiratory depression.

Q. So what you -- what you're, if I understand

you correctly, opining is that the respiratory status of the patient is what should be closely monitored and observed?

A. Oh, yes.

Q. And that relates specifically to the blood gases; correct?

A. Not only to the blood gases, but the fact is that the patient is not get -- see, you putting everything together.

Q. When you say, Doctor, that the patient is not getting better, are you referring to the 4:20 lab values?

A. No, I'm referring to the clinical picture that the patient is coming to the ICU and is remaining obtunded, despite that the sodium is being corrected.

Q. What do you mean by obtunded? What does that term mean to you?

A. Not very active, responding. The guy's not active. He's not fully awake.

Q. Now, in rendering your opinion as to the time involved here, you are relying and look to the lab values; am I correct?

A. No, sir. I'm making the point with the lab values now and making that observation and went

through the progress note of the entries of the nurses and the physicians.

Q. So that I'm clear, in -- what in the lab values at 4:20 were you specifically referring to, to form a basis of your opinion or assist you in your opinion that he was not getting better?

MR. MELLINO: Objection. You asked him what time the patient would have been intubated --

MR. JACKSON: Right.

MR. MELLINO: -- in response to his answer that they should have recognized hyperammonemia because the sodium was improving and the patient -- and Mr. Kubach wasn't getting any better so I looked into the lab sheets to find out at what point the sodium had returned to a level of 120 to give you an answer to when the patient should -- would have been intubated. Now you're asking him --

MR. JACKSON: I asked him what in the lab values at 4:20 was he using to form his basis that at that point in time, they should have intubated because he was not getting better. Now --

MR. MELLINO: Well, that's not what

you asked him.

Q. (BY MR. JACKSON) Is your answer the sodium?

A. No, it's not the sodium. Maybe I don't make myself clear, but, please, I will try to do my best. What I was trying to convey to you, sir, is that taking the 123 as an instruction, you don't intubate the patient because it shows 123. Please, just understand that.

Q. That's what I'm trying to understand.

A. No, that's not what I said. If I said that, if I give you that impression, that's wrong. What I'm trying to say is that a good doc will look at the patient and will say, "This patient develop hyper -- hyponatremia. That means that he receive a significant amount of glycine. We are treating the hyponatremia. We are coming to the level that the patient should be getting better. He's not getting better. Well, what is the problem? Why he's not getting better?'' And I pick up 123 because in my experience, my animal studies, in my hundreds cases of hyponatremia that we were able, you know, when you reach 120, 115, many of these people will begin to feel better. The sodium begin to clear. And this guy is the opposite, and this

deserve an explanation.

Q. Now, when you say, getting better, what should the doctors be seeing?

A. That the patient is waking up.

Q. Is there anything else, other than waking up, that you consider getting better?

A. The patient is able to have a, you know, able to talk sometimes. Okay. Especially if it's acute hyponatremia, you sometimes see dramatic improvement.

Q. What else? Anything else?

A. If the patient is seizing, he will stop the seizures. If a patient is comatose, sometimes the patient is waking up. All these -- I mean, the patient is improving. In this situation, the patient is not improving, but worsening. And that's what I said, not the serum sodium is going to make the determination to intubate or not. It's that the serum sodium is used as a marker to alert the physicians what else could be going wrong.

Q. Now, let's talk about the picture of this patient. What I understand you to be saying, when he's not getting better, but getting worse, is that we are now discussing clinical observation; is that correct?

A. Yes, sir.

Q. As far as the lab values, as far as the blood gases, do you consider the blood gases and the other lab values of Mr. Kubach to be indications that he was getting worse?

A. No. The serum sodium indicates to me he's getting better and --

Q. How about the blood gases? You referred to those earlier.

A. Let me see the blood gases, Do we have the blood gases here, Chris? These lab?

MR. MELLINO: Yes, they're in here somewhere.

THE WITNESS: Could you -- that would be 4:20; right?

MR. MELLINO: Yes. That's the time. This is at 2:20.

A. 2:20. The only thing that we can say with the blood gases that the patient is having respiratory alkalosis, okay, that he trying to hyperventilate, okay, as a pH of 7.54, a P-C02 of 25 and a P-02, 114, but I'm sure he is in oxygen supplementation. He is taking oxygen. Now, that by itself only suggests that the patient that is maximum hyperventilation or trying to, you know,

trying to hyperventilate. Not maximum, I'm sorry. Trying to hyperventilate and nothing else. Okay.

Q. (BY MR. JACKSON) So that's not an indication to us that this patient is getting worse, is it?

A. Well, again, there's no indication that the patient is getting better, either, because when you have somebody who continues to -- the normal P-C02 is 40. Why the patient continues to have 25? He has abnormal blood gases. That's no question. He has abnormal blood gases because he went from a pH of 7.41 to a pH of 7.54, the P-C02 is coming down and I'm sure that, you know, that is a reflection, probably -- I need to see the bicarbonate in this file. Okay. He probably has, you know -- I need to plot that number. Let me see if I can do that.

Well, I can see some inconsistence in this number. In other words, he has a pH of 7.54, okay. He has a P-C02 of 25 and he has a bicarbonate of 22.1. When you plot these three numbers to check for consistency, doesn't come out right, Means that probably the bicarbonate in this fellow should be a little bit higher than the 22.1, but that's a trivial thing. That doesn't -- just trying to play with the numbers.

Q. Okay.

A. Now, again, the fact is that these blood gases that we have here are not normal blood gases, and with the picture of the not normal blood gases and high ammonia level and the doctors knew that he had that complication of hyponatremia, the people can put the thing together and say that this guy most likely will have hyperammonemia as a result of this problem.

Q. Now, Doctor, as it relates to the situation that we're describing here, we are now talking about their clinical observations of this man getting worse, as you say, rather than getting better; correct?

A. Yes, sir.

MR. MELLINO: He said the patient wasn't getting better.

Q. (BY MR. JACKSON) I thought you said he was getting worse in your opinion. Did you not say that?

A. Was not getting better.

Q. Did you say that he was getting worse?

A. I don't know. Can --

Q. Do you feel that he was getting worse?

A. Well, he's not getting better. He is -- he

is -- you know, he's not getting better --

Q. Do you feel he was getting worse?

MR. MELLINO: At what time are you talking about?

MR. JACKSON: 4:20.

A. He's not waking up. Put it that way.

Q. (BY MR. JACKSON) Do you think he's getting worse?

A. Probably.

Q. Okay. So your opinion is that at 4:20, he was getting worse?

A. Probably.

Q. Now --

A. And let me -- let me qualify that. Because I would suspect -- I will expect for somebody in which hyponatremia is being corrected and is acute hyponatremia that he will be able to respond, you know, in my opinion, in my experience, within -- with an improvement. The fact he is not, that, to me, suggests that he's not getting better, that maybe he's getting worse.

Q. Now, the clinical observations would be recorded in the -- in the flow chart of the SICU; correct?

A If they are properly done, yes.

Q. Okay. What, from the flow chart, do you use to conclude that Mr. Kubach was either not getting better or was getting worse at around 4:20 or thereabouts?

A. I need to see that, Okay. Well, to answer your question, sir, said that at 1630, "Dr. Kursh here," says.

Q. Dr. Kursh?

A. Kursh.

Q. Uh-huh.

A. Away -- aware of the neural status and sodium. Means he was aware at 1630 that the sodium was 123 --

Q. That's 4:30?

A. 4:30. Yes. That's what we were talking about.

Q. Okay.

A. You asked me when you think the doctor become aware; right?

MR. MELLINO: Right.

A. And that's the time according to the nurse. Actually, at 1640, he ordered to restart the serum sodium, and at 3 percent saline at 25 ml's. Decreased response here.

Q. (BY MR. JACKSON) What time, Doctor?

A. I think is at 6:00,
Q. At 6:00 in the evening?
A. Yes. Decreased response.
Q. You're referring to the nurses' notes?
A. Yes, sir.
Q. And it says what, please?
A. "Decreased response."
Q. Decreased response to what?
A. Yes, sir. Well, usually, that -- the nurses in the assessment of the patient asks questions and, you know, you just see the patient is more alert or less alert, more obtunded, less -- will interpret that the decreased response, the plaintiff is getting less responsive from before.
Q. That's a nurse's assessment?
A. I assume that this is what a nurse wrote. I think that this is a nurse assessment, yes, sir. Patient notes.
Q. Okay. What other notes would indicate to you that -- well, you took it up to 6:00, so at 6:00, you had a note that said -- I'm sorry -- decreased response? Was that the phrase?
A. Excuse me, sir?
Q. Would you say decreased response? Was that the -- okay?

A. Yeah. Well, decreased is an arrow pointed down. Down will indicate, in medical, the way we doctors write and nurses --

Q. Okay.

A. That is increased, is up; decreased is down.

Q. Okay. So the arrow indicates at 6:00 that there was a decreased --

A. Well, around 6:00; yes.

Q. Okay.

A. Yes.

Q. Now, as a physician, do you rely upon nursing assessments in terms of treatments of your patient or do you make your own assessment?

A Well, I really, in my area of expertise, ICU, nephrology, I really heavily rely on my nurses, especially our nurses in the ICU. These people tend to be very good. But not only that, Dr. Kursh, at 18 hours, here, said.

Q. 1800?

A 1800, I believe.

Q That was 6:00?

A. 6:00.

Q. Okay.

A Dr. Kursh here, aware of decreased mental

status and a question. Seizure activity?

Q. So apparently Dr. Kursh was there at 6:00?

A. Yes.

Q. And personally observed and evaluated the patient in some manner; correct?

A. And he said, aware of decreased mental status, means he agreed according to the nurse that --

Q. Doctor, you don't -- you don't mean to tell us that you believe that the nurse's note that says that the doctor was aware of the decreased mental status is an indication that Dr. Kursh agreed that the man had a decreased mental status, do you?

A. I don't intend to say that. I just said that he was aware of the nurse's comment.

Q. Okay.

A. That's the only thing I said.

Q. And apparently, based upon those notes and certainly based upon your review of Dr. Kursh's deposition, you're aware that he -- he assessed the patient at that time and did not feel it necessary to intubate the patient?

MR. MELLINO: Objection.

A. Yeah, I was aware of that.

Q. (BY MR. JACKSON) Okay. Now, you differ

from that?

A. Well, not only I differ, but I think what happened subsequent to Mr. Kubach will tend to agree with us.

Q. Well, let's not talk in retrospect. I'd like to talk at the point in time when the doctor was there, his clinical observations of this patient are what you take issue with; correct?

A. Well, I have a problem in Dr. Kursh, and with all due respect, I think he's -- he recognized the problem, he knew according to his deposition about the complication, he knew there was a question about the hyperammonemia. I mean, he knew all this problem, but which was amazing to me, that he choose not to convey that information, that potential complication to the family. He said that he doesn't do that. Means, when I see a physician that takes that position, you know, I'm just curious to see why he is not going to do other things. Means we have a gentleman here who not -- acknowledge, yes, the hyperammonemia can occur, that he is aware of the hyperammonemia, but, nevertheless, he doesn't mention that complication to the family. He never do that.

Now, that's the same physician who is

seeing somebody with neurologic deterioration and he is in opinion he's not going to intubate the patient. Well, I will not have to agree with his opinion. I think he's wrong.

Q. Doctor, your opinion is that Dr. Kursh's observations of the patient should have required that this patient be intubated; is that correct?

MR. MELLINO: Objection.

A. No. I think he --

Q. (BY MR. JACKSON) Let me withdraw the question.

A. Yes.

Q. You take issue with the fact that when he saw this patient at 6:00 that evening, that he didn't have the patient intubated at that point in time? Isn't that what your opinion is?

A. I take an issue that Dr. Kursh, who knew about this complication according to his deposition, who knew that hyperammonemia can result as -- and produce this problem, he know that, he didn't -- he know that, and having this specific patient in which his neurologic status is not getting better, is not improving, is getting worse, he choose not to do anything but observe. To me, that is not good practice of medicine.

Q. That's what I'm trying to understand from you.

A. Yes.

Q. So it is your criticism of Dr. Kursh that at 6:00, when he saw this patient and knew what he knew about this patient at that point in time, that he should have had the patient intubated; is that correct?

A. Yes.

Q. Okay. So that you take issue with his clinical judgment in assessing that patient and treating the patient as of 6:00 that night; is that correct?

A. Yes.

Q. Now, as it relates to Dr. Nearman, what -- at what point in time do you believe Dr. Nearman should have acted to intubate this -- and before I ask that, Doctor --

A. Yes.

Q. -- your criticism of these doctors in their care and treatment of this man is that they did not intubate him; is that correct? And mechanically ventilate him.

A. Not only that they didn't intubate, but failed to recognize the complication that will lead

to the respiratory arrest.

Q. What is the complication that they failed to recognize?

A. The hyperammonemia that will produce respiratory depression.

Q. Did you not just say that you believed that Dr. Kursh was aware of hyperammonemia?

A. Yes. He was aware.

Q. Okay. Now, hyperammonemia is --

A. He was aware, but he didn't do anything.

Q. Hyper --

A. He was aware during his deposition. He knew the complication, but in no way, in the progress note, he reflects that was happening to -- the only notes -- the only progress note that I saw in these entire chart, and maybe you can point it, was made by a junior house officer at -- or a student, I believe, who just point out about the high ammonia level. Neither Dr. Nearman, Dr. Angell or Dr. Kursh entertained in the chart the possibility that the respiratory complication or the mental obtundation that this patient was having was related to hyperammonemia.

Q. Hyperammonemia is simply an increased level of ammonia in the blood; correct?

A. Yes, sir.

Q. By definition?

A. Yes, sir.

Q. Okay. Now, as it relates to Dr. Kursh, we have discussed your criticisms of him, and that specifically relates to his failure to intubate this patient at 6:00; correct?

A. The failure to intubate the patient is the end result, John. What -- you need to recognize the problem. You need -- you're not going to begin to intubate people because they're not getting better. You know what could be the reason for this patient not getting better, and since he knew the complication, according to his deposition, he knew that this could happen, and if he knew that and he's aware of the articles, he knows that the common cause of death of these people is respiratory arrest. And in order to prevent respiratory arrest and respiratory depression, you prophylactically intubate these people. You have to do that.

Q. Okay. Now, as it relates to Dr. Kursh, then, that's your criticism with him that he didn't take care of this at 6:00 when he saw the man wasn't getting better; correct?

MR. MELLINO: We've already gone over this three times. He said that --

Q. (BY MR. JACKSON) Well, is that correct or not? Yes or no?

MR. MELLINO: He's already said that Kursh was negligent in failing to recognize this as a complication in Mr. Kubach and he failed to intubate him.

MR. JACKSON: That's what I'm asking him.

MR. MELLINO: You didn't ask him that. You asked him if it was a failure to intubate. We've gone over this three times and you've asked him if it was failure to intubate and he came back and told you that it was these two things.

Q. (BY MR. JACKSON) Doctor, you -- what evidence do you have that Dr. Kursh was not aware of the hyperammonemia?

MR. MELLINO: In Mr. Kubach, you're talking about?

MR. JACKSON: Well, what else would I be talking about, Chris. Where do you think I'd be talking about that, other than in this case with Mr. Kubach? Help me with that.

MR. MELLINO: Because you already -- when he told you that he was not aware of it, you said that he said he was aware of it in his deposition.

MR. JACKSON: The doctor said that.

THE WITNESS: I didn't say that.

MR. MELLINO: Yes, well, there's a different between being aware of the complication of hyperammonemia and recognizing it in the patient that he treated.

A. You see, the question is -- I don't know -- let's -- let's --

Q. (BY MR. JACKSON) Here's my question to you, Doctor. Okay? Do you have any evidence from anything you have reviewed in this case that Dr. Kursh was not aware of the complication of hyperammonemia in Mr. Kubach?

A. Yes.

Q. What?

A. Absolutely.

Q. What is that?

A. Total, in no way, in the medical chart, I saw a progress note by either Dr. Nearman, Dr. Angell or Dr. Kursh in which hyperammonemia was entertained as a possible diagnosis for the

respiratory complication --

Q. Okay.

A. -- for the mental obtundation. The only thing I remember seeing was in Dr. Kursh deposition, when he was asking by doctor -- Mr. Kampinski about that, he said, "Yes, I recognize this as a potential complication." They are two different things. I can recognize bleeding after a chest injury as a complication, but I maybe have seen somebody with a chest injury and not recognize the patient is bleeding. What I'm trying to tell you, sir, that from the record I reviewed, I have no indications that Dr. Kursh was aware that this patient was having neurologic problems secondary to hyperammonemia.

Q. And you base that upon the fact that Dr. Kursh nor Dr. Nearman made a specific note in the chart addressing the fact of that awareness of hyperammonemia; correct?

A. Yes, sir. That's the only way we doctors know what we think about the patient is to put it in the chart. Whatever is in our head is no good.

Q. Okay. Now, as it relates, then, to Drs. Kursh and Nearman, so that I'm very clear in my mind, your belief that they were not aware of

hyperammonemia in Mr. Kubach is based upon the fact that they did not write a note in the chart to that effect?

A. No, sir. I think that we'll change it. That, among other things.

Q. What else, Doctor, in addition to that,, what else?

A. The fact is that these people are at all appalled that the patient is not getting better. That is a decreased mental -- decreasing responsive and I don't see any order here that will indicate to me that, yes, indeed, these persons are aware of the complication and are doing something to prevent that.

Q. Now, Doctor, you have described for us what the nurse's assessment of the patient was. From the record, as far as Dr. Nearman and Dr. Kursh is concerned -- let me talk specifically about Dr. Kursh. You know that at 6:00, he was there and looked at the patient; correct?

A. He was 6:00 and he was also before that.

Q. Okay.

A. Okay.

Q. Do you recall what he said about the patient's condition when he observed the patient at

6:00 from his deposition?

A. No, 1 don't.

Q. Okay. Now, at 6:00, when we have the note from the nurse that there was a decreased mental status, at what point in time after that was Dr. Nearman made aware of this decreased mental status as assessed by the nurse, from your understanding?

A. It's there, sir. Doctor -- 18 -- 18 hours, Dr. Kursh -- are you talking about Nearman? You change now?

Q. I changed to Dr. Nearman.

A. Okay. Wait a minute. Wait a minute. Dr. Nearman discontinues the hypertonic saline when the patient arrive, was around --

Q. Now, we're talking back in the morning, aren't we, Doctor?

A. No, 12:45, just onto --

Q. Late -- early morning. Early afternoon. Excuse me. I'm talking about 6:00, after 6:00 when the nurse made this notation that she assessed him as having a decreased response?

A. I don't see Dr. Nearman here. I don't know when -- I don't know when he become aware.

Q. Upon what, then, do you base your opinion

that Dr. Nearman was negligent because he did not respond to this patient getting worse or having a decreased response?

A. Well, I assume that Dr. Nearman make rounds, according to his deposition, he makes rounds several times in the patients. That's what he said in his deposition.

Q. Okay.

A. The fact it is not reflected here, I don't have an explanation for that, but many times, what happen is in the ICU, at least where I practice, the nurse will only put the name of the physician who is not the staff in the ICU. In other words, the staff in the ICU is assumed to be around all the times, but if the surgeon come or the neurology, the people will put, saw, saw.

Q. So your understanding or your criticism of Dr. Nearman is based upon your understanding that he would have made rounds after 6:00 and would have --

A. Well, that's what he said in his deposition, sir.

Q. Okay.

A. It's not my understanding. That's what he acknowledge, that he saw Mr. Kubach, I think it's

several times that day.

Q. Okay. Now, well, I want to be clear of that, though, Doctor. That's one of the facts that you used to criticize Dr. Nearman, then, that he was aware of this after 6:00; is that correct?

MR. MELLINO: Well, I don't want you to be confusing --

MR. JACKSON: Don't interrupt the doctor. Is that correct?

MR. MELLINO: Objection. I --

MR. JACKSON: Don't -- now, you objected and made your objection, so don't make a speech.

Q. (BY MR. JACKSON) Is that correct?

MR. MELLINO: I'm not going to make a speech. You're trying to limit his testimony till after 6:00. He's already testified --

MR. JACKSON: I'm not limit --

MR. MELLINO: He's already testified in response to your question --

Q. (BY MR. JACKSON) Is it your opinion in rendering an opinion of Dr. Nearman that he was aware after 6:00 of the decreased response in this patient? Is that your -- is that part of your basis or not?

MR. MELLINO: No.

A. No.

Q. (BY MR. JACKSON) Well, then, explain why it is not.

A. Okay. What I said to you is that this is an ongoing process, that Dr. Nearman is the director of the ICU, that according to his testimony, he made rounds, that we cannot pinpoint at what time he saw the patient, but, of course, if Dr. Kursh is aware of that decreased mental status --

Q. At 6:00?

A. -- at 6:00, Dr. Nearman probably was also aware, too.

Q. Okay. And it is that fact which you use to feel or to render the opinion that Dr. Nearman failed to appreciate and properly treat this hyperammonemia; correct?

A. Yes. But in addition to all the other things.

Q. What are the other things you use against Dr. Nearman?

A. The other things, what happened during the near night when the patient arrested.

Q. Okay.

A. The patient was left alone, this guy who is

not doing well, with a supervision of the guy who is out of the medical school just two months. Nobody else is there, except doctor -- what is the name, Jayanthi was his name?

Q. Jayanthi?

A. Jayanthi. I don't see Nearman there. I don't see Kursh there. I don't see even Angell there. I see a nurse and a guy who is two months out of medical school.

Q. Okay. So --

A. I'm sorry. Yeah, two months of medical school.

Q. That's what I'm trying to understand. As far as Dr. Nearman is concerned, then, it's the things that he did or didn't do from 6:00 later into the evening; is that correct?

MR. MELLINO: Objection. He's already testified it was 4:00 -- it was at 4:00.

MR. JACKSON: That's not what he said.

Q. (BY MR. JACKSON) Is that correct, Doctor?

A Before 6:00, too.

Q Well, that --

A He was aware of the patient, John, and let's be sure that you understand what I said. He was

aware of the patient. He discontinued -- in other words, he takes an active role in this patient. He discontinues the hypertonic saline. Later on he restarted, or somebody else restarted. I think it's Dr. Kursh. But he knows -- he's aware of the patient, by his own admission. He makes rounds on the patient. And it is one patient that if I recall correctly, that day, the ICU was not very busy. That's one of the things that the nurses point out. Means, I don't believe there were too many sick people like Mr. Kubach, and if he's the director of the ICU, I think he's -- was his responsibility to be sure that somebody with seniority was aware of what happened during the night.

Q. Doctor, let me go back, because when I asked you to point out for me the evidence that you found from the chart that this man was not getting better or was, in fact, getting worse, you went through the notes and pinpointed a note at approximately 6:00 indicating that there was a decreased response. Am I correct?

A. Yes. Can I have the chart? Do you have the chart, please, where the progress note down by the doctors? Could you give me that? I want to see

something.

Q. Well, let me ask you a question while he's looking for that.

A. Yeah.

Q. Prior to that time in the notes, there is nothing that indicates that this man is getting worse or is not getting better. Am I correct?

A. Before I do that, I going to review the notes.

Q. Okay. But in terms of the ICU chart that you reviewed, there's nothing before 6:00 upon which you -- you base your comment --

A. No, that's not true, John.

Q. What is there?

A. The guy is not -- the guy is admitted, okay, and the guy is not progressing well. The guy continues to be obtunded, dilated pupils, sluggish response. I don't see in any way that we are making progress from the admission at 12:05 to 6:00, and the sodium is getting better. That, to me, indicates that this is not the normal response that somebody has with hyponatremia. Something else is going on. That's what I'm trying to convey to you from the beginning.

Q. What are the doctors seeing during that

period of time?

A. Which doctors?

Q. Any of the doctors that you're criticizing.

A. You have Dr. Kursh and Dr. Angell were there and Dr. Nearman were there at different times.

Q. Okay. What were Dr. Kursh's observations during that period of time, his clinical observations of the patient?

A. No. As you said better, he didn't make it, you know. The nurses put the observation. I'm just trying to find out if he have any progress note down during that time and I --

Q. Let me *go* back. In there, what were Dr. Nearman's observations of the patient during that time?

A. Dr. Nearman give an order to discontinue the hypertonic saline when the patient arrive.

Q. What were his clinical observations of the patient?

A. Doesn't say anything here. I don't think he put clinical observations in the patient notes. The clinical observations are entered as an independent note by the physician in the chart. That's what I'm trying to find out. Okay.

When the patient is arrived to the

ICU at 14 hours is a progress note, okay, who --

Q. What time was that?

A. 4:00 -- 1400.

Q. 2:00?

A. 2:00. And said, "Underwent TURP," you know. The sodium is 102. Started in hypertonic saline, and assessment is somnolent and combative. Okay. Suggests -- suggested, I said, discontinue hypertonic saline, hydrate with normal saline, Lasix and, very interesting, follow with ammonia level also.

Means at 2:00 that day, we have somebody who -- and I'll basically Dr. Angell --

MR. MELLINO: That's DiCiccio, I think.

THE WITNESS: DiCiccio. But this is Kursh. Right?

MR. MELLINO: Uh-huh.

A. Means these people already at that time, at 2:00, knew about the problem, knew that was a potential problem.

Q. (BY MR. JACKSON) Okay.

A. And it is unfortunately but I don't see no progress note until 8-29-87, there's a chief resident inhouse note, and this, I think, is at the

time that the patient has the respiratory arrest.

Q. Now, from the time he was admitted to the SICU until that time, what notes would you have expected to see in the chart?

A. Oh, at least two or three progress note.

Q. From whom?

A. I -- from Dr. Nearman, from the surgical ICU resident, from Dr. Angell when he saw the patient. The patient is not -- is -- let us assume he's not getting worse. He's not getting better, and I don't see the reflection in the progress note why he's not. And, again, I don't see in any of these progress note either by Dr. Kursh, by Dr. Angell or by Dr. Nearman the hyperammonemia was playing a role in this problem. Even so, that these people said, follow ammonia levels.

Q. Doctor, I'm confused as to what point in time you say Mr. Kubach should have been intubated. Can you tell me?

A. Well, see, that is irrelevant, but let's put it -- you want a time?

Q. I do.

A. Okay. I would intubated around 4:00.

Q. Okay. Why?

A. Because in my -- why? Because I know what

I'm doing, because I know that this guy is having problems. I know that the ammonia level is up. I going to prevent the problem. That's why.

Q. So you would intubate him at 4:00 simply because of a hyperammonemia?

A. Oh, absolutely, sir.

Q. In the absence of any other indications you would -- you would intubate this man because he has a high ammonia level?

A. Well, that's not a correct question. You asked me about Mr. Kubach. Let's don't change it. Hyperammonemia as a whole, no. But Mr. Kubach with hyperammonemia and not getting better and mental obtundation, yes.

Q. And all of these opinions are based upon materials that you gleaned from the chart, the medical chart, and from the depositions which you've read; is that correct?

A. No, these are opinions based on my research and my extensive practice.

Q. But as --

A. You asked me what I will do.

Q. But as far as this patient is concerned, you certainly have had no contact with this patient, so you are relying upon the facts that are set forth

in the chart and in the depositions of these various people that you reviewed; correct?

A. Yes, sir.

Q. Now, how quickly, Doctor -- what's the rate of ammonia metabolism in a man like Mr. Kubach?

A. I cannot tell you that. All depend of the liver and all depend of the diuresis, but I would think, in reviewing the literature, what I see, in 24 hours, he should be okay.

Q. Okay. 24 hours from what point in time?

A. From that -- you know, I would say, you know, by the next day, noontime, he should be back to normal or with the levels which he will not sustain any problem, because he went from 94 to 300 something at midnight; right? Yes. Okay. Yes. 93 ammonia, and he ha5 343.

Q. At what time?

A. Will be -- this will be the time?

MR. MELLINO: Uh-huh.

A. 12:45, midnight.

Q. (BY MR. JACKSON) Okay.

A. Means he is peaking or, you know, but there was -- and that's most likely correlate at the time that --

MR. MELLINO: I think that's at 12:45

in the afternoon.

A. In the afternoon. 12:45 in the afternoon. At 10:50 is -- at the time, you know, he's -- the 340. You know, he's having at 10:50 in the morning, right after surgery, is 93. And at noontime is 343. He doesn't have any other ammonia levels, but you can predict that his continues to rise.

Q. Was your understanding that that 300 was at 12:45 midnight?

A. No. No, no, no. It was not. I'm sorry.

Q. How fast would that be metabolized?

A. Again, all depend. I am not an expert in ammonia metabolism, myself, but I think I can looking into the literature with similar levels and similar type of elderly people, that according what I gather and in my experience with other patients, in about 24 hours.

Q. Okay. How would the hyperammonemia, if it was causing a problem, manifest itself physically in a patient like Mr. Kubach?

A. With respiratory depression,

Q. Any other manifestation?

A. Nausea, vomiting.

Q. Now, what was your understanding of

Mr. Kubach's mental status upon admission to the hospital?

A. That he was not -- that he has some problem that, as I said, he has question of senile dementia, yeah. That he -- but according, I think, to the wife, he was able to communicate, you know, was not ready to play chess, I'm sure, but --

Q. Did you read the wife's deposition, also?

A. No.

Q. Where did you get the understanding that you just stated?

A. Through communication with the lawyers.

Q. What other facts were you communicating to -- from the lawyers as to things you relied upon in making your opinions?

A. Only that.

Q. What, in your opinion, was Mr. Kubach's ammonia level at the time of his arrest?

A. I don't have any idea. I can only predict by the kinetics that probably either equal to 343 or higher.

Q. Why do you say that?

A. Because that's, you know, most likely. If the patient's ammonia were getting better, unlikely he will have more respiratory depression. The fact

that he continues to have respiratory depression and finally arrested will suggest to me that his level was peaking, was still the same.

Q. So you believe it was either the same or going higher at the time of his arrest?

A. Probably so, yes.

Q. Doctor, as a general proposition in medicine, a bad outcome is not in and of itself equal to negligence, is it?

A. You are correct.

Q. We've used the term "standard of care" here. What do you understand that term to mean, that phrase?

A. Standard of care means the standard that other similar physicians in the community or national will render under the similar circumstances.

Q. The opinions that you hold here, you have indicated that you believe that Mr. Kubach's death was a result of the failure to intubate him; is that correct?

A. Again, it's a failure to recognize and manage proper the complication, which include, among other things, early intubation, yes.

Q. What other management of the patient would

there have been, in your opinion?

A. Well, you have to ensure the proper diuresis, because one of the things that you need to be sure that the patient is peeing well to get rid of the ammonia.

Q. Do you have any indication here that he was not --

A. No, he was peeing adequate.

Q. Okay. So his intakes and outputs were adequate, were they not?

A. That means, he was able to get rid through diuresis and the renal function was improving. I have no indication that he would not be -- I have no indication that he would not be able to get rid of the ammonia given the fact that he will be intubated and given time to get rid of that.

Q. So, other than the intubation itself, is there anything that you believe these doctors failed to do which was a cause of this man's demise and arrest and ultimate demise?

A. This guy didn't follow the patient.

Q. Who?

A. He didn't --

Q. None of them?

A. No, I don't think so.

Q. Okay.

A. It's not reflected. Let me put it this way. It's not reflected in the chart that during the period of the time that the patient was in the surgical ICU, except for the initial progress note, and even when the patient's not getting better, or worse, I don't see any early -- I don't see an active intervention from either Dr. Kursh, Nearman, Angell, about the care.

Q. Doctor, had this man been intubated and mechanically ventilated, do you believe he would have had an arrest and ultimately died?

A. Absolutely no.

Q. Okay. So, therefore, you believe that the failure to intubate him is what was the proximate cause of his arrest and demise? Is that correct?

A. In my opinion, yes.

Q. Okay. Do you hold these opinions to a reasonable degree of medical certainty or probability?

A. I do.

Q. And explain your understanding of that phrase to me, reasonable degree of medical certainty or probability.

A. Well, basically, I think you are referring

to probably what would happen if we take a hundred patients under the similar conditions, that if you do intubate the patient, if you don't, and I think if you intubate these patients, you will have a significant number of patients not having a bad outcome, where if you have no intubation, a significant number of patients will have bad outcome.

Q. What is a significant number to you, medically?

A. Well, statistically or biology?

Q. Statistically.

A. Less than .05. That will be, but, you see, that doesn't mean anything, because you have to have a significant number. It depend on the number -- in other words, Mr. Kubach, one is a hundred percent. I mean, he is significant, but you cannot write a paper and say that this is a problem because you need a significant number of observations to make a validity from this statistical standpoint.

Q. Okay. You're talking about standard deviations and things of that nature statistically?

A. No, I'm talking about -- no, the standard

deviation relate to the number of the sample. I'm talking about that you have to have -- the larger the sample, the more significant your observation will be,

Q. Okay.

A. The more powerful.

Q. I want to know your understanding of reasonable degree of medical certainty or probability. What does that mean?

A. Well, that's what I'm trying to tell you. I don't know --

Q. What does it mean in terms of probabilities, as you understand it?

A. More than 50 percent, I think.

Q. All right. Doctor, what is your fee arrangement for reviewing matters of this type?

A. I charge $400 an hour.

Q. Is that for review and deposition time?

A. No. I charge $4,000 for a deposition, and if I need to be -- go for --

Q. Court appearance?

A. -- court, I charge from the moment I leave my house until I come back.

Q. At what rate?

A. $400.

Q. How long did you meet with Mr. Mellino before your deposition this morning?

A. Maybe 45 minutes, 30 minutes. I don't know.

Q. That was your preparation time for the deposition, 45 minutes?

A. With him?

Q. Yes.

A. Yeah.

Q. Did you prepare additionally to that?

A. I said, yes, I looked just yesterday at things.

Q. How long did you review it yesterday?

A. Three, four hours, I think.

Q. These are the materials that you discussed that you did not bring with you today? You reviewed those, your file materials?

A. I review the articles and other things, yes, and the file.

Q. Do your fees go to the university or do they go to you?

A. No, I -- go to my corporation.

Q. Your corporation?

A. I don't -- you know, I'm -- we -- I don't have salary from university. Whatever I generate

is what I keep.

Q. How long have you been reviewing matters on a -- for medical malpractice cases?

A. It's funny. I just only began after I publish all these articles in hyponatremia. Three or four years, maybe.

Q. How many cases have you reviewed?

A. Well, I cannot tell you, but many.

Q. On the average, can you tell me what you -- how many cases you review in a year?

A. Four, five.

Q. You said you had a number of cases pending earlier. How many cases do you presently have pending?

A. I don't understand that question. What do you mean case --

Q. Earlier you made reference to the fact that you had a number of reviews pending, files that you were reviewing pending. How many do you presently have pending where you are reviewing them or you are writing reports or depositions or --

A. Oh, okay. Okay. I see. You talking about other cases?

Q. Other than this one.

A. Yes. Okay. I don't know. Seven, eight.

Q. Are the cases for plaintiffs or defendants?

A. I would said -- you know, but I need to go, that probably majority are for defendants.

Q. Can you -- can you give me percentages on that?

A. Maybe 60-40.

Q. How many times have you been deposed before?

A. Ten. I don't know. I just --

Q. Have you ever been -- have you ever given live testimony in court?

A. No.

Q. Okay. These cases which you have presently pending, the seven or eight, from what states other than Ohio, which is this case, are they?

A, I think it's California, Texas, Alabama, Florida. I don't know if it's -- I don't know if it's other cases from Illinois or New York. I just don't know.

Q. Have you reviewed, other than the states that you've just told me about, the cases that are pending, have you reviewed cases from other states, other than these six?

A. Maybe, but I don't recall. Let me put it -- I would say I get maybe one or two calls a month in

the phone for me to render an opinion if -- and the majority, I would say, 90 percent of these cases, I just don't take it.

Q. What percentage of your income is generated from your involvement in medical malpractice matters?

A. I don't know about that.

Q. Okay. Do you have any estimate?

A. No.

Q. How about last year?

A. I don't know.

Q. Would you have records that would reflect that?

A. No. Because all goes to pay to the, you know, to the corporation. I don't -- you know, just --

Q. Who -- how many other people are involved in the corporation, other than yourself?

A. Is only one, me.

Q. You are the corporation?

A. I am.

Q. Okay. And when you give that to the corporation, I assume that the corporate records would reflect that it relates to testimony on a medical malpractice?

A. No. Doesn't.

Q. It does not? What it does it reflect in the record?

A. Says, just payment. Just goes --

Q. Have you ever reviewed a case for Mr. Kampinski before?

A. No, never.

Q. Are you a member of any organizations or groups which review medical malpractice cases, provide experts for medical malpractice?

A. I was asked -- I think it's a -- let me see. It's an association in Chicago, called Trial Defendants' Lawyers, the Defense Doctors. I just want to be sure that that's -- I don't know -- that called me one day and said that if I willing to review cases for doctors? I said, yes, but never get any cases.

Q. You've never gotten any cases?

A. No.

Q. Other than that, are you a member of any organizations or groups which review malpractice cases?

A. No.

Q. Where do you -- what's the source of your referrals in these matters, Doctor? Where do you

get these cases?

A. Through the phone.

Q. Who are they? From groups, from attorneys, from --

A. People who know me, through my research.

Q. Have you ever been sued in malpractice?

A. No.

Q. At what point in time during the course of Mr. Kubach's treatment do you believe that he was salvageable, that some intervention would have prevented the arrest and saved his life?

A. Up to the point of respiratory arrest.

Q. Which was what time?

A. Midnight, I believe.

Q. Pardon me?

A. Midnight, I believe.

Q. Do you have any opinion as to whether or not Mr. Kubach, had he survived, would have had a normal or otherwise life expectancy?

A. Well, I think it probably will go back to his same status, to what which he was before.

Q. What do you believe his life expectancy was when he entered the hospital in terms of his overall condition?

A. Well, you know, you can go by several ways.

One will be by life actuarial analysis, and I think he probably will have eight to nine years more.

Q. Eight to nine years?

A. Yes. That going for life expectancy, you see, tables.

Q. Is that -- is that Mr. Kubach or is that a normal life expectancy for a man of his age?

A. I think it's done for in the -- in the general population.

Q. That's actuarially?

A. Yeah. Actuarially, yes.

Q. Now, as it relates to Mr. Kubach, are you going to render any opinions or do you have an opinion about whether he had a normal life expectancy or otherwise?

A. No, I will not render an opinion.

Q. Let's take a moment here.

(Discussion off the record.)

Q. (BY MR. JACKSON) Oh, Doctor, I'm going to request that the materials that you reviewed -- you said you had a flow sheet or some such thing -- I'm going to ask for a copy of that, that it be produced, because you didn't bring your records

here today.

MR. MELLINO: Well, he's not under any obligation to produce anything for you.

MR. JACKSON: I'm going to request that he do that. He said he would be willing to do it. I'll ask him to do it.

MR. MELLINO: He's not going to -- if you want to request something, you can request it through it us.

MR. JACKSON: I'm asking right now. You don't represent the doctor, so we can deal with the Court if you refuse, because you don't have a right to refuse.

MR. MELLINO: Well, you don't have a right to ask him for anything.

MR. JACKSON: I have a right to see what materials he reviewed, and that's what I've asked for. I'd like to see the materials that you reviewed, Doctor.

MR. MELLINO: Well, you can't ask him to produce anything. No, he's not under any obligation to produce anything for you.

MR. JACKSON: We can deal with the Court on that. He's apparently willing to do it.

MR. MELLINO: Well, he's not

willing.

Q. (BY MR. JACKSON) You're willing to do that, Doctor? This man doesn't represent you. I want you to understand that.

A. I know that.

Q. Okay.

A. I am -- let me go back and look, if I have it --

Q. All right. Let's do it this way, Doctor. You expressed a willingness to do that. You can -- I can do that through plaintiff's attorney, but I want to see the documents that you reviewed, not the entire medical chart, but I want to see what you reviewed by way of these flow sheets and what you called ancillary or additional materials and I'm requesting you to provide those to Mr. Kampinski. I'm sure he's got those already and there's some correspondence which would reflect what was sent to you, and I would also request a copy of your records which would show the dates upon which you rendered services for this case and the time involved in that, and I assume that would be part of your file, also, would it not?

A. I will assume.

Q. Okay.

(Short recess.)

Q. (BY MR. JACKSON) Doctor, a couple of quick questions and I'll be done. You made a mention earlier that you were -- at least I thought you said you were putting something into a textbook as it relates to increased ammonia or hyperammonemia?

A. (Witness indicated by nodding head.)

Q. Can you tell me more about that?

A. (Witness indicated by shaking head.)

Q. You have to say yes or no to both of those questions.

A. No, it's a -- we are writing a book chapter, but it's in the progress.

Q. We being?

A. Somebody else.

Q. Who's somebody?

A. Which I'm planning to choose. It's going to be one of my fellows.

Q. Okay. You don't -- you don't have a co-author right now?

A. No, I don't.

Q. It's in the process of being written? Are there drafts of this or --

A. It is an idea. I was asking to do that.

Q. Okay. And whom will this -- for whom will this be done?

A. For textbooks on nephrology.

Q. Okay. It is something that is not presently in publication at this time?

A. No, it's not.

Q. Whose textbook are we referring to?

A. It's going to be Suki and Masry, TEXTBOOK OF NEPHROLOGY.

Q. I believe you also made a comment earlier that you had done a study which was never published as it relates to glycine.

A. Yes.

Q. When was that done and is that available? Is it --

A. No, it's not. Actually, I wish it were. It was done several years ago when I was the chief of renal service at Ben Taub. We did it with the idea of see what were the -- how patients with obstructive uropathy handled significant water loading, and we did it with surgical resident -- no, urology resident who decide to be in private practice and I never got around to publish the thing.

Q. Did you record that -- the data that you -- did you record the data from that study? Did you maintain that information?

A. Probably, but I don't know where it is.

Q. Okay.

A. Oh, I do, but I -- I do -- I record it, but I don't know where it is.

MR. JACKSON: I have no further questions at this time but I'll reserve my right to ask additional questions when we get these materials, which we assumed would be here today.

MR. MELLINO: Which you already asked for. That was one of the formalities we were waiving at the beginning.

MR. JACKSON: I'm not sure I've ever been to an expert's depo where they didn't bring their file with them, Chris.

EXAMINATION

QUESTIONS BY MR. IRWIN;

Q. Doctor, my name is John Irwin. I have a couple of questions for you. Do you believe that Mr. Kubach had central pontine myelinolysis?

A. No, sir, I don't.

Q. What do you believe was the mechanism of his

respiratory arrest? Perhaps you could describe it for me.

A. The mechanism that I believe is that ammonia produce respiratory depression, per se. If you take an animal model and you infuse with ammonia, the natural death of this animal is respiratory, stop breathing. Apparently ammonia produce selective respiratory depression, and that's what I think is the mechanism of this complication that occurred not only -- it's interesting -- not only in this patient with this condition, but, as I mentioned before, there's a recent article on the "Green Journal" about total different problem, was a patient undergoing chemotherapy which produced an increase in ammonia, and the most side effect complication of that was respiratory depression.

Q. Would this have been characterized by a progressive change in respiratory pattern or respiratory efforts or would this have been a sudden, instant change?

A. Usually, his -- the patient began to have, you know, obtundation, more labored respiration and basically stop breathing. But as I mentioned before, sometime it's very, very difficult to characterize this respiratory changes unless you

are seeing the oxygenation and the blood gases serially.

Q. Looking at what you've looked at in this case, can you tell me whether, from the records and the depositions you've reviewed, this patient had a progressive change in his respiratory pattern or a sudden cessation of breathing, putting everything you know together about this case?

A. I think he got into some kind of problems later that night, who alert one of the nurses to call somebody. I think -- to call the resident that was on call to evaluate the patient, and he didn't make any changes, and I also -- the patient became hypertensive. The blood pressure went up. That's an indirect sign of CO2 retention.

Q. All right. Anything else --

A. Not that I --

Q. -- that come5 to your mind?

A. I don't recall.

Q. I understand the blood pressure. What are the other changes that you mentioned?

A. I think the respiration become more labored, I think.

Q. All right.

MR. MELLINO: You can read the note

if you --

Q. (BY MR. IRWIN) What do you mean by that?

A. Well --

Q. Describe that for me.

A. That, okay, that the respiratory rate, okay, became more, you know, the depth of the respiration became deeper, you know. You can -- and you slow the respiration, means the respiratory rate that in this guy probably was at 40 at one time, when he was hyperventilating, decreased to 15, while if you couple that with an increase in C02, with an increase in blood pressure, that could be the clue that this guy has begun to retain C02, because C02 is, you know, one of the --

Q. And that would be a prelude to --

A. To the impending respiratory arrest.

Q. To the respiratory --

A. Yes.

Q. So you would expect a deeper breathing pattern, a slower breathing pattern, an increase in the blood pressure?

A. That, or -- but I saw patients, interesting, some of the papers that we published in the "New England," where -- that was actually females with hyponatremia that were awake and talkative in the

room and the patient has an explosive onset of respiratory arrest. Means, I think, there's a misconception that many people have, that you really need to have all this constellation. You can have it, but if you don't have it, that doesn't mean that you will not see this syndrome.

Q. All right. But in this case, from what you know of Mr. Kubach's situation and the blood pressure having gone up and the labored respirations that you've described, you believe that he had a progressive --

A. Yeah.

Q. -- labored pattern of breathing?

A. That was worsening, yes.

Q. Leading ultimately to his respiratory arrest? Do you have any reason to believe that his respiratory arrest was preceded by a seizure, in your thinking?

A. Well, the only thing I see is, I think, and maybe I -- you can point me down, about 18 hours, at 6:00, is a question mark of a seizure activity.

Q. Yes.

A. But I don't recall seeing on -- the respiratory arrest -- can I have the thing back --

Q. You want that?

A. Yes. Let me see.

MR. MELLINO: That's the same thing as this.

A. You see, here he said, respiration laborous, Kusmaul, and Kusmaul syndrome was described, not for this, but was described in patients with diabetic acidosis. And it's a type of respiration that would indicate deep respiration, but we can see it in any type, okay, of metabolic problem and --

Q. (BY MR. IRWIN) What I'm asking is whether in the scheme of the mechanism of this --

A. See, here he continues to say, deep and labored respirations, right there. It's what I'm trying to point out to you.

Q. All right. All right.

A. And at -- now, at 2:00 -- 10:30, he got a respiratory arrest. That's 2230; right?

Q. Yes.

A. And that's, according to this note, I don't see any evidence that the patient has a seizure activity before that. I don't see it.

Q. My question is, Doctor, in your understanding of this sequence, this mechanism of events, is a seizure normally a part of this

sequence of events?

A. No, sir. No -- let me tell you. No on hyperammonemia. In hyperammonemia, it's a more progressive, deepening, chronic, if you want, problem.

Q. A slow, downhill course over a period of several hours?

A. Right. While in hyponatremia, however, acute, what we describe, other people describe, especially young female, it's abrupt onset of sometime seizure followed by respiratory arrest, sometime respiratory arrest alone, but I don't recall seizure be part of common seen in this syndrome. It's more a gradual thing.

Q. So I guess it's fair for me to say that, to assume from what you've told me, that we're really dealing with hyperammonemia, and that syndrome you would expect a slow, progressive respiratory distress and then a respiratory arrest?

A. That's right.

Q. Okay. Several times during your testimony earlier, you gentlemen were referring to the time at which Dr. Kursh was at the bedside, and I believe you made it at 1800, 6:00. Take a look at that note, Doctor. It looks to me like it was 1855

or 6:55.

A. Well, I don't know. I thought that was two zeros.

Q. Read the next entry. What -- take a look at that whole thing.

A. "18, Dr. Kursh here, aware of the decreased mental status, question, seizure activity."

Q. All right. I see that entry as being 1800 and then followed by 1855.

A. Well --

Q. You -- okay.

A. I have no way of --

Q. Let me just step around, if I may, if I may approach your witness. This entry, "1800, turned, skin remains moist, eyes elevated up to the right, decreased responsive, increased tremors of head, upper extremities, KCL replacement, per Dr. Nearman, 3 percent normal saline off, ask Hemminger's signature." The next entry is either 1800 or 1855 or what --

A. I don't know.

Q. You don't know. All right,

A. Okay. I thought it was 1800. I'm sorry, but you could be right. I don't know.

Q. All right. Fine. Thank you, Doctor.

That's all I have.

EXAMINATION

QUESTIONS BY MR. JACKSON:

Q. Doctor, if, in fact, that is 1855 rather than 1800, our references earlier to -- to 6:00 would be 6:55; correct?

A. Yeah.

MR. JACKSON: Okay. Thank you. I don't have any -- will you waive your signature to this, Doctor?

THE WITNESS: I like to see -- I like to review it, but is okay.

MR. JACKSON: That's your decision.

THE WITNESS: You want me to review it?

MR. MELLINO: Why don't you read it if you'd like to?

THE WITNESS: Yes, I'd like to read it.

(Whereupon the deposition was concluded at approximately 1:45 p.m.)

I have read the foregoing testimony given by me on the date and time indicated thereon and have made all corrections deemed necessary.

JUAN CARLOS AYUS, M.D.

Subscribed and sworn to before me, on this, the day of , 1909.

.....

Notary Public in and for

THE STATE OF TEXAS:

COUNTY OF HARRIS:

I, Peggy Ann Antone, Certified Shorthand Reporter in and for the State of Texas, do hereby certify that the facts stated by me in the caption hereto are true; that the foregoing deposition of JUAN CARLOS AYUS, M.B., the witness hereinbefore named, was taken by me in stenograph shorthand, the said witness having been by me first duly cautioned and sworn under oath to tell the truth, the whole truth and nothing but the truth, and later transcribed from stenograph shorthand to typewritten form by me.

I further certify that the above and foregoing deposition, as set forth in typewriting, is a full, true and correct transcript of the proceedings had at the time of taking said deposition.

I further certify that I am neither attorney or counsel for, nor related to or employed by any of the parties to the action in which this deposition is taken, and further that I am not a relative or employee of any attorney or counsel employed by the parties hereto, or financially

interested in the action.

I further certify that charges for the preparation of the foregoing completed deposition were $ _____ for the original thereof, charged to Attorney(s) for _____.

GIVEN under my hand and seal of office on this, the 13th day of July, 1989.

.....

Peggy Ann Antone, R.P.R.
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