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#587

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Aug. 20, 1992

Re: Michael Sparr, et al vs. Samaritan Hospital, et al

Dear Mr. Mellino

Enclosed please find the original deposition of Dr. Stuart Edelberg taken in the above-entitled matter on Aug. 10, 1992. Should he desire to make corrections, please have him do so on the attached errata sheet rather than to mark up the original deposition.

A signature line is provided at the bottom of the certificate page. Please have him sign and date the errata sheet and return the deposition transcript with the errata sheet enclosed, to this office.

In order tea comply with Maryland Rules of Procedure, the transcript must be read, signed and returned to this office within thirty (30) days from receipt of this letter.

Very truly yours,

Richmon C. Gore

#587

IN THE CIRCUIT COURT FOR COMMON PLEAS
ASHLAND COUNTY, OHIO

MICHAEL SPARR, ETC.

CN: 34518

vs.

JUDGE HENDERSON

SAMARITAN HOSPITAL, et al.

_____/

Pursuant to Notice, the deposition of DR. STUART EDELBERG was held on Monday, August 10, 1992, commencing at 4:45 p.m. at the BWI Marriott, 1743 Nursery Road, Baltimore, Maryland, 21090, before Ronda Hayes, Notary Public.

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APPEARANCES:

CHRISTOPHER M. MELLINO, ESQUIRE,
On behalf of Plaintiff

K. RICHARD AUGHENBAUGH, ESQUIRE,
On behalf of Defendant (Via Telephone)

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Reported by:
Ronda Hayes

STIPULATIONS

It is stipulated and agreed by and between Counsel for the respective parties that the filing of this deposition with the Clerk of Court is hereby waived.

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DR. STUART EDELBERG,

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

MR. MELLINO: One is that Jerry Kaler was given notice of the deposition and because of his familiarity with Dr. Edelberg he said he has a pretty good feel for what he is going to testify to and he elected not to come to the deposition. And Chuck just wanted me to make sure that by doing the telephone deposition you were waiving any right you had to take Dr. Edelberg's deposition in person.

MR. AUGHENBAUGH: I am waiving that right. You are talking about discovery purposes.

MR. MELLINO: Yes.

MR. AUGHENBAUGH: And I do not expect to anticipate any other deposition with Dr. Edelberg unless he changes his opinion.

EXAMINATION BY MR. AUGHENBAUGH:

Q. Doctor, I can't see you and I appreciate you accommodating me. I wonder for the record if you would state your full name?

A. Stuart Charles Edelberg, E-D-E-L-B-E-R-G, S-T-U-A-R-T.

Q. Do you have a C.V. somewhere?

A. Yes, I do.

Q. I wonder if you would mind giving it to Mr. Mellino so he would give it to me?

A. That has just been done.

Q. I don't expect to go over the things that are in your CV provided, Chris, you can supply me with a copy would that be all right.

MR. MELLINO: Sure.

Q. Doctor, I assume you have hospital privileges somewhere?

A. Yes, I do.

Q. In more than one institution?

A. For hospitals, I only have privileges in one institution, that is Sinai of Baltimore.

Q. Sinai of Baltimore?

A. That's correct.

Q. How large a hospital is that, sir?

A. That's four hundred plus beds.

Q. Is that a level one, two or three institution?

A. Well, it's a tertiary care center. We're dropping the level, now. It would be considered level three by the old definition in terms of obstetrics and gynecology.

Q. Relatively sophisticated?

A. Yes, sir.

Q. And under the old definition you would be a level three at Sinai?

A. Correct.

Q. And do you function over at Sinai Hospital other than as admitting physician or staff physician?

A. I am head of the residency head of resident

education in obstetrics and gynecology.

Q. And you have occupied that for how long, please?

A. Two and half years, now.

Q. I can't see you, I have no idea how old you are. Could you tell me?

A. 55, sir.

Q. A young man.

A. Thank you, I needed that.

Q. I wanted to ask you how you manage to get together with Mr. Kampinski in this case?

A. Well, I was formerly from Cleveland and I ran a major obstetrical residency program in Cleveland at Cleveland Metropolitan General Hospital which is Metro Health Medical Center. I did some medical, legal, while I was there and both defense and plaintiff's work and Mr. Kampinski had contacted me on some cases in the past.

Q. Okay. So, he communicated with you directly rather than through some service?

A. I never used a service, sir.

Q. Do you advertise your availability as an expert anywhere?

A. No, I do not.

Q. When was it that you were contacted first about the case, please?

A. I am not sure, sir. I don't have that original letter.

Q. What was your task supposed to be?

A. Well, usually what happens is an attorney will call me. I'll ask him to run the case by me, before I even bother looking at it to see if it's in my field of expertise. If I feel that it's of interest, then I will ask them to send the case to me. I will then review it and call them back and tell me what my find accident were.

If they want a letter they get a letter if they don't want it they don't get a letter. And that's basically the way most cases arrive on my desk.

Q. What did you understand your project was with regard to this case?

A. Well, again, it's strictly reviewing a record

and advising the attorney of what my findings are.

Q. As to what subject?

A. On the entire medical record in terms of obstetrical and gynecologic care.

Q. The propriety of the care?

A. Propriety of the care both from nursing and physicians' point of view.

Q. How many cases have you done with Mr. Kampinski's office before.

MR. MELLINO: I am going to object, what do you mean by done.

Q. Well, okay. Have you worked on other cases with Mr. Kampinski's office?

A. I've probably seen a number of cases and I probably rejected a number of cases. I don't know how many cases I truly have accepted. I would think I've seen maybe five or six cases but that's a guess over the years.

Q. Do you have any other ones at the moment with Mr. Kampinski's office?

A. I am really not sure if there are any active

ones.

Q. What materials did you have an opportunity to see?

A. Initially it was just the medical records and that includes the monitor sheets. I don't see an original attorney's record but I don't believe anything that they write anyhow so I do my own review. I see clinical data from Susan Allman this looks like out-patient records. And I know I have the hospital record, I have some pediatric records.

Q. Subsequently, did you receive other material?

A. Subsequently I have received some depositions.

Q. Whose depositions?

A. Stauffer, Allman, Loftus, Lance, those are the only ones I have here.

Q. The four nurses?

A. Correct.

Q. Have you read --

A. Wait a minute I just found another one in the pile, here.

Q. Okay what's that?

A. This is Slagle.

Q. All right. Do you have all the records that you needed in order to make an opinion?

A. Yes, sir, I do.

Q. Did you see the plaintiff here, the baby?

A. No, I have not examined the baby.

Q. Do you need to do that in order to reach your opinion in this case?

A. No, I really would not be qualified to evaluate the baby it's not in my area of expertise.

Q. Was the standard of care in 1986 when this baby was born, the same in material respects as it relates to your opinion as is today?

A. Obviously some things have changed. But in terms of this case not a lot has changed. I did review William's of '86 to make myself more comfortable for this particular error.

Q. So, you did consult the William's book during the course of your study of this case?

A. That's correct.

Q. Did you rely on any part of it for your opinion here?

A. Not really just reinforced things that I know quite well.

Q. So, did you find that your opinions were in anyway influenced by a change in the standard of care between '86 and the time that you made your opinion?

A. No, it hasn't. There have been a number of bulletins from the American College that have altered our thinking a little bit. And I always take them into consideration that if they downgrade something, I will downgrade it in the past. I won't hold somebody to that exact standard if things are changed and modified.

Q. Do you have an opinion as to the propriety of the care rendered by the nurses in this case?

A. Yes, I do.

Q. What is your opinion?

A. My opinion is they basically dropped the ball, here. This is a, if you want me to summarize I'll give you a quick synopsis.

Q. That would be good?

A. Here is woman who comes in nulliparous female having had no premature, full term pregnancies and during early labor normal tracing is noted. She's 42 plus weeks or thereabouts. Making her somewhat at risk. The first few blood pressures there's a mild elevation, which then requires you to make the diagnosis of pregnancy induced hypertension and requires very close observation. Here, the institution chose to do fetal monitoring and the initial fetal monitoring is quite normal.

The physician apparently gave some standard orders and remained at home. In spite of the elevated blood pressure an enema was given which is a little out dated for 86. And the patient was taken off the monitor for a period of time. Which I believe even Dr. Slagle was uncomfortable with. The initial monitor tracing is perfectly normal. When she's put back on the monitor there's a tachycardia or higher heart rate associated with decreased variability, which is a worrisome tracing. Not ominous but worrisome and certainly a change from her initial tracing.

Then for some explicable reason, which I cannot explain to you, the monitor was removed for approximately 30 minutes. Nurses say the patient objected to the monitor and that would not be a satisfactory reason for removing the monitor given the tracing that was present for approximately a half hour thereabouts.

The monitor is then put back on, and at that point, the monitor tracing is extremely poor quality. And I cannot tell you what went on for a period of time because there literally is a totally inadequate tracing and considering now you have a post-dated patient with probably pregnancy induced hypertension, that is unacceptable.

Q. What's unacceptable?

A. That they are not getting an adequate continuous tracing.

Q. Okay.

A. Now ultimately, a bradycardia is picked up by direct oscultation probably by Doptone here and there's a persistent bradycardia for a prolonged period of time

without any attempt to delivery or any maneuvers except oxygen is given. The patient does reach full dilatation the bradycardia continues. There's some evidence by multiple auscultations that we may have a wondering baseline. This is very ominous in that you would find a fetal heart of 88 and fetal heart of 156.

So there's really a problem going on and then ultimately membranes are ruptured and the mother, the baby, spontaneously delivers and then there's a very poor resuscitative process. And a team is not standing by capable of resuscitating this baby. The doctor is unable to intubate the baby times three. And there's a delay in neonatal resuscitation.

The pH is, I believe, on the charge I didn't see a pH for at the time of the delivery. A cord pH. In one of the depositions it was mentioned that it was very low, I believe. The first pH that I have is extremely low with a large base deficit, indicating that there was a marked delay in neonatal resuscitation. And ultimately the baby suffered from birth asphyxia.

Q. All right. Now, so the specific areas in which the nurses fell below the standard of care are what, please?

A. One, removing the monitor. Certainly, the second time. The first time would be a borderline kind of thing. I am upset by the removal because I don't think the enema should be given in the face of preeclampsia. However, removing the monitor after there's abnormal tracing is unacceptable. That's clearly wrong and removing it for 30 minutes is wrong.

And then in the face of inadequate tracing when the monitor is finally replaced the failure to apply an internal monitor or calling someone to do that is again unacceptable and does not meet standard of care. And of course the delay in the delivery fails to meet standards of care. And then the neonatal resuscitation fails to meet standards of care.

Q. I was asking you, at that point, essentially the criticisms that you directed to the nurses as opposed to anyone else. Do you, in your opinion, is the delay in the delivery criticisms related to the

nurses?

A. Yes, it is, because they didn't call the doctor in.

Q. Okay.

A. Now, normally when one looks at a tracing the characteristic way a tracing goes from good to bad or bradycardia is, you will see a normal tracing with normal variabilities. I read the early tracing. And you will then see abnormalities of a tracing namely tachycardia, decreased variability, late deceleration, severe variable decelerations.

And ultimately the baby decompensates and you see bradycardia and the last thing is a wondering baseline and that's the most ominous. We don't really have a good tracing from the time that there's abnormalties to the point that the bradycardia is picked up.

Q. Okay?

A. But somewhere during that time, in all probability, the tracing demonstrated the need for prompt delivery. And that would require in all

probability in this case, a C Section and since it's a Level 1 hospital, they would have 30 minutes to accomplish that delivery. And had that been done, in all probability, a good neonate would have been delivered. Or a healthier neonate.

Q. Do you have any criticism of the hospital other than directed to the nurses, themselves?

A. Well, again, it's not having a neonatal resuscitative team present but the nurses did not call that team in.

Q. Would the condition of this labor and delivery require a neonatal resuscitative unit to be present under ordinary circumstances?

A. Yes it would because as I said, they would have ruptured membranes because of the poor quality of the tracing. When they did that they would have noted meconium. Now, fetal distress requires a neonatal resuscitation team be present. Meconium requires neonatal team be present.

Q. Now, the nurses would not have known about the meconium until the membranes ruptured?

A. That's correct. When there was an abnormal tracing at just after the enema, when there's decrease variability I believe that's 12:53 I have in my notes. I'd have to look at the tracing to be exact. Once you see the fetal tachycardia that now requires invasive monitoring or rupture of the membranes and putting on a scalp electrode.

Q. So that regarding the hospital itself you feel that the hospital failed to meet the standard of care by not providing a neonatal resuscitation team?

A. Team for delivery.

Q. Okay. Do you know if they have one?

A. Well, you have pediatricians available and you have to call your pediatrician in. So a pediatrician can do it. Today, especially in Cleveland they have Code Pink Teams. Where they are actually training nurses to be part or completely the resuscitative team.

Q. So the problem here, in your opinion, was that the hospital didn't have such a team available?

A. Or person. The pediatrician did ultimately

come in. But the pediatrician should have been present at delivery. And had the fetal distress been recognized early on, the pediatrician would have been there. Certainly at 1:23 a.m., there was a severe bradycardia. Oxygen was begun and so there was plenty of time to notify a pediatrician because the baby wasn't delivered until 1:57 a.m.

Q. Do you have any criticism of Dr. Slagle?

A. Well Dr. Slagle, should have been notified to be there.

Q. That isn't a criticism of him?

A. No, he has to hear from nursing that we have a patient with elevated blood pressure, who is post-dates and we need you here. Initially, I am not so critical. Once you have that second tracing then it's mandatory they call them to come in because it's an abnormal tracing when she returns from the bathroom.

Q. All right, can you tell me the time when you believe that Dr. Slagle should have been called by the nurses?

A. All right. I am opening up the monitor strip

and I know the non-stress test that was done a few days before is normal. The initial monitor strip that I am looking at, this is 7/25 that's not the one.

Initially, our tracing begins at 2152 and we have a normal tracing although the contractions are quite frequent. Which may account for why the baby may have gotten into trouble. That's not the physician or hospital's fault. That just happens the uterus is contracting very frequently or polysystaly.

But we have some accelerations of the fetal monitor which suggested good fetal well being. At approximately 2223, patient is placed on her side. The tracing continues quite normally.

And then at 23:10 she's given a Fleet Enema. The monitor is reinstituted at 23:53 and that is panel 49, 515. The fetal heart was previously running with a baseline of about 140 to 144 with good variability in acceleration. When the monitor is now reinstituted we see significantly decreased variability. The fetal heart is running upwards of 160 which is a mild tachycardia. There's question of late deceleration

seen there. We have a contraction that certainly occurred at midnight and appears there's a late deceleration there.

That's the point where they have to call the physician in and say we need to evaluate. The tracing looks quite different from previously, there's no variability. I've got a question of late deceleration and panel 49,516 which is the contraction prior to that, there's some skip areas but there's the impression of late deceleration there.

So over that ten minutes period of time or 15 minute period of time it's time to call the physician in. Well, apparently at about two or three minutes after the midnight. The tracing was discontinued and as we discussed that before because the nurses said the patient complained about the monitor. Well with abnormalities as seen there you cannot remove the monitor. And then it's not replaced until 0:37 after midnight or 37 minutes after midnight.

And then the tracing is so poor and the contraction monitor is so poor that I can't, I can't

tell you what goes on for a good period of time here. I am up to 1:10, now.

1:15, still a bad tracing. And then we have a fetal heart that they did listen to at about 1:20 a.m., and it says fetal heart 1:20. But we have, we can't tell where that is in relationship to contractions.

There's then another fetal heart listed at 49,534 which would be about 1:24 a.m. That's 88, there's a bradycardia, they are starting oxygen and now you have got a medical emergency. And that bradycardia essentially continues.

There's some wondering, for example, at 1:30 there's a fetal heart of the 126 and then it drops down to 92. There's a 156 listed at 1:40, again, what I spoke about is this could be the wondering baseline but the tracing is essentially none existed. And I can't tell when the contractions are occurring. We could have been very severe lates and a persistent bradycardia. And I would assume this is a end stage bradycardia which then goes into a wondering baseline.

Q. All right. You are suggesting that the time when Dr. Slagle was to be notified by the nurses was 23:53?

A. Or around midnight. Somewhere in that neighborhood. We certainly have a very poor tracing from a 3 institution. And you have to allow the nurses sometime to observe. But now we have elevated blood pressure. We have got post-datism and abnormal tracings, that requires calling the physician in to come evaluate.

It also, if you are a Level 1 hospital, and you have got an abnormal tracing and all these risk factors you start putting your C Section team together because you may have to do an emergency section and since you don't have everyone in house you have to call them to come in to prepare for a possible emergency section.

Q. So at around midnight we needed to call not only Dr. Slagle, but also the C section crew?

A. That's correct.

Q. Plus we also needed to have the

resuscitation.

A. We notify the resuscitation team we may have an emergency delivery. What clearly you would like to do at that point is rupture membranes and in all probability you would have found the meconium which added one more risk factor. The internal monitoring will give you a much clearer picture of what's going on in terms of fetal well being.

Q. When do you think that the internal monitor should have been placed?

A. As soon as there's a question of the suttle late decelerations and degrees variability, around midnight.

Q. Now, nurses don't do that?

A. No, they have to call the physician in to do that or they have to have a house physician to do it. If they don't have a house physician then they are going to have to wait until the doctor gets in and it's going to take them another 15 or 20 minutes.

Q. So at that point you feel there was sufficient evidence that they were encountering a fetal

distress problem that they should have called the doctor, so, he could have came in and put the internal monitor?

A. That's correct and that's exactly what you would expect in someone who is post-datism with elevated blood pressures. There's a degree of placenta insufficiency. These babies do very, very well as long as the uterus is quiet. When contractions begin that's where they begin to get deoxygenated and that's when they get into trouble.

Q. Getting back to the original question about Dr. Slagle. Do you have an opinion as to whether or not his care met with the standard of care, here?

A. Well, technically it met the minimum standards of care. In other words, he came in apparently when he was called. An earlier forcep delivery could have been done if he is trained in it. And that I don't know how well he is trained. Certainly in term of his attempt of resuscitation, he attempted the intubation and missed it or was unable to do it times three. Performing a procedure and not

doing it successfully is technically not malpractice. Not doing it is malpractice.

Q. So, what you are saying here is that you have no criticism of Dr. Slagle's management of this case?

A. Other than I would have preferred him attempting the delivery at a little earlier stage.

Q. Now, of course when he got there, he has a choice of whether or not to proceed with the vaginal delivery or try to do a C Section, at that point?

A. That's correct and I don't believe he has the capability of doing a C section, I may be wrong.

Q. In any case the idea is to get the child out as quickly as possible, right?

A. That's correct. Now, if they are a Level 1 hospital and nothing has been prepared, it's going to take 30 minutes to put together a C section team to get the baby delivered.

Q. So if he could actually accomplish delivery before the C section team could be assembled there would be no criticism in him not having a C section team?

A. That's correct.

Q. Okay. Did that happen, here?

A. I believe, I have to pinpoint the exact time he came in. I know that's in the nurses' notes and it says Dr. Slasle here and I have to find my nursing notes.

Q. While you are looking for that. You are saying that this particular kind of a hospital it would take 30 minutes approximately to arrange for a C section?

A. That's correct. It's difficult for me to read these notes. I have got big black lines through my labor curve.

Q. In your opinion --

A. Wait just a second. I am getting some other records to look at.

A. Maybe I am missing it. I just don't see a note where it says Dr. Slagle is here. Wait, wait here we go. 1:51. I see, it's says Dr. C.A.S.

Q. That's right, he arrived at 1:50 and delivered the child at 1:57?

A. Well, then he has done his job.

Q. It would be pointless to do a C section?

A. That's correct.

Q. He was able to manage it by a regular vaginal delivery?

A. That's correct.

Q. So you don't have any criticism of him for not doing a C section dependant on the fact that he wasn't there until 1:51?

A. That's correct.

Q. Now, do you have any criticism-- let me ask it a different way. You have given me a variety of criticisms you have of the nurses and the way they managed the labor and delivery. Aside from the nurses' conduct, is there anybody at the hospital who is subject to a criticism by reason of your review of the charts?

A. Again, my area of expertise is not neonatal medicine. But, no, I see no other deficiencies in my reading of the medical records at least in terms of maternal care.

Q. So the criticisms as we're listing them pertains solely to the nurses, here?

A. That's correct.

Q. In your opinion, Doctor, were any of the hospital written policies and procedures violated?

A. I don't know.

Q. Do you see from your review of the charts any policy deficiencies the hospital may have had, as it relates to this case?

A. Well, again, most hospitals have a fairly standard kind of policies of how nursing should identify high risk. I haven't read their statements but certainly elevated diastolic blood pressure would qualify. Post-datism would qualify as high risk. Abnormal fetal heart tracings would qualify as high risk. And the failure to get inadequate tracing would require that something else be done. Either frequent fetal hearts or more appropriately internal fetal monitoring.

Q. All right. After the child was born, do you have any criticism of the nurses following that point?

A. Well, again, it's a matter of the resuscitation team not being there.

Q. All right?

A. And an obstetrican --

Q. And that criticism was for them not bringing the resuscitative person or persons into the case quick enough, right?

A. That's correct, because obstetricans usually do not administer Sodium Bicarbonate to an acidotic baby. They wait for the pediatrician. The obstetrican job is to get the intubate and get the baby oxygenated and that's about the level of their expertise.

Now, some hospitals have protocals where they maintain at least the obstetrican's resuscitative skills by having them intubate ketamized or sedated cats to maintain their skills.

So there are various things a hospital can do to make sure the skills are maintained. I was practicing in Touson, Arizona one hospital was a level three and one a level one. And the level one since it didn't have neonatal resuscitative teams in the early

70's or mid 70's required us to come in and demonstrate our skills on ketomized cats to be sure we can intubate in an emergency until help arrived.

Q. I guess what I am asking you, Doctor, is whether you feel that the nurses had any are to be criticized for the way in which the resuscitative process was handled, other than the fact they didn't call the resuscitative personnel when you suggest it should be done?

A. Not that I can see from reading the records. This is still, unknown, after intubation then that becomes the neonatologist's province or pediatrician's.

Q. And you feel that even though the resuscitation process was not entirely successful that nobody failed to meet the standard of care in that connection?

A. No, as I said, they met the minimum standards of care by attempting the intubation.

Q. Okay. Have you given me all of the opinions you have or the criticisms you have as it relates to the medical care rendered in this labor and delivery?

A. I think that's pretty much in a nutshell, yes.

Q. Would you agree, Doctor, that the placement of the internal monitor requires the membranes been ruptured?

A. Yes.

Q. And doctors are the only ones who do that?

A. No, that's not entirely true. Some hospitals do allow the nurses to put on scalp electrodes and rupture membranes.

Q. Is that the standard of care?

A. It depends on the hospital. I would not hold the hospital to do that.

Q. Now, I noticed in this chart of several places the fetal heart rate was determined by Doppler?

A. That's correct.

Q. Is this a customary practice in the absence of good fetal heart readings from the monitor?

A. Depending on how you do your Doppler. It's considered by Acog (phonetic) today as an adequate standard. That's why I say we talked about new

standards, Acog has clearly indicated to us that careful auscultation of the fetal heart every 15 minutes after a contraction is as good probably as continuous fetal heart monitoring. None of us have gone to that method because it actually requires more intensive nursing than the fetal heart monitor. Because we don't have to have one-on-one nursing.

Q. But it is acceptable to use a Doppler for the checking of the fetal heart information?

A. That's correct. But you want to do that right after a contraction so you can assess for late deceleration and of course they did begin it but they began it at I believe, 1:20 a.m.

Q. Is there any connection between an abnormal fetal heart tracing and fetal distress?

A. Well, there's a correlation between the two. Obviously, there are many false positives, where you can have an abnormal tracings and you do a scalp pH and you find it's perfectly normal.

Q. So, an abnormal tracing does not necessarily mean that the fetus is in distress, does it?

A. That correct.

Q. It may mean there just may be stress there?

A. That's correct but a bradycardia is a horse of a different color.

Q. All right. That's when the fetal heart rate drops off?

A. That's correct assuming you have a normal tracing prior to that. The finding of a slow heart beat as your first finding in labor may indicate a hard abnormality. So that in itself is not an immediate abnormality but in this particular case we go from normal to very abnormal.

Q. Is it significant when a tracing goes from normal to abnormal and back to normal?

A. If it goes back to normal that's a very good sign and that can happen with in utero resuscitation. In other words, let's assume we're running poticin and you get late decelerations and the tracing becomes quite abnormal you turn the woman on her left side you stop the poticin and start oxygen and indeed if the tracing improves you may back off for a while. You

have just resuscitated the baby so that can happen.

Q. Is it possible for the some abnormalities shown on the fetal heart monitor to be transients?

A. That also happens all the time sure.

Q. One the things you have to learn when you are going to read the monitors is to differentiate between a situation where there may simply be abnormalty in the tracings and the situation where the fetus is really in distress?

A. That's correct.

Q. Okay?

A. That's why we rupture membranes and place internal monitors to get a better read and if we find meconium that's a good correlation with what's going on. Meconium does not mean fetal distress in itself.

Q. No, but it's one of those things that may?

A. That's correct.

Q. In this particular case, what actually occurred here to demonstrate the fetal distress. Was it simply the readings on the monitor?

A. Well, again, we're missing a lot of tracing.

And when we go from a normal tracing to a flattened baseline which tends to indicate a drop in pH. Probably in a 7.20 range. There appears to be late decelerations, the monitor is removed again. And then the monitor is replaced and there's essentially no reading for a long period of time.

Then there's a severe and prolonged bradycardia, which appears to have some evidence of some wondering baseline. That's all I can say about the tracing. Somewhere between the beginning and the end, there were sustained abnormalities which would be recognized as fetal stress/distress.

Q. All right. So, that combination of items that you just mentioned leads you to conclude that's when fetal distress was going on?

A. Well, we have evidence of fetal stress/distress when the monitor is here placed after the enema. Because we have a fetal tachycardia. We have lack of variability and we have probably two late decelerations there. Certainly one is very easy to read and one is suggestive.

Q. So at that point, and we're talking midnight there is fetal stress.

We're talking about?

A. Fetal stress developing distress.

Q. What constitutes bradycardia?

A. Bradycardia is a persistent heart rate under 120. Particularly under 110. Now, there can be variations as you go along and we have numbers like 88,126. And 92 and 116, 156, 88, 125, 92, 80. Those are ominous numbers for the most part.

Q. You are reading the fetal heart rate?

A. Correct.

Q. And those come off?

A. Doptone.

Q. The Doppler?

A. That's correct.

Q. In this case you feel that those that heart rate is too low?

A. That's correct.

Q. All right. Did you notice from time to time that heart rate goes up as well as down?

A. That's correct. That may mean what we call a wondering baseline. And because that is the end stage. Usually you will go from stress to fetal distress to bradycardia to your wondering baseline. Now, not absolute. But that's in general what goes on.

Q. Would that also be indicative of a relief of whatever was producing the bradycardia?

A. Not one or two numbers, no.

A. Just to clarify a little bit more based on a fetal heart of 123 of 88 and 125 at 104 and a history of meconium, if you had ruptured membranes. Finding meconium, knowing there's lack of variability, knowing there was late decelerations that would constitute a crash section in an academic center.

Q. Now, you suggested the nurses should have notified Dr. Slagle at midnight?

A. That's correct.

Q. What would they have told him?

A. They should have told him that we have a patient who has elevated diastolics consist with pregnancy induced hypertension. We have a patient who

is post-dates. We have a patient whose tracing shows lack of variability with a fetal tachycardia of 160 and probably some late decelerations. We need you to come in and evaluate right now.

Q. What was the last item, please?

A. Late decelerations.

Q. You believe that all five of those things dictated the need to be reported to the doctor and the doctor instructed to come in, at that point?

A. That's correct.

Q. If the doctor had been notified, at that point, what would have changed here?

A. Well, hopefully the doctor would have come in, ruptured membranes, found meconium and identified a fetal distress and notified the team, a team to be assembled and or the team should have already been assembling and then an emergency C Section performed.

Q. What's the significance of the entry in the chart about calcification in the placenta?

A. That just goes along with post-datism and pregnancy induced hypertension. In other words,

there's advanced placental aging with that particular condition. And so one develops placental insufficiency in labor and we discussed that before. These babies do very well at rest and get into trouble at labor. That's why when one has a patient with post-dates or with known hypertension or preeclampsia or pregnancy induced hypertension. You want them to come in early in labor because that's when the fetus gets into trouble.

Q. That indicates the factor for describing this as a high risk pregnancy?

A. The placental calcification is a very common finding and depending on the degree it would go along with post-datism.

Q. Would you be in a position to give us an opinion as to when the brain damage occurred with respect to this child?

A. Well, it's always very hard to pinpoint exactly when it began. Because we're missing so much of the tracing. I mean it certainly appears when she came back from her enema that there was fetal stress/

distress. And some time between that point and 1:23 the baby probably became acidotic. So probably when the baby developed the bradycardia that's the point where in all probability the brain damage began. Because that's when the compensatory mechanisms give way in the fetus.

MR. MELLINO: Could you stop for a minute, Doctor. My understanding was that you were in the process of retaining approximate cause expert?.

(A discussion was held off the record.)

BY MR. AUGHENBAUGH:

Q. Doctor, just a few more things, here. Number one, there's been a suggestion here that when the nurses applied the fetal heart monitor that they only applied one of the sound transducers and not both. Do you see any evidence of this in this case?

A. No, I do not.

Q. As far as you can see when the nurses applied this external fetal heart monitor they did it in the way it was supposed to be done?

A. Correct, there's a doptone device that is

there. periodically picking up fetal heart rates. And there's also what we call a todokynamometer which can pick up although poorly uterine activity.

Q. So, there are as far as you can see in the reading the tracings, so far as they are readable, you believe the monitor was attached properly?

A. The monitor was attached properly but not adjusted properly.

Q. That was the other question. What is it that causes in your judgment here this inadequacy in the external fetal heart monitor readings?

A. Usually it requires moving the monitor around until you get an adequate tracing. Certainly some of the older monitors are more difficult to use than the newer monitors. But the fact is, if you are unable to produce a decent tracing with external monitoring. For reasons of obesity or fetal position, then you just have to go to internal monitoring.

Q. What do you think the reason why they could not get the good reading on this external monitor was here?

A. I can't answer that question, I don't know.

Q. Is it possible that movement of the patient would influence the readings taken by the fetal heart monitor?

A. Movement can affect it but then you chase the baby by continuously moving it.

Q. Do you think there was something wrong with the machine?

A. I don't know.

Q. So, you are not, there isn't sufficient information in the record for you to tell why the fetal heart tracings looked like they do?

A. No, because they got very good tracings early on. They got very good tracings after the enema and then they got terrible tracings.

Q. Okay. Do you think this has something to do with the way indeed the monitor was adjusted?

A. Possibly. But again, you can switch to an internal scalp electrode very simple and straight forward. And at least you will be able to monitor fetal heart rate. And if you are having trouble with

the contractions, it's very simple to put the nurse by the bed side and observe when the contraction begins and ends and mark on the monitor. So you can be very unsophisticated and get very decent tracing.

Q. You keep going back to the scalp electrode. That requires the rupture of the membranes does it not?

A. They can.

Q. So you just can't put that on whatever you want to if the membranes are intact?

A. No, someone has to rupture the membranes and some hospitals the nurses would be permitted to be put it on. Most hospitals would require a physician.

Q. So, the nurses in this case, you are not critical that they didn't put the internal monitor on. You are critical they didn't notify the physician to do it?

A. That's correct.

Q. Doing it actually means you have to rupture the membrane?

A. That's correct. And there are some risks associated with rupture of membranes that why most

hospitals don't want nursing to rupture membranes.

Q. Thank you Doctor, very much. I appreciate it and I apologize for my inattendance.

A. No, thank you for a short depo.

(Deposition concluded.)

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CERTIFICATE OF DEPONENT

I hereby certify that I have read and examined the foregoing transcript, and the same is a true and accurate record of the testimony given by me.

Any additions or corrections that I feel are necessary, I will attach on a separate sheet of paper to the original transcript.

_____

Deponent

State of Maryland

County of Baltimore, to wit.

I, RONDA HAYES, a Notary Public of the State of Maryland, County of Baltimore, do hereby certify that the within-named witness personally appeared before me at the time and place herein set out, and after having been duly sworn by me, according to law, was examined by counsel.

I further certify that the examination was recorded stenographically by me and this transcript is a true record of the proceedings.

I further certify that I am not of counsel to any of the parties, nor in any way interested in the outcome of this action.

As witness my hand and notarial seal this 20th day of August, 1992.

Ronda Hayes

RONDA HAYES,

Notary Public

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Deposition of Dr. Stuart Edelberg

August 10, 1992