IN THE COURT OF COMMON PLEAS
LORAIN COUNTY, OHIO
CASE NO. 97 CV 118157

TERRY HERBERT DABULEWICZ, etc., et al.,

Plaintiffs,

vs.

THE CLEVELAND CLINIC FOUNDATION, et al.,

Defendants.

Civil Action
DEPOSITION UPON ORAL EXAMINATION

Of

CRAIG SAUNDERS, M.D.

TRANSCRIPT of the deposition of CRAIG SAUNDERS, M.D., a Defendant, called for Oral Examination by the Plaintiffs in the above-entitled action, by and before PATRICIA J. RUSSONIELLO, a Certified Shorthand Reporter and Notary Public of th State of New Jersey, at the NEWARK BETH ISRAEL MEDICAL CENTER, 201 Lyons Avenue, J Building, 4th Floor, Room 3, Newark, New Jersey, on Tuesday, April 6, 1999, commencing at 4:00 o'clock in the afternoon

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I N D E X

E X H I B I T S

(Exhibit 1 marked for identification.)

C R A I G S A U N D E R S, M.D., having been duly sworn by the Notary, testifies as follows:

MS. TOSTI: May I have agreement from counsel that Ohio Civil Rules will apply and that there be a waiver to any defect in notice or service of this deposition?

MS. CARULAS: Yes.

MS. HARRIS: Yes.

MS. TOSTI: Hang on just one minute because I'm going to delete some questions that I have here based on the CV that you provided.

Bev, Dr. Saunders provided a curriculum vitae and that will be attached as Exhibit 1 to this deposition.

MS. HARRIS: Fine.

DIRECT EXAMINATION BY MS. TOSTI:

Q. Doctor, at the time that you rendered care to Charlotte Herbert who was your employer?

A. Cleveland Clinic.

Q. And currently who is your employer?

A. St. Barnabas Health Care System.

Q. And other than St. Barnabas do you provide professional services for any other entity?

A. No.

Q. And at the time that you rendered care to Charlotte Herbert did you provide professional services for anyone other than the Cleveland Clinic?

A. No.

Q. Have you ever had your deposition taken before?

A. Yes.

Q. How many times?

MS. CARULAS: Just note my objection but go ahead.

A. I don't know.

Q. More than five?

MS. CARULAS: Note my objection.

A. Probably not.

Q. And in what capacity was your deposition being taken, and by that I mean were you an expert witness or a defendant in the case or a fact witness?

MS. CARULAS: Objection.

A. Defendant.

Q. Now, I'm sure that counsel has reviewed some of the rules of the deposition for you. I'm just going to go through them briefly.

This is a question-and-answer session. It's under oath. It's important that you understand the questions that I'm asking. If you don't

understand the question, let me know. I'll be happy to repeat it or to rephrase it; otherwise, I'm going to assume that you understood the question and that you're able to answer it and I would also ask that you give all of your answers verbally because our court reporter can't take down head nods or hand motions.

If at some point you wish to refer to the medical records please feel free to do so. Obviously counsel has a set of records that you can refer to.

Also at some point during this deposition your counsel or Miss Harris may choose to enter an objection. You are still required to answer my question unless counsel instructs you not to.

Do you understand those instructions?

A. Yes.

Q. Now, Doctor, you had mentioned that you had been named as a defendant in a medical negligence case before. Is that correct?

MS. CARULAS: Objection.

A. Yes.

Q. Okay. How many times have you been named as a defendant?

MS. CARULAS: I'll just have a

continuing line of objection here. Go ahead.

A. Three or four.

Q. And where were those cases filed?

A. Cleveland and California.

Q. Do you recall the plaintiff's name in the last case that was filed against you?

A. I think this may be the last one filed against me.

Q. Well, the one prior to this.

A. I got a block.

Q. Okay. Do you recall the plaintiff's name in any of the other cases that have been filed against you?

A. One's name was Penny Taylor in Californ: ..

Q. What was the allegation of negligence that was made in those cases? And if you can recall from each of the three or four cases I'd like to knov the allegation for each of those.

MS. CARULAS: And again just a continuing line of objection. Agreed?

MS. TOSTI: Yes.

MS. CARULAS: Okay. Go ahead.

A. Penny Taylor case was a lady that I had operated on, put in a mitral valve. Some time later the valve clotted off. Another surgeon operated on

her but she arrested and had a neurologic injury.

Q. How was that case resolved?

THE WITNESS: I'm not sure I know the terminology.

A. I mean, what do you mean how was it resolved?

MS. CARULAS: If you --

Q. Was it settled? Did it go to trial? Was there a defense verdict, a plaintiff's verdict o was it dismissed without any judgment or settlement in either side's favor?

A. I don't know if it went to trial or not but it was -- it was settled and an agreement given in favor of the plaintiff.

Q. Okay. Do you recall the plaintiff's attorney's name in that case?

A. No.

Q. What about the other cases that were filed against you? Do you recall the allegations of negligence of any of the ones that were filed in the Cleveland area?

A. Yeah. The name of that was Broadwater.

Q. That was the plaintiff's name?

A. Yes.

Q. Okay. When was that case filed?

A. Couple of years ago.

Q. And what was the allegation of negligence in that case?

MS. CARULAS: I just want to note if any of these cases are ongoing cases I don't think it's appropriate for you to testify about them in this case. Simply say they're ongoing. I don't know if any of them are but if there are note that.

A. This is an ongoing case.

Q. Okay. Any of the cases that were filed against you in Cleveland, are there any that have been resolved?

A. I believe these are the only two. This one and that one.

Q. There's no other cases that were filed against you other than this one and the Broadwater case in the Cleveland area?

A. These are the only ones I'm dealing with

Q. Okay. I understand that those two are ongoing but any that have been resolved in which they were either settled, went to trial and there was a verdict or dismissed?

A. Not that I recall at this time.

Q. Now, Doctor, what states are you currently licensed in?

A. New Jersey and Ohio.

Q. And at the time that you rendered care to Charlotte Smith you were licensed in Ohio?

A. Correct.

MS. CARULAS: Just for the record, Herbert.

MS. TOSTI: I'm sorry.

Q. Charlotte Herbert.

Has your license to practice in any state ever been subject to a proceeding by the state Medical Board?

A. No.

Q. Have you ever acted as an expert in a medical/legal proceeding?

A. No.

Q. Have you ever given testimony in any case of a similar subject matter to this case --

A. No.

Q. -- and -- let me finish my question -- and involving issues of post-operative wound infection?

A. No.

Q. Now, Doctor, you are Board certified. Is that correct?

A. Yes.

Q. Okay. What areas are you Board certified in?

A. Thoracic surgery.

Q. Is there a subspecialty Board in cardiovascular surgery available?

A. No.

Q. When did you receive your certification in thoracic surgery?

A. It's on my CV.

Q. I'm not --

MS. CARULAS: Page 3.

THE WITNESS: Should be, anyway.

MS. CARULAS: No. 1981 and recertified --

THE WITNESS: Yeah.

MS. CARULAS: '89.

MS. TOSTI: I'm not --

MS. CARULAS: Page 3. If you look at Page 3 and look down under Certifications it's one, two, three, four -- fifth line.

MS. TOSTI: Oh, okay. I'm sorry.

Q. Now, in August *of* 1995 what position did you hold with the Cleveland Clinic?

A. I was a staff surgeon at the Cleveland Clinic and was also in charge of the affiliate programs which included Elyria.

Q. And in regard to your position as head of the affiliate program what duties and responsibilities did you have?

A. Was both administrative and clinical.

Q. How many hours a week did you spend on the administrative aspect of your position?

MS. CARULAS: Just note my objection. If you know.

A. I don't know.

Q. Approximately, Doctor?

MS. CARULAS: Just note my objection. No guess. If you have...

A. I have no idea.

Q. Was half of your time or more than half --

A. No.

Q. -- spent --

A. The vast majority of my time was clinical.

Q. Please let me furnish my question because she's going to have a problem if we both talk at the same time.

My question is trying to get at whether you had more of an administrative job or more of a clinical job. And so the greater amount of your time was devoted to your clinical responsibilities?

A. Yes.

Q. When did you leave Ohio?

A. In June of '98.

Q. And what was the reason that you left your practice in Ohio?

A. To assume the Chairmanship of the St. Barnabas cardiac surgery program.

Q. Have your hospital privileges ever been called into question, suspended or revoked?

A. Never.

Q. Now, Doctor, you've provided me with a copy of your curriculum vitae and there are a number of publications that are listed on the curriculum vitae.

Do any of these publications deal with the subject matter of post-operative infections?

A. No.

Q. Any deal with the subject matter of mediastinitis?

A. No.

Q. Any with the subject matter of endocarditis?

A. No.

Q. The presentations that you have listed are any that are listed on this curriculum vitae, do any of those deal with those subjects?

A. No.

Q. Okay. The curriculum vitae that we hav marked as Plaintiff's Exhibit 1 is it current and up-to-date?

A. It's probably a few months behind.

Q. Are there any additions or corrections that you'd like to make?

A. No.

Q. What have you reviewed for this deposition?

A. I've reviewed some of the medical records that were provided to me by my lawyer.

Q. Okay. Could you tell me what portions of the records that you've reviewed?

A. Summaries that the -- the emergency roo visit and the hospitalization in Elyria.

Q. Have you reviewed any of the Cleveland Clinic records from Cleveland Clinic proper?

A. No.

Q. Have you referred to any textbooks or articles in preparation for this deposition?

A. No.

Q. What about the death certificate or autopsy?

A. What about it?

Q. Have you reviewed it in preparation for this deposition?

A. No.

Q. Have you since the filing of this case reviewed any of the actual echocardiograms done on Charlotte Herbert?

A. No.

Q. Have you reviewed any deposition testimony?

A. No.

Q. And since the filing of this case have you discussed this case with any physicians?

A. No.

Q. Other than with counsel have you discussed this case with anyone else?

A. No.

Q. Do you have any personal notes or personal file on this case?

A. No.

Q. Have you ever generated such notes or kept a file on this case?

A. No.

Q. Is there a textbook in your field of practice that you consider to be the best or the most reliable?

MS. CARULAS: Note my objection.

A. No.

Q. Are there any publications that you believe have particular relevance to the issues in this case?

A. No.

MS. CARULAS: Objection.

Q. Have you participated in any research dealing with the subjects of mediastinitis or endocarditis?

A. No.

Q. What is post-cardiac surgery mediastinitis?

A. It's an infection in the mediastinum after cardiac surgery.

Q. Is there a difference between post-cardiac surgery mediastinitis and post-cardiac surgery sternal wound infection?

A. I suppose it's a matter of degrees, yes.

Q. How do you differentiate between the two?

A. Well, any wound infection will run a whole spectrum from superficial to deep.

Q. Does a sternal wound infection after cardiac surgery place a patient at risk for

mediastinitis?

MS. CARULAS: Just note my objection. Go ahead.

A. Not necessarily.

Q. Is it a risk factor for mediastinitis?

MS. CARULAS: Just note my objection. Go ahead.

A. It could be.

Q. Now, Doctor, for the balance of this deposition when I refer to mediastinitis I'm referring to the type that occurs after cardiac surgery, and I realize that mediastinitis can occur in other instances but for the basis of this deposition it's someone that develops mediastinitis after cardiac surgery.

What is the mediastinitis infection rate after elective bypass surgery?

A. Probably less than 1 percent.

Q. And in August of 1995 what was the mediastinitis rate for elective bypass surgery at Elyria Memorial Hospital?

A. I don't know.

Q. Do you know whether it was consistent with the usual expected rate?

MS. CARULAS: Objection.

A. I believe it was.

Q. How often in your current practice do you see patients with post-cardiac surgery sternal wound infections?

A. Again, sternal wound infections can run the gamut from very superficial, insignificant to deep mediastinitis, and if you -- if you include all of those in that it's still a very small portion. Probably in the range of two or three certainly. Might say less than 5 percent of the patients.

Q. Now, in your current practice do you do revascularizations using bilateral mammary arteries?

A. Yes.

Q. And approximately how many in the last year have you done that?

A. With bilateral mammaries?

Q. Yes.

A. I don't know. It would be a guess but maybe 30 or 40.

Q. And approximately how many of those were on diabetics?

A. Probably none.

Q. Okay. Is there a reason why none of those were diabetic?

MS. CARULAS: Just note my objection.

Go ahead.

A. Sternal wound infections are known to increase with bilateral mammaries and harvesting in insulin-dependent diabetics.

Q. What about noninsulin-dependent diabetics?

A. Well, it's less clear in those patients.

Q. Would you agree that a sternal wound infection in a diabetic patient that has had bilateral mammary arteries used in revascularization should be treated aggressively to decrease the risk of infection spread?

MS. CARULAS: Note my objection.

A. Could you repeat the question?

MS. TOSTI: Would you read my question back.

(Last question read back by the reporter.)

A. Sternal wound infection should be treated whether they're diabetic or not. You know, depending upon the clinical setting that they present in.

Q. Would you agree they should be treated aggressively meaning opening the wound, debriding them, looking for deep infection?

MS. CARULAS: Objection.

A. No, I wouldn't say that that should be done all the time at all.

Q. And my question I was referring to a diabetic that had bilateral mammary arteries. You don't believe that that should be done all the time?

MS. CARULAS: Same objection. Go ahead.

A. No. There's an entire spectrum of presentation and of -- and of degree and if you would be opening all these and treating them aggressively you'd be doing a great disservice to the patients. Not every patient warrants that,

Q. Doctor, prior to Charlotte Herbert had you personally diagnosed any patients with post-cardiac surgery mediastinitis?

A. Yes.

Q. Is that something that you saw -- I don't want to say regularly in your practice but it wasn't something that was unusual?

A. I've 20 years experience of doing cardiac surgery and this is a known complication and it occurs.

Q. What would be the signs of post-cardiac surgery sternal wound infection?

A. Redness, erythema, drainage from the incision, fevers and chills.

Q. What would be early signs of post-cardiac surgery mediastinitis?

A. Early signs can be very general. Could be like anything -- any infection like anything bothering them. It could be just a sense of feeling poorly. It could be a low grade temperature. It can be very, very nonspecific. Again, these things run the entire spectrum.

Q. Okay. And besides the general symptoms what are the next set of symptoms that you may see?

A. I'm not sure I follow where we go from one to the next here.

Q. I'm trying to discern what the signs and symptoms of post-cardiac surgery mediastinitis would be.

You said initially early symptoms might be just a general feeling of not -- of feeling poorly. Beyond that what other symptoms may you see in that type of mediastinitis?

A. Well, again, they may run an entire spectrum from very minimal symptoms to instability o the sternum and drainage from the incision.

Q. Would you see chest pain with it?

A. You may.
Q. Is that a common sign?
A. It certainly can occur.
Q. You see bacteremia with it?
A. Not necessarily.
Q. In some instances do you see bacteremia with mediastinitis?
A. They can be combined.
Q. Leucocytosis?
A. That could be one of the signs.
Q. Pleural effusion?
A. That could be one of the signs.
Q. Fever?
A. That could be another sign.
Q. Tachycardia?
A. That could be.
Q. Now, Doctor, you mentioned sternal instability. Would you agree that sternal instability is a late finding when the infection is well-advanced in mediastinitis?
A. Well, you can have mediastinitis without sternal instability.
Q. I'm asking you specifically about sternal instability and as to whether that is a late finding when the mediastinitis is well-advanced?

A. It could be early, it could be late. It runs a spectrum. Never presents the same way each time.

Q. Is sternal instability present in most cases of post-cardiac surgery mediastinitis?

A. I don't know if I can accurately answer that.

Q. In your practice in the times that you've seen post-cardiac surgery mediastinitis do most of those cases have sternal instability?

A. A lot do but I'm not sure that most do. It certainly is possible to have mediastinitis with a perfectly stable sternum. Again, there's an entire spectrum of presentation.

Q. What causes the sternum to become unstable in mediastinitis?

A. Well, what causes the sternum to become unstable in any situation is a loosening of the wires, a breaking of the wires or a giving away of the tissue.

Q. And in post-cardiac surgery mediastinitis why does that occur in some instances?

A. Again, that can be a multi-factorial thing. Some people cough a lot and cough the incision loose. Some situations there's infection in

the tissue and the tissue gives -- gets loose.

Q. Can osteomyelitis of the sternum cause the sternum to become unstable in patients with mediastinitis?

A. That would be one example of the tissue giving way.

Q. Doctor, if you need to answer your pager --

A. I do.

Q. -- feel free to do so.

THE WITNESS: I have to find another phone here.

(Pause.)

MS. TOSTI: We all set?

THE WITNESS: (Indicates.)

Q. How long after cardiac surgery does mediastinitis usually present if a patient's going tc develop mediastinitis?

A. I think it's unusual to see it while they're still in the hospital and usually it occurs after they've been discharged home in the first few weeks after surgery.

Q. Would you agree that mediastinitis due to gram positive organisms usually present somewhat later than infection caused by gram negative organisms?

A. You know, I'm not sure that I know that that's a fact.

Q. How is mediastinitis diagnosed?

A. Well, it depends upon its presentation.

Q. Well, Doctor, I'd like for you to tell me what methods can be used in what situations to diagnose mediastinitis and you can qualify that any way you choose to.

A. Well, mediastinitis by definition is infection of the mediastinal structures. It's a deep wound infection so you have to find some way to make the diagnosis that the infection is indeed even below the sternum. That is done by CT scan. Sometimes echoes help tell whether there's fluid around the heart. It's sometimes done by probing the wound and exploring the wound and seeing how deep it goes.

Q. You do a physical exam of the patient?

A. Yes.

Q. Is that helpful?

A. (Witness indicates.)

Q. Are blood cultures helpful?

A. Blood culture would tell you whether or not there was a blood-borne infection but it would not be a diagnosis of mediastinitis.

Q. Is needle aspiration helpful?

A. It could be.

Q. Have you ever utilized mediastinal needle aspiration to assist in the diagnosis of mediastinitis?

A. I don't believe I ever have.

Q. To your knowledge is mediastinal needle aspiration used by other cardiothoracic surgeons in diagnosing post-cardiac surgery mediastinitis?

MS. CARULAS: Objection.

A. I really can't comment on what other cardiac surgeons do and I'm not aware of any literature on needle aspiration.

Q. What factors could increase the risk for developing mediastinitis after cardiothoracic surgery?

A. What factors would increase the risk. The patient's preoperative status, nutrition, hygiene, presence or absence of any infections, presence of co-morbidities such as diabetes or other immune deficiencies, the surgical procedure itself, the post-operative care and the home care.

Q. The complexity of the surgery, is that a factor in regard to the risk for developing mediastinitis?

A. It could be.

Q. Use of mammary arteries?

A. Media -- mediastinitis can occur without the use of mammary arteries but we've already talked about the increase of incidence in diabetics with bilateral mammaries.

Q. Doctor, do post-operative wound infections occur more frequently in bypass patients that are diabetic as compared to nondiabetic patients?

A. I think wounds occur more frequently in diabetics, period.

Q. Okay. My question is in regard to wound infections after bypass surgery.

A. Diabetes is an increased risk for wound infections. Insulin diabetics.

Q. What about --

A. I can't comment on -- I'm not sure it's so clear with noninsulin or borderline diabetics. Again, we get into the spectrum of presentation.

Q. What are the complications associated with post-cardiac surgery mediastinitis?

MS. CARULAS: Just note my objection. I'm not sure I understand the question but go ahead if you...

A. Well, complications can be again an

entire spectrum from sternal instability to prolonge hospitalization on antibiotics that are treated medically to full-blown endocarditis like this patient had so just about anything is possible.

Q. Would it be fair to say that one of the complications --

MS. TOSTI: Bev, are you having a problem hearing because this gadget is making a whistling sound?

MS. HARRIS: I'm doing okay but you'll hear me if I can't, okay?

MS. TOSTI: All right.

Q. Doctor, would it be fair to say that on of the complications associated with this type of post-operative mediastinitis would be extension of infection into contiguous structures?

A. That could be.

Q. Sternal osteomyelitis, is that also a complication of this type of mediastinitis?

A. That could be.

Q. Sepsis?

A. That could be.

Q. And you've mentioned the endocarditis. That also can be a complication?

A. If you have blood-borne, that could be.

Q. Would you agree that when a diabetic patient that has had both mammary arteries used for revascularization surgery presents a couple weeks after surgery with fever, severe incisional pain, elevated white blood count, that there should be a high index of suspicion for mediastinitis?

MS. CARULAS: Objection.

A. Mediastinitis **is** in the differential diagnosis for all patients that you see afterwards that are having problems or complications.

Q. Would you agree in the patient that I just described, though, there should be a high suspicion or a high index of suspicion for mediastinitis because the mediastinitis can lead to such catastrophic complications?

MS. CARULAS: Note my objection.

A. I don't think your index of suspicion is affected by the possible outcomes of that. Your index of suspicion is simply that. It's not based on what can possibly happen.

Q. Would you agree that with this type of post-operative mediastinitis the longer it goes untreated, the less likely treatment will be successful?

MS. CARULAS: Objection.

A. Not necessarily. Again, there's a whol spectrum of presentation and -- and response to treatments that occurs in mediastinitis.

Q. I want to be sure that I'm understandin what you're saying.

You don't believe that the longer it takes to treat mediastinitis the less likely there's going to be successful treatment? And correct me if I'm misunderstanding what you're saying.

A. Yeah. I think I'm very concerned that you're putting words into my mouth here right now --

Q. I want to make sure that I understand what you're saying --

A. Okay.

Q. -- and so please explain if I've misinterpreted what you've said.

A. Why don't you repeat the question again?

Q. Okay. The longer mediastinitis goes untreated the less likely treatment will be successful. Do you agree with that statement?

MS. CARULAS: Objection.

A. I think that that is a possibility but it's not necessarily universally true. It depends upon the organism, it depends upon the degree of

mediastinitis. It depends upon an entire variety of variable factors.

Q. Would you agree that the longer mediastinitis goes untreated the more likely complications will occur?

MS. CARULAS: Objection.

A. I'm sorry. Haven't I answered this question?

Q. I don't believe so, Doctor.

A. Would you restate it then?

MS. TOSTI: Would you repeat my question.

(Previous question read back by the reporter.)

MS. CARULAS: Objection. That has been asked and answered.

A. Would you rephrase that? I can't answer it any better than I already have unless there's something...

Q. Doctor, is there a statistical relationship between the length of time that mediastinitis goes untreated and a direct relationship with the seriousness and numbers of complications that occur?

MS. CARULAS: Objection.

A. I'm sorry. I find it very hard to follow your -- your thought here and there's an entire spectrum and it depends upon the presentation, it depends upon the organism, it depends upon the degree of involvement. I can't answer the question any better than I already have.

Q. Does the mortality associated with mediastinitis increase as the length of time it takes to initiate treatment increases?

MS. CARULAS: Objection. Same question phrased slightly different.

A. I can't answer it any different than what I already have.

Q. Doctor, what is the mortality rate for cardiac surgery patients diagnosed and treated for mediastinitis within a month of their cardiac surgery?

A. Again, it depends on the degree of mediastinitis but, you know, I wouldn't -- I would hesitate to give you an answer without referring to the literature.

Q. Okay. I'm speaking overall for all cases of post-cardiac surgery mediastinitis. Are you able to tell me what the mortality rate is for patients that are diagnosed and treated?

MS. CARULAS: Just note my objection. Don't guess. If you have an answer to the question -

A. I don't have that number off the top of my head.

Q. Would you agree that the administration of antibiotics is an essential component of therapy for post-cardiac surgery mediastinitis?

A. Yes.

Q. Would you agree that the longer the treatment of mediastinitis is delayed the greater the chance that infection will spread to other parts of the body?

MS. CARULAS: Objection. Asked and answered. Go ahead.

A. It's the same question and I'm going to give you the same answer.

Q. Would you repeat your answer to the question then?

A. Repeat your question.

MS. TOSTI: Would you please reread my question?

(Previous question read back by the reporter.)

THE WITNESS: Can I ask you to read my answer to her?

A. It depends upon the organism. It depends upon the degree and it depends upon the presentation. It depends upon the patient, the co-morbidities, the immune factors. It depends upon a variety of situations. I cannot sit here and say definitely that, yes, this is right or that is wrong and I will not.

Q. Doctor, if --

MS. TOSTI: Bev, we're getting a whistling. I don't know if you can hear it on your end.

MS. CARULAS: We'll just have to live with it I think.

MS. TOSTI: Is she still there, though? Bev, are you still there?

MS. CARULAS: Hello?

(Pause.)

BY MS. TOSTI:

Q. If mediastinitis is suspected is antibiotic therapy covering the most common pathogens usually started immediately after blood cultures?

A. If I suspected it, yes.

Q. And then once the blood cultures are done and a specific infecting organism is identified then the antibiotic therapy is tailored to that

specific type of infection, correct?

A. Yes.

Q. Doctor, if a patient has mediastinitis following cardiac surgery should that patient be hospitalized for treatment?

A. It depends upon the severity.

Q. Okay. Are there some instances --

A. It depends on what you mean when you're defining mediastinitis.

Q. Well, give me your definition of mediastinitis.

A. Mediastinitis can run a spectrum of disease from very mild to very severe and I have certainly treated patients with deep wound infection at home with dressing changes.

Q. So in some instances patients with post-cardiac surgery mediastinitis will not require hospitalizations and can be treated at home?

A. Post-operative wound infections run an entire spectrum.

Q. And I'm just asking you if there's some instances that they don't require hospitalization an they can be managed at home?

A. It -- it's very logical that at some point in the management of these patients with

mediastinitis very early before the entire course of it has been defined or afterwards, after the course has been contained that home care can be done for them, yes.

Q. Okay. How about initially when they ar first diagnosed with mediastinitis? Are there some groups of patients with post-cardiac surgery mediastinitis that will not require hospitalization for their initial treatment?

A. Well, it depends upon the presentation and you don't know when these patients present what the extent of it is and you have to sometimes wait for things to declare themselves.

Q. In a patient that's been diagnosed with mediastinitis are there some patients that can be cared for at home without having to hospitalize them

A. Well, I would -- I assume that there could be but this is such a rhetorical question that I find it very difficult to give any -- you're askin a vague question and want a concrete answer from me.

Q. All right.

A. I find this line of questioning very difficult.

Q. Okay, Doctor. Let's take your practice.

Have you had patients that have developed post-cardiac surgery mediastinitis that you have cared for at home that did not require hospitalization for initial treatment?

A. I'm sorry. I'm very uncomfortable here because we're talking in such vague -- I mean, I can be so misunderstood by any answer that I give here with this line of questioning that I --

MS. TOSTI: I would prefer that you not motion to him as to any type of an answer.

Q. And I would prefer that you give your answer to me directly.

A. I'm giving my answer to you.

Q. Okay. Now, please explain your answer any way that you feel comfortable with, Doctor.

A. I feel comfortable by saying that post-operative coronary artery mediastinitis can present in a spectrum of presentation depending upon as we've said before the organism, the extent, the stage at which it is in development; that depending upon when it is seen at the time that it is seen and the way that it is presented that there is different ways that it can be treated successfully. That may include local drainage procedures, I&Ds, it may include antibiotics, it may include observation, it

may include hospitalization and IV antibiotics and it may ultimately include debridement of the wound.

Q. I'm going to ask my question again, Doctor.

In your practice have you had patients that you have diagnosed with mediastinitis that have not required hospitalization and that you have treated at home?

A. I have --

Q. And I'm speaking --

A. -- answered --

Q. -- of the post-cardiac mediastinitis.

A. And I have answered that question to the best of my ability and can give no other answer than what I have.

Q. I'm asking you for a yes or no.

Have you had patients that you have diagnosed with post-cardiac surgery mediastinitis that you have not hospitalized and have treated them at home? And I would ask that you either answer that yes or no and give whatever explanation you like.

MS. CARULAS: Just note my objection. He does not have to answer it either yes or no. I think he's answered --

MS. TOSTI: I don't think he has

answered the question.

A. I don't think that there's any rule in the deposition that says that I must answer yes or n and I believe that I have fully explained the treatment of mediastinitis to you.

Q. Doctor, I'm asking in your practice whether you have had any patients that you have treated at home for post-cardiac surgery mediastinitis and have not hospitalized them?

A. I answered that.

Q. You haven't answered it. Have you had any?

THE WITNESS: Would you read my answer back?

Q. I'm asking have you had any patients? To me that's a yes or a no. Yes, I have. No, I hav not.

A. I said yes in that answer.

Q. Okay.

A. That in the spectrum of these --

Q. Is your answer --

A. Excuse me.

Q. Is your answer yes?

A. In that spectrum patients are treated depending upon their presentation, depending upon the

degree and some of that treatment has occurred at home both pre- and post-hospitalization.

Q. And you did not --

A. Yes.

Q. -- listen to my question, Doctor, because my question was once the diagnosis was made have *you* treated the patient at home and they have not required hospitalization?

A. I'm sorry. I cannot give you a better answer than what I already have.

Q. Doctor, what is bacteremia?

A. Bacteremia is bacteria in the bloodstream.

Q. Is it seen frequently with mediastinitis?

A. It may be.

Q. Is it seen in most cases?

A. It depends upon the degree of mediastinitis. It certainly can be one thing. All mediastinitis does not have bacteremia.

Q. In the majority of cases of mediastinitis do you see bacteremia?

MS. CARULAS: Objection.

A. I can't answer that question now. I don't know the answer to that question now.

Q. If a patient has bacteremia which you said is bacteria in the blood the bacteria can attach to other organs, colonize and form a new site of infection, correct?

A. Yes.

Q. What does the term "sepsis" mean?

A. Means infection from the bacteria in the bloodstream.

Q. What is acute bacterial endocarditis?

A. It's an infection of the endocardium of the heart. Did you say bacterial?

Q. Yes.

A. In that case it's by bacteria and it most frequently involves the valves.

Q. And if a post-cardiac surgery patient develops bacteremia can that cause acute bacterial endocarditis to develop?

A. I've only seen it once in my lifetime.

Q. And was that one time in this case with Charlotte Herbert?

A. Yes.

Q. Other than Charlotte Herbert have you seen any other patients who have developed acute bacterial endocarditis after having bypass surgery?

A. I'm sure that I must have.

Q. Would you agree that mediastinitis after bypass surgery would increase the risk for developing acute bacterial endocarditis -- or let me rephrase that -- would be a risk factor for developing acute bacterial endocarditis?

A. Would mediastinitis be a risk factor for endocarditis? Is that the question?

Q. Yes. After bypass?

A. It could be one of them I suppose.

Q. Would you agree that if a bypass patient develops mediastinitis that the infection should be treated promptly to decrease the risk of the infection spreading?

A. Yes.

Q. And would you agree that the sooner acute bacterial endocarditis is treated with antibiotics the more likely treatment will be successful?

MS. CARULAS: Objection.

A. We've answered that question.

Q. This is in regard to acute bacterial endocarditis, Doctor, not mediastinitis, and I don't believe I've asked that question before.

A. That's my mistake.

MS. CARULAS: Objection.

A. Ask the question again.

Q. The sooner acute bacterial endocarditis is treated with antibiotics the more likely the treatment will be successful?

MS. CARULAS: Objection.

A. Again, that would depend upon the virility of the organism, the status of the patient, the antibiotics used. And I refer again to the whol spectrum of treatment.

Q. I want to make sure I understand your answer here.

My question was in regard to the treatment of bacterial endocarditis with antibiotics so what I'm asking you is the time delay between the time that the patient has acute bacterial endocarditis and the initiation of antibiotics. You don't think that that time period makes a difference as to whether or not the treatment will be successful?

A. That may be a factor. I'm saying that there are a lot of other factors involved also.

Q. That's one factor, though?

A. It may be a factor.

Q. How is acute bacterial endocarditis diagnosed?

A. Bacterial endocarditis can be diagnosed by an index of suspicion with fevers and chills, with splinter hemorrhages, from emboli, from sometimes even bleeding. The objective evidence of it is usually an echocardiogram that shows an infected or vegetations on the valve.

Q. Do you use blood cultures in the diagnosis of acute bacterial endocarditis?

A. Yes.

Q. Is the presence or absence of a murmur of any significance in the diagnosis of acute bacterial endocarditis?

A. It may be or it may not be.

Q. If it's a new murmur is that something that's significant?

A. A new onset murmur would be a concern.

Q. What are the complications associated with acute bacterial endocarditis?

A. It can run a spectrum from very minimal complications to severe life-threatening complications.

Q. And what would those be?

A. Congestive heart failure, renal insufficiency, pulmonary edema, septic emboli.

Q. Would you agree that the leading cause

of acute bacterial endocarditis is Staph aureus?

A. You know, that depends upon the patient populations you're talking about but staph is a very common organism -- organism in endocarditis.

Q. Well, we're talking about post-cardiac surgery patients.

A. Well, that's a common organism.

Q. Is Staph aureus also a common cause of post-cardiac surgery mediastinitis?

A. It's a common organism that causes mediastinitis, yes.

Q. And how is bacterial endocarditis treated?

A. Recognized cases of endocarditis are treated with appropriate antibiotics depending upon the blood cultures and the sensitivities of the organism and if that's not successful surgery is oftentimes used.

Q. And in regard to surgery are you talking about valve replacement?

A. Valve replacement. Repair is less common in endocarditis. It depends upon -- on what -- where along the spectrum of the disease that you're treating the patient, whether you've been able to heal the endocarditis with antibiotics, whether it's

an active infection so there's no -- there's no one answer for it.

Q. Under what circumstances would surgical valve replacement be required in a patient that has had bacterial endocarditis? What would be the deciding factors that would cause the decision to be made to replace the valve?

A. Well, if the valve was -- was failing functionally, if there was a vegetation that was at a high risk for embolizing or even if the valve had been treated and the endocarditis was resolved but it was left with a deformed valve and it was causing problems, these would be some of the indications for surgery.

Q. Do you have an independent recollection of Charlotte Herbert as you sit here today? Aside from what you've read in the medical records in your review --

A. I remember --

Q. -- do you recall her?

A. I remember her, sure,.

Q. Now, in August of 1995 did you have any type of a professional association with Dr. Mikhail? Was he a member of the Cleveland Clinic staff?

A. He was.

Q. And did he hold any clinical position or title with Cleveland Clinic that was senior to yours?

A. No.

Q. How is it that Charlotte Herbert came under your care?

A. I believe I was on call the weekend that she came into the emergency room.

Q. And if you could just tell me how the on-call system was working at that time. In other words, were you on **call** for only Dr. Mikhail or were you on call for several people? Were you working just on the night shift?

A. I was on call for the cardiac surgery patients.

Q. When you took --

A. For the practice.

Q. Okay. And how many cardiac surgeons were you covering for?

A. Two.

Q. And who were they?

A. Dr. Saltus and Dr. Mikhail.

Q. And when you were taking call how long a period of time were you taking call?

A. I don't recall.

Q. Generally-speaking did you do it for the

whole weekend or just on the night shift?

A. No, it wouldn't be just the night shift and it was likely the whole weekend.

Q. Did you trade-off with Dr. Saltus and Dr. Mikhail on weekends to take call?

A. Yes.

Q. Among the three of you?

A. Yes.

Q. Dr. Mikhail was -- I'm not sure if I'm pronouncing his name correctly. Is it Mikhail?

A. Mikhail.

Q. Mikhail?

A. (Witness indicates.)

Q. Dr. Mikhail was out of town. Do you know when he left to go out of town?

A. No, I don't.

Q. Prior to the time that he left did he discuss Charlotte Herbert with you at any time --

A. No.

Q. -- prior to the emergency visit on August 20th?

A. No.

Q. And did you consult with Dr. Mikhail at any time about Charlotte Herbert on August 20th when she was seen in the emergency room?

A. No.
Q. Did you consult with Dr. Mikhail at any time prior to his return to town when she was in the hospital?
A. No.
Q. Now, prior to August 20th which was the date that she was seen in the emergency room had you seen Charlotte Herbert as a patient?
A. I don't recall.
Q. And after the time that -- let me back up on that.
Do you know whether you saw her at any time prior to the time she had her bypass surgery?
A. Not that I'm aware of.
Q. Did you see her at all when she was hospitalized for her bypass surgery that you recall?
A. It's quite likely that I did but I don't recall.
Q. Would that be on rounds covering for Dr. Mikhail?
A. That's a possibility.
Q. But you didn't at any time care for her as your patient?
A. No.
Q. When she presented to the emergency room

on August 20th how were you notified that she was there?

A. I don't recall the specifics. I'm sure I was paged.

Q. Did you speak to anyone from the emergency room when you received the page? Did you call them back?

A. Well, I assume that I did but I don't recall any details of that.

Q. Do you recall if you talked to the emergency room physician or one of the nurses?

A. I don't recall.

Q. Do you recall what you were told about Charlotte Herbert?

A. I do not.

Q. Where were you when you received the page?

A. I don't recall.

Q. Do you know whether you were in the hospital or outside the hospital?

A. I don't know.

Q. Did you go to the emergency room to see Charlotte Herbert on August 20th of '95?

A. Yes.

Q. And what was the reason that you decided

to go to the emergency room to see her?

A. Because I was paged.

Q. Okay. But, Doctor, I would assume that it's your decision as to whether you go there or you answer a question or whatever and I'm trying to understand why it was that you went to the hospital to see her as opposed to speaking with someone over the phone about her?

A. I see all of our patients that come in to be seen.

Q. Okay.

A. They...

Q. Go ahead.

So if the emergency room pages you you would routinely go and see the patient if one of them had presented to the emergency room?

A. Depending upon, you know, what they called about but, yes, as a general rule I would see the patients.

Q. Do you know what time you saw Charlotte Herbert in the emergency room?

A. It was early morning.

Q. Was anyone with Charlotte Herbert when you saw her?

A. I believe she had a daughter with her.

There was someone with her.

Q. Did you have any conversations with that person that you recall?

A. Yes, I did.

Q. Do you recall the content of any of those conversations?

A. I don't remember the specifics of it. We talked about how she was feeling, what her problems were.

Q. Was Charlotte Herbert able to give you any history?

A. Yes.

Q. Okay. What information did she give you?

A. In generalities without me being totally specific she said, you know, she was feeling poorly, she hurt, she was having bad nausea and vomiting and was generally feeling bad.

Q. Did she tell you when those symptoms started?

A. Well, she had been -- she had been complaining of nausea and vomiting earlier that night or, you know, during the night and in the morning.

Q. Were you aware that she was diabetic?

A. Can I look at the record, at the -- I

looked at the emergency room record and, yes, I was aware that she was diabetic.

Q. And were you aware that she had had bilateral mammary artery implantations during her revascularization?

A. I don't know if I knew that specifically at that time or not.

Q. Did you request to have her old chart brought to the emergency room from her bypass surgery?

A. I don't recall.

Q. If you requested that's something that you can do is have the old chart brought to the emergency room, correct?

A. Yes.

Q. Did you do a physical examination when you saw Charlotte Herbert?

A. Yes, I did.

Q. And what did you find on your physical examination?

A. I didn't find any signs of a deep sternal wound infection. I wrote in my note that she had a glucose of 281 but it was drawn after an IV with 5 percent dextrose was started.

Q. Okay. Now, Doctor, you're looking at

the emergency room record and is a portion of this record in your handwriting?

A. Yes.

Q. Okay. Could you tell me what portion i in your handwriting? Just the areas that you've recorded information.

A. Well, that's just what I was telling you.

Glucose was **281** but drawn after IV with 5 percent dextrose was started. No sternal wound -- no sternal infection. White count **16,000** and complains of epigastric distress. The plan was to D medications, to give antacids, to follow her temperature and to see her in the office or have her call the office in the morning and tell me how she was doing.

Q. And all that that you've just read is i your handwriting --

A. That's --

Q. -- is that correct?

A. That's correct.

Q. Okay. Now, Doctor, Dr. Adelman's emergency note indicates that she was having severe pain. Is that consistent with what you found?

A. No.

Q. So when you saw her she wasn't having severe pain, correct?

A. No.

Q. His note also says that she was having pain on movement. Did you find that in your examination?

A. I don't recall that she was having severe pain when she was moving. She was very dramatic about everything but she seemed to be reasonably comfortable and -- and not debilitated with pain.

Q. Okay. And he says that she was weak and she was having so much pain in her chest that she could not lift her head up. Did you note any problem with her being able to lift her head up when you saw her?

A. Not at all.

Q. I think the emergency room note says that she was dizzy and nauseated. Was that consistent with your findings?

A. Yes.

Q. And I believe there's a set of blood gases also that are recorded in the emergency room typewritten note.

Did you find that there was any

deviations from normal in the blood gases that are recorded there? Did you have those available to you, first off, when you saw her?

A. I don't recall.

Q. Okay. And looking at those blood gases are there any deviations from normal for this patient?

A. Well, this says she's slightly alkalotic. The Ph is 75. PO 2 is 76.

Q. Are those abnormal blood gases for this patient?

A. I wouldn't be too concerned about it.

Q. What was within your differential diagnosis when you saw her?

MS. CARULAS: Note my objection to the term "differential diagnosis."

A. The differential diagnosis in anyone post-operatively --

Q. Well, Doctor, my question is specifically for Charlotte Herbert. I want to know what was within your differential diagnosis?

A. Then the differential diagnosis was gastrointestinal problems. We looked at the incision and I did not think that there was signs of a serious wound infection at that point. Talked to her and her --

-C. Saunders, M.D. - direct - Ms. Tosti-

whoever was with her at the time and the main thing she was complaining about was the epigastric distress, the nausea and vomiting that she had. She had had it before in the hospital. She was on medications that could possibly cause that, specifically the aspirin and the Darvocet, and so we stopped those irritants, gave her some antacids and asked to observe -- asked her to observe the clinical course and to check her temperature.

Q. So getting back to the differential diagnosis, you mentioned GI problems. Was there anything else within your differential diagnosis?

MS. CARULAS: Note my objection. I believe he's answered what his impression was at the time.

Q. I'm going to ask you to please continue with your answer. Other than gastrointestinal problems was there anything else within your differential diagnosis, Doctor?

MS. CARULAS: Objection. Go ahead.

A. I agree with my counsel. I believe I've answered the question; that I looked at the wound, I did not feel at that time that there was evidence of a serious wound infection and my differential diagnosis at that time was basically surrounding the

GI tract because of her previous history and because of her presentation.

Q. Doctor, if you need to answer your page

A. No. We can keep going.

Q. So -- and please correct me if I've misunderstood you but at the time that you saw her in the emergency room you did not have sternal wound infection or mediastinitis within your differential diagnosis?

A. Oh, no. It certainly was within the differential diagnosis.

Q. Well, Doctor, that's what I was asking you. I asked you specifically and the only thing I've heard you answer is GI problems so please if you would elaborate on what was within your differential diagnosis at the time that you saw her in the emergency room.

A. Well, any patient that I see and specifically --

Q. Doctor --

MS. CARULAS: Let him --

Q. -- specifically Charlotte Herbert.

MS. CARULAS: Let him answer the question.

A. I was saying specifically when I was

interrupted.

I looked at her. I assessed her wounds so wound infection was in the differential diagnosis. I listened to her lungs, I listened to her heart. That was in the differential diagnosis. I poked on her stomach and talked to her and tried to assess the GI thing so all of those things were in the differential diagnosis.

Q. Doctor, how do you define differential diagnosis? What's your definition of differential?

A. The realm of possibility. Given the signs and symptoms what are the possibilities something could be happening and within that differential diagnosis you pick the most likely that appears at that given point in time given the patient's presentation, and I felt at that time given her past history, her presentation at that point that the GI was the most likely cause of her problems and elected to watch for the others but to treat that at the present time.

Q. You disagree then with what Dr. Adelman has included in his emergency room note that this was a probable wound infection and possible mediastinitis. Is that correct?

A. The probable, yes, I disagree with. The

possible mediastinitis, anything is possible.

Q. Did she have any signs or symptoms or lab results that would be consistent with mediastinitis at the time that you saw her in the emergency room?

A. I found nothing specific to mediastinitis

Q. My question was signs and symptoms and lab results that would be consistent with mediastinitis, Doctor.

MS. CARULAS: Objection.

A. In an ill patient there's a spectrum of possibilities and there are labs and things that we do that are general. She had white blood cell counts that was elevated and she had a temperature and there is a multitude of things which could cause that and certainly the possibility of wound infection and mediastinitis was considered at that point.

Q. Was she having any kind of pain in the incision at the time that you saw her?

A. She was complaining of pain in the lower portion of the incision.

Q. Did she have any sternal instability at the time that you saw her?

A. I don't believe so.

Q. Is that something that you checked?

A. Always.

Q. Did Charlotte Herbert have any risk factors for mediastinitis when you saw her on August 20th?

MS. CARULAS: Note my objection.

A. We've been through the risk factors of mediastinitis and I believe I've answered that question.

Q. Doctor, you have not answered it in regard to Charlotte Herbert and I'm asking you specifically on August 20th in the emergency room did Charlotte Herbert have any risk factors for mediastinitis?

A. Charlotte Herbert had open heart surgery and she was a risk for having mediastinitis. She had noninsulin-dependent diabetes of some degree which may increase the risk for wound infections and mediastinitis.

Q. She also had bilateral internal mammary artery implants with her revascularization and that would be a factor also, wouldn't it?

A. The -- whether or not bilateral internal mammaries and noninsulin diabetes is a risk factor I'm not sure of.

Q. Now, did you give any consideration to

admitting Charlotte Herbert when you saw her in the emergency room?

A. I did.

Q. Okay. And what was the basis for your decision not to admit her at that time?

A. I talked -- I examined her, I talked with her and the family. I asked -- I don't remember the specific words that were used. We talk to them - I talked to them and I felt that this was something that could be observed, that we wanted to keep track of it. That's why I wanted to check with them in the morning but it was my judgment at that time that it was not necessarily something that she would have to be admitted to the hospital for.

At that particular point in time, the particular presentation that she had, my impression was that she had some gastrointestinal process that was causing her nausea and vomiting and the discomfort in her epigastrium. I discussed it with them. I suggested that we take away the medications that could possibly be irritating that, give her some antacids that could possibly relieve that and to observe farther, see what the results of that treatment would be and what the clinical course would be.

Q. Doctor, can't mediastinitis sometimes cause epigastric-type pain?

A. Anything's possible. In my experience, however, nausea, vomiting, an epigastric pain is not a presenting factor of people with wound infections with mediastinitis.

Q. If a patient with mediastinitis has a retroperitoneal extension do they have acute abdominal signs and symptoms?

A. I've never seen a retroperitoneal extension of mediastinitis.

Q. Now, she had a white blood cell count of 16,900 when she was in the emergency room, correct?

A. Where is that? I'd have to look at the lab tests. I have 16,000 written on my --

Q. Okay.

A. -- on my note but I will spot you the 900

Q. Okay. Is there any reason why you chose not to order blood cultures at that time knowing that this patient had had recent bypass surgery? Is there any reason? Is that something you considered and chose not to do?

A. I'm not sure how I -- how to answer that question except to say that given her presentation and my experience and the way that the wound looked

and so forth I felt at that point in time that it looked more like a gastrointestinal issue than -- than a full-blown sepsis and mediastinitis.

Q. She was febrile at the time that you saw her and also had an elevated white blood cell count.

A. Yes.

Q. Shouldn't that raise an index of suspicion for infection?

A. Yes.

Q. Okay. In a patient that has had recent bypass surgery with an index of suspicion for infection wouldn't a reasonably prudent physician order blood cultures for the patient?

MS. CARULAS: Objection.

A. All I can say is that I looked at this patient and given the presentation at the time, you know, I chose to treat her in this manner. I thought it was prudent to follow this and to watch this but I did not -- you know, the record's clear that I did not order blood cultures. I do not order blood cultures on every post-op patient that has a temperature.

Q. And a white blood cell count over 16,000?

A. A white blood cell count is elevated. There are other things that can do that and it's not

necessarily mediastinitis.

Q. What other things in Charlotte Herbert's case do you think was causing her white blood cell count to be that level?

A. Let's go back to the spectrum of possibilities. Anything is possible.

Q. I'd like to know in this case.

MS. CARULAS: He's answering your question, Jeanne.

Q. When you evaluated her --

A. Yes.

Q. -- you were aware of the clinical data that she had a white blood cell count over **16,000**, you were aware that she was running a temperature and I would like to know what you thought was causing th elevated temperature as well as the elevation in the white blood cell count.

A. Yes. And -- and I think I answered tha question that it was my impression at that time that we were dealing with a gastrointestinal process. I thought it was likely that maybe she had gotten the flu, that she had gastritis, maybe even a perforated ulcer. I mean, the whole spectrum runs here but at that point in time given her presentation and my experience and the information that I had I chose to

treat her this way.

Q. At some point after you saw her in the emergency room did Charlotte Herbert have mediastinitis at some point in her hospitalization?

A. Yes, she did.

Q. Okay. Do you have an opinion as to when she developed mediastinitis?

MS. CARULAS: Note my objection.

A. Some point after heart surgery.

Q. Okay. Do you have an opinion as to whether she had mediastinitis at the time that *you* saw her in the emergency room?

A. It's --

MS. CARULAS: Objection. *Go* ahead.

A. Anything is possible.

Q. When you saw her in the emergency room did she have any signs or symptoms of endocarditis?

A. Not that **I** was aware of.

Q. Do you have an opinion as to when she developed endocarditis?

A. We had on the -- was it the 22nd -- transthoracic echocardiogram that showed normal valve and that Friday I believe it was that she threw an embolus that was removed and found to be a septic embolus. Some time during that period she developed

mitral valve endocarditis.

Q. So is it likely when the echo was done that didn't show any problems that -- let me rephrase this.

Is it likely that the endocarditis developed some time after the echo that was done on the 22nd?

A. All I can say is that there was no echocardiographic evidence according to the echocardiographer's report of endocarditis on the 22nd.

Q. Now, Doctor, the instructions that you gave Charlotte Herbert in the emergency room were that she was to contact your office the next day and come in and see you. Is that correct?

A. That's right.

Q. Okay. And what did you tell Charlotte Herbert in regard to what was going on when you saw her in the emergency room? What was the information that you provided to her?

A. Well, specifics are difficult for me to recall but I -- any patient like this I would have told to watch very carefully for the temperature, see how things go, call me if there's a problem, come in the next day and we'll recheck.

Q. Now --

A. And -- and I would also ask them if they were comfortable with that decision.

Q. Okay. And do you recall if there was any response from Charlotte Herbert when you told her this? Do you remember any part of the conversation?

A. As I remember they were comfortable with that. If they had said that they wanted to be -- if they wanted to be admitted to the hospital that I would have done it. If they were uncomfortable with the plan of care that we had outlined we would have changed it.

Q. When you saw her in the emergency room did you have any preconceived plans of admitting her the next day? Had you made any decisions in regard to admission the next day?

A. No. My decision at that point was to see what developed over the course of time. We were in an evolving process and it was important to watch and see what happened.

Q. Who is Dr. Krause? Do you know who he is?

A. I don't.

Q. Now, Charlotte Herbert presented to your office the following day on August 21st. Is that

correct?

A. Yes, I believe that's correct.

Q. And did you on that day examine her and assess her condition?

A. I think we -- I don't remember the exact specifics of it but I -- but the -- she called and we admitted her right to the hospital at that point.

Q. Did she come in and did you actually see her in person?

A. You know, I don't remember.

Q. Okay. Do you recall doing any kind of a physical exam or anything prior to admission?

A. I don't remember.

Q. Okay. What was the reason that she was being admitted?

A. Because she had continued to have a temperature, continued to feel bad, wasn't doing well at home and -- and I do recall now she had started to drain from the -- from the incision I believe.

Q. Do you recall what was within your differential diagnosis on August 21st when you saw her?

A. At that point we had gotten pus out of the incision and we admitted her with the impression, "rule out mediastinitis, rule out" -- I can't even

read Jeff --

MS. CARULAS: Gastritis.

THE WITNESS: Yeah.

A, -- "gastritis."

Q. Was she admitted to the hospital under your service?

A. Yes.

Q. And, Doctor, you had rule out mediastinitis. What factors did you observe in her that would lead you to a differential diagnosis of rule out mediastinitis?

A. At this point things had changed and she was draining pus out the lower portion of the incision.

Q. Okay. Mediastinitis is a deep wound infection, correct?

A. (Witness indicates.)

Q. Okay. And what evidence did you have that this was a deep wound infection as opposed to just a sternal infection?

A. You know, we didn't have any. We could have just as easily written rule out superficial wound infection. We could have just as easily written rule out substernal infection but we knew at this point with the drainage of the pus that that issue had to be addressed and that we had to find out

the extent of it.

Q. Who is Jeffrey Weiland?

A. He's a physician's assistant that worked with us at the Cleveland Clinic.

Q. Okay. He was a Cleveland Clinic employee also?

A. Yes.

Q. And, Doctor, there's a progress note that is written by I think Jeffrey Weiland as an admission note at 1420 hour.

A. Mm'mm.

Q. And it says that she was seen in your office and that she continued to have nausea, vomiting, achiness, fever, chills. Is that consistent with your findings?

A. Yes.

Q. And did you go to the hospital when she was admitted? Did you see her in the hospital then or did you just see her in the office?

A. You know, I really don't recall exactly what the situation was.

Q. Do you recall checking her for sternal instability on the 21st?

A. I don't recall that. I recall that we made our decision around the new finding of the

drainage of purulent material from the incision.

Q. Now, the information that's contained in Jeff Weiland's note would that be information that he obtained from you or would he be doing his own physical exam?

A. No. We'd be doing it together.

Q. Okay.

A. He would be doing his and we'd be in close communication.

Q. Okay. Now, his note from the 21st, it says chest stable with cough. Would that be an observation that he was making with you?

A. Yes.

MS. CARULAS: How we doing here time-wise? Am I going to catch my 7 flight?

MS. TOSTI: I doubt it.

MS. HARRIS: Am I going to miss my dinner?

MS. TOSTI: We will go until we're done here. I've probably got at least another half hour or more.

Q. The nurse's notes indicate that this lady was admitted around 12:15. The doctor's orders don't indicate that there were any orders for blood cultures on this lady until about 2:20.

Is there any reason why you didn't order blood cultures for her on admission?

A. I don't recall the circumstances.

Q. Okay. Wouldn't you expect if the patient was coming in with a diagnosis of rule out mediastinitis that blood cultures should be done immediately upon admission?

MS. CARULAS: Objection.

A. This is pretty immediate for...

Q. Doctor, if you have a suspicion of mediastinitis in this patient wouldn't it be important to put her on prophylactic antibiotics as soon as possible?

A. Antibiotics would be important, yes.

Q. Yes. Okay. So it would be important to get the blood cultures done and then to start the patient on the antibiotics as soon as possible, correct?

A. Yes.

Q. Okay. In this instance there were --

A. Excuse me.

Q. Go ahead. Finish your answer if you have anything in addition you want to add.

A. No, I don't.

Q. Okay. In this instance there were no

antibiotic orders written for this patient I think until 5:30. Is there a reason why those orders were written at 5:30 and not at the time that the patient was admitted to the hospital?

A. I don't know what the reason is.

Q. You would agree, though, that in a patient such as this with a diagnosis of rule out mediastinitis that they should have been ordered on admission, the antibiotic orders?

MS. CARULAS: Objection.

A. I -- I don't know how to answer that question. I don't think that a two-hour difference in here makes any difference in the treatment of the patient and the final outcome of the patient nor do I know what the circumstance -- recall what the circumstances were that caused that time difference in there but I'm quite certain that it didn't affect the final outcome of this patient and I say that because she was started on the strongest antibiotics that we know, that she had a normal echocardiogram after that and while on these antibiotics she developed vegetation on the mitral valve so do I think that a delay of two hours or twelve hours or whatever in this patient made a difference? No. I think that that's very hard to answer that because it

depends upon the degree, the spectrum, the virility of the organism, the patient's immune system and a variety of factors.

Q. Now, she had a set of blood cultures that were done on August 21st and those blood cultures showed that she had a bacteremia caused by Staph aureus. Is that correct?

THE WITNESS: Is that correct?

A. Can I consult the chart?

Q. I'm not trying to ask you --

A. Okay.

Q. -- specifically when the blood cultures were done but ultimately the blood cultures that were done showed that her infection was a Staph aureus infection, correct?

A. I believe that's correct.

Q. And that she had a bacteremia caused by Staph aureus based on the blood cultures, correct?

A. Yes.

Q. Do you have an opinion as to whether the blood cultures would have been positive for Staph aureus if they had been done in the emergency room on the 20th?

MS. CARULAS: Objection.

A. Anything is possible.

Q. Doctor, her bacterial endocarditis was also found to be due to Staph aureus. Is that correct?

A. Yes.

Q. And is it likely that the mediastinitis that she had caused the endocarditis?

A. I think that's likely.

MS. TOSTI: I'm editing.

MS. CARULAS: What's that?

MS. TOSTI: I'm editing.

MS. CARULAS: That's encouraging.

MS. HARRIS: Keep going.

MS. CARULAS: If you think that by chance you can finish up within 25 minutes we can call for a cab and at least then -- you know, that way you could make that seven o'clock flight as well because it's only like ten minutes --

MS. TOSTI: I'm not sure. It depends on --

MS. CARULAS: Okay. Let's check in ten minutes.

Q. Doctor, when you have a patient that has mediastinitis such as the type that Charlotte Herbert had what's the purpose of opening and debriding that wound? Why do you do that?

A. The basic principles of a wound infection is drainage and debridement and it's the

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same for her mediastinitis as it is for any other wound infection.

Q. Does the removal of the infected material and debris from the wound reduce the risk of the infection spreading?

A. It may.

Q. Does it promote healing?

A. It may and, again, it depends upon the spectrum, involvement and all of the factors that we've discussed several times here before as to how this patient is going to respond and what treatment is going to be successful.

Q. Okay. When Charlotte Herbert came into the hospital on the 21st did you take any action to open and debride her wound on the day of her admission?

A. We expressed some -- there's some drainage. We expressed some purulent material from the lower portion of her wound.

Q. Was there a reason why you did not open the wound on the 21st when she came into the hospital

A. Well, specifically for her it's -- you know, it's difficult for me to recall but in most all these patients you take it by stages and -- and by the signs and symptoms and the things that you see

and your experience. And we got some pus out. We didn't get any more. The next day it looked different and we opened it up and drained more.

Q. Okay. How --

A. We observed that for awhile and then Dr. Saltus made a decision to -- well, then I think -- then I think it was noted that the sternum was unstable and the decision was made then to completely open the wound -- the incision. We had hoped to avoid that.

Q. How did the wound look different on the 22nd?

A. It was draining. It was draining purulent material.

Q. Okay. It was draining on the 21st and you said you didn't open it based on your clinical decision but you did open it on the 22nd because it looked different --

A. Didn't stop.

Q. -- and I want to know what the difference was?

MS. CARULAS: Review the records at least just so you're completely....

(Pause.)

A. The drainage didn't stop. We took the

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dressing off. There was a lot of drainage on the dressing and so we figured that it was more than just a little pus under there and that we needed to look farther.

Q. Okay. Now, you opened only a portion of the wound. Is that correct?

A. That's correct.

Q. Okay. What portion of the wound did you open?

A. The lower portion.

Q. Now, is there a reason why you chose only to open that portion of the wound rather than the whole wound?

A. Well, yes. As I explained before we had hoped not to have to -- to be able to treat it with less aggressive measures, not to have to rewire her sternum. We were hoping that it would be a more contained infection. We were trying to in the process watch her clinical course and find out the extent of this.

Q. Now, Doctor, she was admitted on the 21st after she saw you at the office. You opened this wound at least according to the note on the evening of the 22nd --

A. That's right.

Q. -- I believe is the note.

Did you see her in the morning on the 22nd?

A. Yes.

Q. Is there a reason why you didn't choose to open the wound that morning?

A. Yes.

Q. Okay. What was that reason?

A. The wound had less purulent material expressed, slightly less redness and she's feeling better are the notes that we made.

Q. Okay. And you're referring to --

MS. CARULAS: The 9:10 a.m. note on the 22nd.

Q. ***So*** in the morning on the 22nd did you feel that things were improving at that point?

A. We felt that she was resting comfortably, that she was feeling better today, she still remained febrile but the wound had less drainage and slightly less red so it didn't look like it was worse at that point.

Q. The opening of the wound that you did in the evening on the 22nd was that done at the bedside?

A. Yes, it was.

Q. Did you do any debridement when you

opened the wound at that point in time?

A. I don't remember the exact specifics of that but we opened the wound, expressed what we could and we might have -- if there was a little bit there where we didn't do any big procedure, any big debridement, no.

Q. After the procedure that was done on the evening of the 22nd did you see Charlotte Herbert after that point in time?

A. I think at that point Dr. Saltus assumed her care.

Q. Okay. Why is it that Dr. Saltus assumed her care?

A. Well, Dr. Saltus --

MS. CARULAS: If you know.

A. -- was the staff surgeon there practicing with Dr. Mikhail and I had other responsibilities down at the main campus as well.

Q. So at the time that you were seeing Charlotte Herbert were you working down in Cleveland as well as in Elyria; at both places? Did you have patients at both places?

A. Most likely.

Q. Did you spend a portion of your time at both places during the week?

A. I don't remember the specifics of that at that particular time but -- but, yeah. I might have been at both places.

Q. Okay. And what did you tell Dr. Saltus in regard to Charlotte Herbert's condition when he took over her care?

A. Well, I don't remember specifics of what I -- what I told him but he was there with us when we debrided it and he was fully cognizant of what had been done and...

Q. When you opened the wound on the evening of the 22nd, Dr. Saltus was there with you?

A. Yes. I --

MS. CARULAS: That's all right. You've answered.

Q. Okay.

A. You know, I thought that he was but I -- my recall that could be -- could be wrong. I don't know.

Q. Okay.

MS. CARULAS: No. He was.

A. It might have been Jeff that was there, too, or maybe all -- both of them were there. I don't recall.

Q. It appears that --

A. I thought that he was.

Q. -- that the physician's assistant wrote the note so I'm just interested in knowing if there was anyone additional there and if you don't recall, that's fine.

Dr. Saltus's note on the 24th indicates that he found some sternal instability. Did he discuss her case with you at any point after the 22nd? Were you still in on any discussions regarding her care with Dr. Saltus?

A. I remember specifically, yes, to answer that. I remember specifically him telling me about the plans for the debridement, for opening the chest and, of course, the complication of the emboli.

Q. Even though Dr. Saltus was managing after that point were you in to see her at any point that you recall after the 22nd?

A. I don't recall.

Q. Did you have any input into the decision to take her to surgery for the opening of the remaining portion of her incision and debridement or was that Dr. Saltus's decision?

A. Well, Dr. Saltus is certainly capable of making that decision and -- and I believe that he told me that it needed to be done but at that point,

you know, he was managing the care. I mean...

Q. Do you know why that surgery was necessary? And I'm speaking of the debridement and the opening of the wound.

A. Well, as -- as this was followed and as this developed the sternal instability occurred. We had pus draining from an incision and an unstable sternum and that would be the indication.

Q. So would it be fair to say that her infection was spreading?

MS. CARULAS: Just note my objection again because he wasn't there but to the best of your understanding based upon this discussion you had with Dr. Saltus.

A. Yes.

Q. Doctor, when a patient has mediastinal infection of the type that Charlotte Herbert has why are the wires in the chest usually removed in the procedure?

A. First of all, you're qualifying this as a type that Charlotte Herbert had and I've never seen one like hers before in my life. Let me make that clear. But in any patient that has --

Q. Let me withdraw the question and rephrase it.

In Charlotte Herbert's case why was it indicated to remove the sternal wires?

A. Foreign body in a site of infection.

Q. Okay. And a foreign body in a site of infection, why would you want to remove the foreign body? What impact does that have on an infectious process?

A. First of all, besides the fact that there's a foreign body and it can be a nidus for infection, they're serving no purpose because they'r not holding the sternum together any more.

Q. Have you taken patients to surgery to open a sternal wound, debride it and remove wires in your practice?

A. Yes.

Q. Once sternal instability is noted is there an urgency in getting that patient into surger to open the wound, debride it and remove the sternal wires?

MS. CARULAS: Objection.

A. Not necessarily.

Q. Were you present for that surgery?

A. No.

Q. Doctor, one of the complications that can occur with bacterial endocarditis is that

vegetations can sometimes break off from a heart valve and travel through the bloodstream as a septic embolism, correct?

A. Yes.

Q. And in a patient that has had recent bypass surgery and has mediastinitis if they develop acute limb ischemia would you agree that there shoul be a high index of suspicion for septic embolism fro bacterial endocarditis?

MS. CARULAS: Note my objection. ***Go*** ahead.

A. Well, there's a variety of things that cause limb ischemia and an embolus and in that endocarditis is one of them.

Q. Would you agree in Charlotte Herbert's case that acute ischemia of her left lower extremity on August 25th should have raised a high suspicion that she may be having vegetative embolisms from endocarditis?

A. Again, anybody, Charlotte or anyone else, limb ischemia, there's a variety of reasons that can cause that and we would entertain all of them.

Q. Okay. But in her case --

MS. CARULAS: Just note my objection.

A. I was answering that in her case.

Q. In her case should there have been a high level of suspicion that the limb ischemia may be due to vegetative embolisms?

MS. CARULAS: Just note my objection because obviously he wasn't there to assess this patient and so forth and I think you've answered the question but go ahead. If you can answer it --

A. I believe I have answered the question and having not been there and recalling the facts there is no reason -- well, I shouldn't comment because I wasn't there. I wasn't taking care of the patient.

Q. During the time that Charlotte Herbert was hospitalized at Elyria Memorial Hospital did you have any phone conversations with Dr. Mikhail about her?

A. I don't recall.

Q. Did you participate in any way in the decision to transfer her to Cleveland Clinic proper in Cleveland?

A. No, I didn't.

Q. Did you have any conversations with Charlotte Herbert's family while she was a patient at Elyria?

MS. CARULAS: If you recall.

A. I don't recall specifically but I think that I would have in those first two days but I can't specifically recall them.

Q. And after she was transferred to Cleveland Clinic did you see her as a patient at all?

A. No.

Q. And after she was transferred to Cleveland Clinic did you have any conversations with any of the family members?

A. Not that I recall.

Q. Do you have an opinion as to what caused Charlotte Herbert's death?

MS. CARULAS: Note my objection.

A. No. I wasn't involved in her care at the end.

Q. Do you have an opinion as to what caused her subsequent strokes?

A. I wasn't involved in her care at that time.

MS. TOSTI: Just about done.

Q. Do you have an opinion as to what point in time her condition was irreversible?

MS. CARULAS: Objection.

A. No, I don't.

Q. Do you have an opinion as to whether earlier transfer to Cleveland Clinic for valve replacement surgery would have prevented her death?

A. No, I don't.

Q. Was Charlotte Herbert's death ever discussed in any type of a staff meeting?

MS. CARULAS: Objection.

A. It would have been discussed at the morbidity and mortality conference.

Q. If Charlotte Herbert had not developed endocarditis and her mediastinitis had been treated successfully do you have an opinion as to what her reasonable life expectancy would be?

MS. CARULAS: Objection.

A. The easy answer is no.

Q. Okay. How did you learn of Charlotte Herbert's death?

A. I don't recall.

Q. Did you learn of her death at some time prior to the filing of this suit?

A. Yes.

Q. Did you have any conversations with any of the physicians that treated Charlotte Herbert at Cleveland Clinic in Cleveland? And I'm speaking of the time when she was hospitalized there. Did you

have any conversations with any of the doctors at the Cleveland Clinic?

A. I don't recall any specific conversations

Q. Do you have any criticisms of anyone that rendered care to Charlotte Herbert?

A. Does that include the legal team afterwards?

Q. I don't believe any of them rendered care *so*, no.

Do you have any criticisms of anyone that rendered care to Charlotte Herbert?

A. No.

Q. And do you blame Charlotte Herbert in any way for the complications that she suffered?

A. Medicine is an inexact science and we all do the best that we can in it with our experiences, with our education and with the presentation of things that are given to us. We don't go around pointing fingers and blaming people and -- and putting cause on things. We all try and do the best that we possibly can given the circumstances that we're working in.

Charlotte was an unfortunate individual that had life-threatening diseases and the combination of those diseases came together in her

and caused a very unfortunate situation and some very dedicated people worked very, very hard to try and correct that for her and they weren't successful.

MS. TOSTI: Now, Doctor, I don't have any further questions. I don't know if Beverly Harris may have some questions for you.

MS. CARULAS: You still there?

MS. HARRIS: I don't have any. Thank yo

MS. CARULAS: You have the right to reac over the transcript to make sure everything's taken down accurately. I always recommend that you do that and not waive signature.

I'll order a copy, send it to me, you have my address and then I'll send it on to the Doctor.

And you waive the typical time requirements?

MS. TOSTI: How much time do you want? I don't leave it open-ended so tell me what you need.

MS. CARULAS: Yes. Month to six weeks?

MS. TOSTI: Okay.

MS. CARULAS: Is that fair? Okay. All right.

(Reporter retains exhibit.)

(6:27 p.m.)

JURAT-

I, CRAIG SAUNDERS, M.D., do hereby certify that I have read the foregoing transcript of my testimony taken on Tuesday, April 6, 1999 and have signed it subject to the following changes:

PAGE LINE CHANGE

_____
CRAIG SAUNDERS, M.D.

DATE: _____

Sworn and subscribed to before me this
day of , 19 .

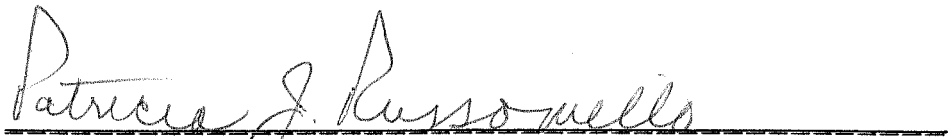
NOTARY PUBLIC

CERTIFICATE OF OFFICER

I, PATRICIA J. RUSSONIELLO, a Certified Shorthand Reporter and a Notary Public of the State of New Jersey, do hereby certify that prior to the commencement of the examination the witness was duly sworn by me.

I DO FURTHER CERTIFY that the foregoing is a true and accurate transcript of the testimony as taken stenographically by and before me at the date, time and place aforementioned.

I DO FURTHER CERTIFY that I am neither a relative nor employee, nor attorney or counsel to any parties involved; that I am neither related to nor employed hy any such attorney or counsel, and that I am not financially interested in the action.



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