IN THE COURT OF COMMON PLEAS
CUYAHOGA COUNTY, OHIO

Michelle R. Freeman,
et al.,

Plaintiffs,

vs. Case No. 490991

Cardiovascular Clinic,
et al.,

Defendants.

TELEPHONIC DEPOSITION OF

BARRY S. GEORGE, M.D.

September 1, 2004
6:03 p.m.

1330 Coschocton Avenue
Mount Vernon, Ohio

Laurie A. Braverman
Professional Reporter

APPEARANCES

ON BEHALF OF THE PLAINTIFFS MICHELLE R. FREEMAN, ET AL.:

BECKER & MISHKIND CO., L.P.A.

JOHN W. BURNETT

ATTORNEY AT LAW

VIA TELEPHONE

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ON BEHALF OF THE DEFENDANTS DR. JAMES SECHLER, DR. RAJU MODI AND DR. CHRISTINE ZIRAFI:

BUCKINGHAM, DOOLITTLE & BURROUGHS, L.L.P.

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APPEARANCES CONTINUED

ON BEHALF OF THE DEFENDANTS PARMA GENERAL COMMUNITY HOSPITAL AND PARMA GENERAL COMMUNITY HOSPITAL HOME HEALTH CARE.

WESTON, HURD, FALLON, PAISLEY & HOWLEY, L.L.P.

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STIPULATIONS

It is stipulated by and between counsel for the respective parties herein that this deposition of BARRY S. GEORGE, M.D., a Witness herein, called by the Defendants under the statute, may be taken at this time and reduced to writing in stenotypy by the Notary, whose notes may thereafter be transcribed out of the presence of the witness; that proof of the official character and qualifications of the Notary is waived.

Telephonic Deposition of Barry S. George, M.D

September 1, 2004

BARRY S. GEORGE, M.D., being by me first duly sworn, as hereinafter certified, deposes and says as follows:

EXAMINATION

BY-MR.BURNETT:

Q. Doctor, I'm John Burnett. I represent the plaintiffs in this case. Would you tell us your full name, please?

A. Barry Scott George.

Q. Sir, do you understand that this is a question and answer session under oath?

A. Yes, I do.

Q. One of my goals here is to walk away from this deposition with a full understanding of your opinions in this case as well as each and every basis for the opinions. So as we go through this, if for some reason I have cut you off and not let you answer fully, will you tell me that so you can go ahead and give me your full answer?

A. Yes, I will.

Q. Also, if you have not understood

one of my questions or I have not stated it artfully, would you tell me? And I'll do my best to rephrase it.

A. Yes, I will.

Q. Sir, if you answer my question, I'm going to conclude that you have understood it and have given me your best answer. Is that fair?

A. Yes.

Q. Okay. You know, why don't you just give me a quick thumbnail sketch of your educational background starting with college through medical school and residency?

A. I finished high school in 1972. I received a bachelor of engineering degree with a specialty in biomechanical and biomedical engineering from Youngstown State University in 1976. I went on to Ohio State Medical School, and I received a doctor of medicine degree from Ohio State Medical School in 1979.

Q. Okay.

A. After I finished that, I did my internship for one year at Riverside Methodist Hospital in Columbus.

Then I did a two-year residency in internal medicine at Riverside Hospital. This was followed by a two-year fellowship in cardiology at Riverside Hospital in Columbus as well as Ohio State University Hospitals. This was then followed by an additional year at the University of California of San Francisco in interventional cardiovascular medicine.

Q. Tell me about your practice as it is today. Break it down for me. Are you an interventionalist?

A. My practice is primarily in clinical cardiology as well as interventional cardiovascular medicine which basically involves balloon angioplasty and staining of coronary arteries, carotid arteries, leg arteries, kidney arteries; pretty much anything to do with clinical cardiovascular medicine.

Q. Okay. How do you spend your professional time? Is more than 50 percent of it involved in the clinical practice of cardiology?

A. Yes.

Q. When you say clinical cardiology

and interventional cardiology, tell me what the difference is.

A. Well, I look at interventional cardiology as we sometimes refer to it in the vernacular, a lab rat. We're in the cardiovascular lab all the time doing angioplasty-type procedures. That is what I consider interventional cardiology. Clinical cardiology is the care of patients on an outpatient setting as well as in the hospital outside of the cardiac cath lab for cardiovascular disorders.

Q. With regard to your role as a lab rat as you put it, what percentage of your time is spent doing that?

A. I'm in the cardiac cath lab, I would say, probably about 80 percent of my time.

Q. Okay. And then how much, then, percentage-wise do you spend in the clinical practice?

A. Outside of the cardiac cath lab, probably 20 percent to as high as 35 percent is spent caring for patients on an outpatient basis or in hospital consultations.

Q. Okay. Do you care for patients in a capacity as an internal medicine doctor?

A. Very little.

Q. Can you give me a percentage?

A. Less than 5 percent.

Q. Okay. You're licensed in Ohio?

A. Excuse me?

Q. You're licensed in Ohio, sir?

A. Yes.

Q. Anywhere else?

A. I'm also licensed in the state of Florida.

Q. Okay. I take it in neither of those states has your license ever been suspended, revoked, or called into question.

A. That is correct.

Q. In both of those states with regard to your privileges, have any of those privileges ever been suspended, revoked, or called into question?

A. No.

Q. To your knowledge, has there been a complaint filed with either of the medical boards in Florida or Ohio?

A. No.

Q. Prior lawsuits, have you been a defendant before?

MR. PARKER: Objection.

Go ahead.

A. I have been a defendant before. Yes.

BY MR. BURNETT:

Q. Can you please tell me how many times?

A. To my knowledge, two times.

Q. Okay. Let's talk about the first one. Can you tell me when that occurred, what the general allegations were, sir?

MR. PARKER: Objection.

A. It was, I believe, in 1988, give or take a couple years; but I'm pretty sure it was 1988. It was in regards to a patient who had aortic coarctation in which I performed a balloon angioplasty procedure on the aorta.

BY MR. BURNETT:

Q. Okay. Did the patient die?

A. No.

Q. Okay. What was the result of that suit? Did you pay any money? Did you go

to trial? What happened?

MR. PARKER: Objection.

A. I was vindicated at trial.

BY MR. BURNETT:

Q. A defense verdict.

A. That is correct.

Q. Let's talk about the next one, please, sir.

A. The next one was a patient that I was involved in the care after my partner had performed a coronary angioplasty who subsequently developed a septic arthritis in the knee about two weeks after the procedure was performed. And allegedly, this was due to the groin insertion site and infection from there in that it was not adequately or appropriately diagnosed and deviated from the standard of care.

Q. What happened with the patient?

A. The patient had no long-term sequelae, had to have a drainage procedure performed on the septic arthritis of the knee.

Q. Okay. Did that go to trial?

A. Yes.

Q. Okay. And what happened there?

A. The defense was vindicated on that as well.

Q. So another defense verdict for you.

A. That is correct.

Q. To your knowledge, are there any suits outstanding against you now?

A. To my knowledge, there are none.

Q. You haven't received any 180-day letters recently?

A. No.

MR. PARKER: Objection.

BY MR. BURNETT:

Q. Okay. Do you know what that is, the 180-day letter?

I'll explain it. It's a letter they send where they say we're contemplating bringing an action against you. We're extending the statute by 180 days.

A. Yes, I have not -- To my knowledge, I have not seen any of those recently.

Q. With regard to lawsuits, let me ask the question a little bit differently. To your knowledge, has any professional group

or hospital with which you've been associated been sued and you not named but your conduct nevertheless called into question?

MR. PARKER: Objection.

A. No.

BY MR. BURNETT:

Q. Okay. You do medical legal work apparently.

A. Yes, I do.

Q. How long have you been doing it?

A. I've been doing medical legal work for, I would say, about 12 to 14 years.

Q. Okay. How did you get involved in it?

A. I was asked by an attorney to opine on a case.

Q. Okay. And you started doing it, and I take it you enjoy it on some level.

A. Yes. That's correct.

Q. Okay. What, if you can, looking back over the years, what percentage of your medical legal work is reviewing for the defense; and what percentage is for the plaintiffs?

A. My review -- And I think it's --

Sometimes, when the networking occurs, it skews it somewhat. But I would say probably 75 to 80 percent of the cases that I have reviewed are for the defense; and 20, 25 percent are for the plaintiff.

Q. All right. Do you advertise your services as a medical legal expert?

A. No, I don't.

Q. So it's just pretty much word of mouth.

A. Correct.

Q. Have you ever testified at trial for a plaintiff?

A. No, I have not.

Q. Okay. Have you ever testified at trial for a defendant?

A. Yes.

Q. How many times, please?

A. Three times.

Q. Okay. Now, by the way, in the cases in which you reviewed over the years, have any involved issues similar to the ones in this case?

A. In regards to the cardiovascular illnesses, yes. In regards to the other

noncardiac illnesses, no.

Q. Okay. And I'll get into this in more detail, but what was the likely cause of death in this case?

A. Well, that's always up for speculation. But my thoughts and opinions in regards to the cause of death is that this was not necessarily related to hyperkalemia and was more than likely related to the respiratory embarrassment from a mucous plug coupled with the fact that I believe despite appropriate therapy this patient succumbed to sepsis.

Q. In any of the cases you've reviewed, have you opined that the cause of the patient's death was the same as this patient's death?

A. No.

Q. Okay. By the way, have you done medical legal review for Buckingham, Doolittle in the past?

A. Yes, I have.

Q. How about Ron Wilt or Paul Dzenitis? Have you worked with them in the past as well?

A. I can't recall for sure whether I've done work for Paul or not. I know I've done it for Buckingham, Doolittle; but I don't know if it was in particular for Paul.

Q. Can we talk about what's in your file, please?

A. Yes.

Q. Did you bring it with you, sir?

A. No, I did not.

Q. Okay. Did you make any notes in your review of this case?

A. The only notes I made on my chart is that basically on the cover sheet of information that I was offered I just had scribbled a very short note that said didn't die of hyperkalemia.

Q. Okay. Do you remember what was in your chart? Can you recite it to me from memory? I mean what was in your file.

A. You mean what all materials did I review?

Q. Yes, sir.

A. I reviewed the hospital charts that were from Parma Hospital, the admission prior to the patient's demise.

Q. All right.

A. I also reviewed the charts of the hospitalization in which the patient expired. I reviewed the medical records of the cardiovascular clinic, Volume 1 and Volume 2. I also reviewed the opinion letters of the plaintiffs' expert, Dr. Crane.

Q. Okay.

A. I also had reviewed -- You know, I can't tell you; but there were numerous depositions.

Q. All right.

A. And I've reviewed quite a few of those.

Q. Did you review any other defense reports?

I understood -- Or maybe I'm thinking of Dr. Armitage. Did you review his report or his deposition?

A. Yes, I did.

Q. Okay. Can you think of anything else you reviewed?

A. I reviewed the opinions of Dr. Michael Yaffe.

Q. Okay. Anybody else?

A. Not that I can recall off the top of my head.

Q. Okay. Did you do any research in preparation for authoring your report in this case?

A. No.

Q. How much do you charge an hour to review?

A. I charge $500 an hour.

Q. How about to testify?

A. The same.

Q. Even at trial?

A. Yes. If I go to trial as an expert witness, it's $500 an hour, minimum eight hours.

Q. All right. Are you planning on testifying at this trial when it proceeds later this year?

A. If asked to do so, I will.

Q. Okay. Would you please define hyperkalemia for me?

A. Hyperkalemia is an elevation of the serum potassium above what the usual, conventional laboratory numbers. They are slightly different depending on which

laboratory analysis and which lab is conducting the test. But it's usually if the serum potassium level was above 5.2 or 5.3 or thereabouts.

Q. In this case was she above 5.2 or 5.3?

A. In the later part of her illness in the second admission, her potassium was elevated. Yes.

Q. Okay. And it was above 5.2, wasn't it?

A. Yes, it was.

Q. Okay. By the way, the patients you've treated over the years when you've evaluated them, have you ever had C. diff colitis on your differential?

A. Yes.

Q. Okay. In those circumstances, did you treat the C. diff empirically? Did you suspect the C. diff empirically, or did you wait for the result of a stool sample?

A. The way my practice is, I basically am more so a cardiologist than an internist. And as I mentioned before, I practice -- Only about 5 percent of what I

do is internal medicine. And in a patient such as this patient who perhaps was a patient under my care for a cardiovascular disorder that comes in with her signs and symptoms, she would be very quickly referred to an infectious disease specialist or a gastroenterologist.

Q. What if the patient came in, you know, in the evening like this patient did and they couldn't see an ID specialist until the next day? Would you have nevertheless treated the suspected C. diff colitis empirically?

A. Well, in my institution, that's not the case. We just don't deal with this. Like I say, if I had a patient who came in that I had been, that had been a cardiac patient of mine who came in with a main complaint of diarrhea, nausea, vomiting, fever, that type of thing, the communication with the emergency room physician would be one such that this patient would be referred to either an internist or an infectious disease specialist. And I then would be a consultant for her cardiovascular situation during her

hospitalization.

Q. Have you ever ordered Flagyl to cover suspected C. diff empirically?

A. Not in the last 15 years.

Q. Okay. Did you do it before that?

A. Yes.

Q. Okay. Why the difference in the 15 years? Why do you say that?

A. Because where I practice, there are enough specialists and primary care physicians, what we call hospitalists who are internal medicine specialists, basically, who take care of people in the hospital full time that my practice of internal medicine has become less and less and less to the point where I mentioned before that it's probably no more than 5 percent of what I do.

Q. But if you saw a patient coming in with a two or three-day history of diarrhea with co-morbid conditions such as COPD and some heart disorders and you have on your differential C. diff colitis and it was in the evening, can we agree more likely than not you would treat that empirically until an internist would be able to see the patient?

MR. PARKER: Objection.

A. No. Quite frankly, I wouldn't.

BY MR. BURNETT:

Q. Okay. Tell me why.

A. Because I haven't treated C. difficile colitis for well over 15 years. And not that I'm not board certified internal medicine which I am, but I have not treated a case of C. difficile colitis for over 15 years; and I'm sure that there are things that have changed over the last 15 years that I really don't consider myself to have the expertise to do so. In my cardiac patient's best interest, I would refer them on to an expert who does have that expertise.

Q. If this was your patient and she was admitted under the same circumstances as she was with Dr. Zirafi, can we agree that you would have insisted that a internal medicine specialist see the patient that evening rather than waiting until the next evening then?

MR. PARKER: Objection.

A. I'm not sure that I would necessarily insist on an internal medicine

specialist seeing at that point in time. I think probably if I felt comfortable with the emergency room physician and I felt they were competent, that sort of thing, that probably would be sufficient for me. I would certainly make sure that contact was made with an internal medicine specialist that evening and then pretty much leave it up to them.

BY MR. BURNETT:

Q. And what would you tell the internal medicine specialist that evening? What would you convey in this case?

A. I would say: Look. This is a patient of mine who has a, you know, chronic cardiovascular disease, had a mitral valve replacement, has a low ejection fraction, has significant pulmonary disease, none of which are the presenting problem. It's acute diarrhea, leukocytosis. It appears to be some sort of a GI or infectious problem which I don't feel comfortable taking care of, and I think you need to.

Q. Very good. And then you would leave it up to that internal medicine

specialist to decide whether he or she needed to see the patient that evening or the next day; correct?

A. That's the way I would practice. Yes.

Q. Was that done in this case?

A. It would be appear to me that the patient was brought into the hospital, was admitted under the care of a cardiologist after correspondence with the emergency room physician. The clinical cardiologist who initially saw the patient, it would appear at least to my perusal of the chart, practices a lot more clinical cardiology and probably a fair amount more internal medicine than I do and felt comfortable with admitting to their service and proceeding with appropriate care.

Q. Okay. You know, a lot of these questions beg, my questions to you kind of beg this question. Are you going to testify as to standard of care in this case?

A. I am not going to testify in regards to the standard of care of whether appropriate antibiotic therapy was rendered. I don't feel I have the expertise to do

that. My main testimony is in regards to the presumed cause of death as well as the cardiovascular prognosis for this patient.

Q. Well, since you're a cardiologist and you practice some internal medicine and Dr. Zirafi's a cardiologist, I mean, we know she did not call an internal medicine specialist that evening and speak with them about the presenting symptoms and the concern about the C. diff colitis. Was that a deviation from the standard of care in your mind?

MR. PARKER: Objection.

A. I really do not feel that I have the expertise to render an opinion on that particular situation.

BY MR. BURNETT:

Q. Okay. By the way, were you asked to review this with an eye toward whether there was a standard of care violation or not?

A. I was asked to review the chart in regards to the cause of death and the future cardiovascular prognosis primarily.

Q. Okay. Do you think, though, that

she was more likely than not sick enough with C. diff Friday evening to be treated empirically?

MR. PARKER: Objection.

A. Again, I'm not sure I have the expertise to render an opinion about that.

BY MR. BURNETT:

Q. All right. In your practice, have you had patients who actually had pseudomembranous colitis?

A. Yes.

Q. Okay. Have any of them ever had a sudden cardiac arrest?

A. I don't think so; but it's, you know, I hesitate to say that it's not occurred because we take care of a lot of heart patients and see a lot of cardiac arrests. So it would be really hard for me to say that it's not happened, but I don't specifically recall a case where that has occurred.

Q. Is it fair to say that high potassium levels and bicarbonate levels can cause a sudden cardiac arrest?

A. Well, high potassium levels can

cause a cardiac arrest. As a general rule, the high potassium level associated with a low bicarbonate level and not a high bicarbonate level, it is more common for a low bicarbonate level to cause a cardiac arrest than a high bicarbonate level.

Q. Did she have a low bicarbonate level before her death in this case?

A. Yes, she did.

Q. And how low? Can you articulate that for me, put a number on it?

A. Well, her tank was about two-thirds full, shall we say; in other words, at the lower limits of normal for bicarbonate levels. She had about two-thirds of what you were supposed to have --

Q. Okay.

A. -- if I can explain it in layperson's terms.

Q. So it's fair to say that in general the high potassium level you saw in this patient and the low bicarbonate level you saw in this patient can, in general, cause a sudden cardiac arrest.

A. At the levels that she had of

bicarbonate level and potassium, it is unusual; but it can on occasion.

Q. Okay. Why do you say it's unusual, though?

A. Well, in this patient, the potassium level basically at the terminal event was, I believe, 7.4, 7.5; thereabouts. I'd have to double-check the charts to be sure which I don't have in front of me right now. But I'm pretty sure I'm close to the right number there. The day before, I think it was 6.0.

And those numbers and based on my experience in cardiovascular medicine over the last 24 years, that doesn't cause cardiovascular arrest. Ordinarily, we would see blood potassium levels above 8 where you really start seeing changes to the electrocardiogram and significant rhythm disturbances.

Q. Okay. What about the bicarbonate level? Was that sufficient, though?

A. The bicarbonate level of 19, if I recall is about what it was, in and of itself would be highly unusual for that to

cause a cardiac arrest.

Q. Is it fair to say toxins from sepsis syndrome can cause a cardiac arrest?

A. I think that's a fair assumption.

Q. Okay. By the way, on the patients you've had over the years who had C. difficile colitis, did any of them die?

A. Not of the C. difficile colitis.

Q. Yes. And I guess that was my question. I'm sure a lot of them die, but --

A. Well, thanks a lot.

Q. And I didn't mean it like that.

A. I know.

Q. Did any of them die from the complications of the C. diff colitis, though, such as -- And I may have asked this earlier. If I did, I hope you'll excuse me -- such as a cardiac arrest from the sepsis syndrome?

A. Well, as you're aware, C. difficile colitis can cause diarrhea, nausea, vomiting, dehydration. All of those things when coupled with any patient who has cardiovascular disorders or any other chronic

cardiopulmonary diseases certainly can contribute to a sudden death event.

Q. All right. Did you read Dr. Modi's deposition transcript?

A. I believe I did, but it's been a long time since I've read it.

Q. I'm going to read to you from Page 24 and ask if you agree with this or not. And I'm starting at Line 7. I asked Dr. Modi: More than likely than not, her death was a result of sepsis?

Answer: As we had suspected. Right.

Question: And more likely than not, the sepsis results from the C. diff colitis; correct?

Answer: Probably.

Do you agree with that?

A. Within my realm of expertise as an internal medicine specialist who has not been practicing internal medicine for a long time and a cardiologist, I would agree with it.

Q. Okay. But you don't agree with Dr. Crane's opinion as to the cause of death; correct?

A. I would have to have his letter, opinion letter here. Bear with me a second here. I think we have it. If I could review it or if you could paraphrase his opinion, I could more accurately answer that question.

Q. You wanted to put me on the spot, didn't you?

A. No. Hang on a minute. I've got the letter in front of me. Just bear with me 30 seconds here.

Q. Okay. I moved to the front of the office where our phone is. I'm at the front desk rather than at my desk. And if you need me to, I'll go back and get it if you can't find it.

A. No. I have the letter in front of me. I'm looking at it right now.

Q. Okay. Take a moment to read it.

A. As best I can gather from Dr. Crane's letter, it doesn't specifically address it. But his opinion basically is that the cause of the patient's demise was due to delayed appropriate antibiotic therapy for the C. difficile colitis.

Q. And I think additionally if you look at his deposition transcript, he says that a combination of the high potassium levels, the bicarbonate levels, and the toxins from the sepsis syndrome caused an arrhythmia from which she expired.

Do you agree with that?

A. Not necessarily so.

Q. Okay. That's what we need to get to.

A. Yes.

Q. Can you please tell me each and every reason why you don't agree with that?

A. Well, everybody dies of a cardiac arrhythmia.

Q. Okay.

A. I mean, let's get that right out in the open to begin with. I mean, your heart stops beating. Either it just ceases to beat and have rhythm, or you develop a rapid rhythm that then degenerates to what we call a fibrillatory rhythm; and the heart ceases to function as a pump.

Basically, that's pretty much how everybody dies, even a person who, say, is in

a multiple-trauma accident who bleeds to death. What happens is is that by losing all their blood, finally they develop eventual lack of oxygen-carrying capacity to the vital organs, most particular the heart. And the heart develops a rhythm disturbance, and you die.

Q. All right.

A. So it's really kind of difficult for me to -- I don't know exactly how I can be any clearer than that. Everybody dies of a heart rhythm disturbance. Your heart stops.

Q. Okay. But I think that what I was pressing you on was how is it that your opinion as to the cause of death differs from Dr. Crane's if, in fact, I've articulated it correctly?

A. I do not believe that the high potassium levels, the low bicarbonate levels in and of themselves caused the cardiac arrest and the demise. What caused her demise, I think, probably was a combination of the mucous plug which was documented on autopsy which most likely created lack of air

exchange, if you may, in this patient which subsequently led to low oxygen levels that in the face of probably sepsis, that was not fully under control -- the antibiotic hadn't controlled the problem -- coupled with abnormal potassium and bicarbonate levels, they all added up to her demise.

But I can tell you that in patients who die strictly of hyperkalemia, it is that they have very dramatic changes on their EKG rhythm strips which this patient did not have.

There are, I guess I would put it, warning signs, changes on the EKG, the P wave, the QRS intervals, the T waves such that you know hyperkalemia's coming and you know that that's going to cause the demise. We didn't see that in this patient.

Q. Would the hyperkalemia be a result of what? I mean, she had hyperkalemia. What was the result of that?

A. I think the hyperkalemia most likely was due to insidious and progressive kidney failure coupled with dehydration coupled with the sepsis picture.

Q. Did the sepsis cause the kidney failure?

A. I think the sepsis probably caused pretty much organ, total body shutdown towards the end in the last 24, 36 hours of this patient's illness. The sepsis basically hampered the kidney function such that she was less capable to rid her body of the poisons we all need to get rid of every day as well as -- Because of her chronic cardiovascular problems and her chronic pulmonary problems, her immune resistance was down; and despite using the appropriate antibiotics, they weren't working.

Q. Was the sepsis more than likely than not caused by the C. difficile disease?

MR. PARKER: Objection.

A. Again, it's a little difficult for me to render an opinion on that. But I think that if it wasn't the C. difficile infection, I don't know what else it could be. But I would certainly defer to an internist or an infectious disease person about that.

BY MR. BURNETT:

Q. Okay. Now, when we talk in terms of a mucous plug and you talk about a lack of air exchange, does a mucous plug have to -- Tell me what a mucous plug is. I suppose I should ask you to define that first.

A. Well, in layperson's terms, it's like somebody put a cork down your lungs and now you're trying to breathe.

Q. Where does the mucous plug physically have to be located for it to cause this lack of air exchange that you've described?

A. Well, the pulmonary, the lungs, the windpipe is connected to the lung tissue by a series of tubes which is not unlike the branches of a tree. And the closer to the trunk of the tree the mucous plug occurs, the more it compromises exchange of air and the surface area to exchange.

If you consider the fact that she had a mucous plug that was more on the left side in the left, upper lung, that in and of itself -- If you or I had a mucous plug in our left, upper lung, we would cough and choke and get short of breath; but it

wouldn't kill us per se. In a patient who has all the other cardiorespiratory infectious, bedridden illnesses that this lady was dealing with, yeah, it could kill you.

Q. Is that where it was found on autopsy, the left, upper part of the lung?

A. I believe that was correct. I'd have to refer to the chart again here.

Q. Yes. Please take a look and see so that we know.

A. Okay. Bear with me here just a second.

Q. Sure.

A. Yes. It was Finding Number 4 on the autopsy report; mucous plug left, upper lobe bronchus.

Q. Does it say how big it was? Doesn't it have to be a certain size?

A. Not really.

Q. How big does it have to be to cause this lack of air exchange that we've discussed?

A. It depends on how sick the patient is, that I think this patient had compromised air exchange to begin with because of the

chronic pulmonary disorder coupled with acute issues of -- Patients get what's called atelectasis where they get mini-lung collapse just from being acutely ill.

And all of this is an additive effect. And, yes, if you were to say this patient just had a left, upper lobe mucous plug and that's it, that's not going to kill the patient. But when you add it up to all the other issues surrounding this patient's acute illness, it could easily tip the patient over the edge.

Q. I'm going to just restate what I think your opinion is, and please tell me if I'm right or wrong. The cause of death was a combination of the mucous plus, the sepsis which was not fully under control, and the increased bicarb levels. Is that fair?

A. No. It's not increased bicarb levels.

Q. I'm sorry. The decreased bicarb levels.

A. Well, the decreased bicarb levels are basically a manifestation of acidosis which is again due to sepsis that's not being

adequately treated with the appropriate antibiotics due to the patient's compromised immune situation.

Q. Okay. So really, then, the cause of death is actually a combination of the mucous plug and the sepsis which was not fully under control. Is that fair?

A. I would say that would be in my opinion the best guess.

Q. Okay. Would you hold that opinion to a reasonable degree of medical probability?

A. Yes, I would.

Q. Okay. Then is it fair to say that the sepsis not fully under control was certainly a substantial contributing factor to this patient's death?

MR. PARKER: Objection.

A. Yes. Despite appropriate antibiotic therapy, it appeared as if it was not doing its job. The antibiotics weren't doing its job due to the patient's preexisting, compromised immune status.

BY MR. BURNETT:

Q. What do you mean by her preexisting, comprised immune status?

A. Well, we know for a medical fact that patients who have preexisting cardiac disorders and/or pulmonary disorders or kidney failure or anemia, or these types of things, that these patients do not have near the ability to fight off infections that a normal, healthy individual who does not have chronic illnesses has.

So the -- You know, I guess a layperson would think, okay, I take antibiotics and it will make everything better. What antibiotics do is they have the ability to kill bacteria in most situations. But without an intact, robust immune system, antibiotics aren't going to work.

Q. Okay. All right. So describe if you will for me, then, the mechanism of the death. I mean, I take it there was, then, an arrhythmia.

A. Well, it's a little difficult to say from looking at the charts. But obviously, she had arrhythmia; or she wouldn't be dead.

Q. Right. I know that from what we discussed. So we know that happened.

A. Right. What I -- The best I can glean from the chart is that the patient developed what we refer to asystole which is basically the spark plugs cease to fire for the automobile engine, if you may, to use the analogy. The pacing mechanism of the heart just gave up and stopped.

Q. Okay. Well, you say in your report with regard to the hyperkalemia this metabolic disorder did not cause an arrhythmia and subsequent death. I want to make sure that I understand that fully. Would you flush that out for me, please?

A. Well, there's several reasons why I opined that the hyperkalemia was not a significant contributing factor to her demise. The two things, number one, is again I had previously mentioned that when you look at her EKG, the P wave, the QRS complex, the T wave soon, or prior to her demise, there were no warning signs on the EKG which is seen probably 90 percent of the time if hyperkalemia is the problem.

We do have time to react the majority of the time to hyperkalemia. That

coupled with the fact during her cardiac arrest she received not only epinephrine but she received calcium chloride. Calcium chloride is for cardiac rhythm disturbances due to hyperkalemia, is almost an instant antidote that will correct the rhythm disturbance in a cardiac arrest situation. And needless to say, it didn't correct anything in this situation.

Q. All right. Have you given me all the reasons why you state hyperkalemia did not cause an arrhythmia and subsequent death?

A. I'm not sure I understand your question. I thought I just did.

Q. Yes. That's what I'm saying. Is there anything else that you haven't told me?

A. No.

Q. Okay. That's what I'm trying to get at.

A. Okay.

Q. All right. Let's talk for a moment about your prognosis for her, her two-year survival to be no higher than 50 percent. What's your basis for that?

A. My basis for that is primarily

related to the fact that she had very significant cardiac disease that had been cared for for, gee, 15 years and that recent evaluation by Dr. Sechler and his colleagues had shown that she had a rather substantial depressed, left ventricular ejection fraction that was in the range of 30 to 35 percent.

This was coupled with the fact that prior to her demise she had been treated for the prior four to six months for bouts of congestive heart failure. When you combine those two things, study after study after study, text book after text book after text book in cardiovascular diseases will confirm that the patient's prognosis is very poor when they have a depressed ejection fraction under 40 percent coupled with recurrent congestive heart failure despite medical therapy.

Q. I'm sorry. Did you reference studies or texts?

A. I didn't reference any particular cardiovascular textbook or any particular article. This is almost general knowledge, I guess I should say, in cardiology.

Q. Okay. I want to talk to you about the mucous plug again. I'm looking at Dr. Crane's deposition at Page 94. And he says -- And I'll quote:

I just think that if it's a mucous plug it would have to be the trachea because this has to be a total asphyxiation in order for her to die like that. And that would be a major blockage of the trachea.

And that's the end of the quote. Do you agree or disagree with that statement?

A. I disagree with the statement.

Q. And that's because where you believe it was found on autopsy combined with the sepsis and the organ shutdown, it was sufficient to cause the death?

A. As I mentioned before, I would agree with Dr. Crane's assessment if you or I had a left, upper lobe mucous plug. It would be pretty difficult for that to cause death in either you or I who -- I presume you're a healthy individual, also.

Q. I think so, once in a while anyway.

A. But in a patient who has

preexisting cardiopulmonary compromise and embarrassed cardiopulmonary reserve, I would easily be able to see this happening. As a matter of fact, it happened to one of my patients just less than two weeks ago.

Q. What? A mucous plug caused what was the triggering event to a death?

A. It was an 84-year-old gentleman who had undergone mitral valve surgery, had preexisting liver problems but required the mitral valve surgery because his valve was leaking very badly because of his advanced age which compromised his immune status coupled with the fact he had smoked for years and had pulmonary compromise coupled with the fact that he was just soon after major open heart surgery. He ended up, was doing fairly well and wound up with the same situation, a mucous plug that just put him over the edge, exhausted his reserve.

Q. What causes these mucous plugs?

A. Mucous plugs are caused primarily due to any patient who has an acute illness and particularly if there is problems with the lungs. Anytime that the lungs are not

fully aerated or expanded or if they have been compromised in any way by an infectious process or if their chest wall has been compromised, the lungs' response is to manufacture more mucous as part of the fighting off infection.

If too much mucous is produced and it is not mobilized with coughing, deep breathing, that type of thing, it can become dehydrated, harden, and act like a cork in a bronchus.

Q. When you say acute illness, in this patient, was the acute illness which led to the mucous likely the C. difficile leading to the sepsis?

A. I think the C. difficile and the sepsis and the surrounding diarrhea, dehydration, all of those things added up to mucous plug.

Q. Okay. So basically, more likely than not, if this patient's C. difficile colitis had been brought under control, we wouldn't have let the sepsis and, we wouldn't have had a mucous plug more likely than not. Fair?

MR. PARKER: Objection.

A. Well, I think if the patient would have responded to antibiotics like most patients do to C. difficile colitis, there was a much greater chance that she would have survived the event; and there is probably a much greater chance that she would not have had a mucous plug.

BY MR. BURNETT:

Q. Okay. And you say most patients do respond to the antibiotics. Fair?

A. In my experience, yes.

Q. Okay. Is it in your experience, too, that the sooner the C. difficile colitis is treated by an appropriate antibiotic, the better the chance of the patient for survival? Fair?

MR. PARKER: Objection.

A. Well, I can just tell you as a practicing physician that when an infectious process is diagnosed or entertained, the sooner antibiotic therapy of any sort is started, as a general rule, that would lead to a better prognosis.

BY MR. BURNETT:

Q. In this patient more likely than not, had the Flagyl been started 24 hours earlier, would we have had a more favorable outcome?

MR. PARKER: Objection.

A. I'm really not in a position to render an expert opinion on that because I'm not an infectious disease specialist. So I just don't think it's probably worthwhile me answering one way or the other.

BY MR. BURNETT:

Q. Okay. And the reason I asked that is because you say that most patients respond to the Flagyl.

A. Right.

Q. And in my mind, that was the next logical question because it seems that you do have some experience with patients with C. diff and Flagyl and how they respond.

A. That's true. But it's usually -- My experience is caring for patients from, like I say, 15 years ago. And my experience is caring for my cardiac patients watching after the cardiac problems as they're being treated for their C. difficile colitis by an

infectious disease specialist.

Q. Okay. And I probably asked you this; and if I did, forgive me.

Have any of your patients gone on to develop sepsis and die from either the sepsis or a combination of sepsis and a mucous plug if they had C. difficile colitis?

MR. PARKER: Objection.

A. In my experience, I have not seen that happen.

BY MR. BURNETT:

Q. Okay. Sir, have I covered all your opinions in this case?

A. Yes, you have.

MR. BURNETT: Ken, while I review my notes, do you have any questions of the doctor?

MR. TORGERSON: I have no questions of Dr. George.

BY MR. BURNETT:

Q. By the way, in your experience either in the last 15 years watching your patients being treated by an internist or an infectious disease specialist or, you know, prior to 15 years ago, have you ever seen

anyone prescribe Clindamycin when C. diff colitis was on the differential?

A. I've not seen it prescribed, but my understanding is that it is an alternative antibiotic for C. difficile colitis.

Q. Do you have any opinion relative to the heart size in this case as to whether it was at all abnormal and/or contributory to the death?

A. Her heart size was enlarged.

Q. Okay. I think it was 600 grams; right?

A. I'd have to refer back to the autopsy to confirm that.

Q. Yes. Do you have that at your fingertips?

A. I'm looking ay it right now. Correct. It was 600 grams.

Q. Okay. What would the normal weight, you know, likely have been for someone this age?

A. You know, I really don't know.

Q. Okay.

A. I don't -- You know, it's a little tough when people are alive to weigh their

hearts. That's sort of a pathologist's assessment of heart enlargement. When we deal with living patients, the way we assess heart enlargement is primarily by chest x-ray and echocardiogram.

Q. Okay. If this is a large heart, if the pathologist describes it as a large heart, what's the likely cause of that if you know?

A. The enlarged heart was due to her preexisting valvular heart disease and the long-term ramifications of the preexisting heart valve disease.

Q. Okay. Are you critical of any of the care provided in this case?

A. No, I'm not.

Q. Now, you say she had severe COPD. What's the basis for that, please?

A. She didn't have COPD per se. My impression was from reading Dr. Sechler's evaluation that she had had past bouts of asthma and bronchitis, and this is not at all uncommon in patients who have mitral valve disorders such as this lady who had mitral stenosis and rheumatic heart disease prior to

her valve replacement.

Q. Okay. So is it fair to say, though, that she did not have severe COPD?

A. Well, she clearly had some degree of pulmonary compromise. I really in reviewing the chart could not say to what degree of severity it was. It was certainly clinically significant.

Q. I mean, you use the word severe. Is that accurate or is that inaccurate?

A. I think that it may not be totally accurate, severe COPD, because I don't have any objective parameters in the chart that I could, you know, support that.

Q. Having talked to me about this case right now -- and you're looking at your report -- is there anything in your report that you wish to change or that you think you should add to the report?

A. No, I don't.

Q. Okay. And you've conveyed to me all of your opinions in this case, sir?

A. Yes, I have.

Q. Okay. And the bases for these opinions?

A. The basis for these opinions?

Q. Yes, sir.

A. The basis for these opinions is based on my experience and training coupled with my review of the chart.

MR. BURNETT: Okay. Gentlemen, I think that's all I have.

MR. PARKER: Okay. John, I'm going to have him read. Is 30 days okay?

MR. BURNETT: Take as much time as you want. We're still a couple of months out from trial.

MR. PARKER: Right.

MR. BURNETT: That's fine.

(Signature not waived.)

And, thereupon, the deposition was concluded at approximately 7:01 p.m.

CERTIFICATE

State of Ohio :

SS :

County of Franklin :

I, Laurie A. Braverman, Notary Public in and for the State of Ohio, duly commissioned and qualified, certify that the within named BARRY S. GEORGE, M.D., was by me duly sworn to testify to the whole truth in the cause aforesaid; that the testimony was taken down by me in stenotypy in the presence of said witness, afterwards transcribed upon a computer; that the foregoing is a true and correct transcript of the testimony given by said witness taken at the time and place in the foregoing caption specified.

I certify that I am not a relative, employee, or attorney of any of the parties hereto, or of any attorney or counsel employed by the parties, or financially interested in the action.

IN WITNESS WHEREOF, I have set my hand and affixed my seal of office at Columbus, Ohio, on this 15th day of

September, 2004.

Laurie A. Braverman

LAURIE A. BRAVERMAN, Notary Public in and for the State of Ohio and Professional Reporter

My Commission expires January 16, 2006.

CAPTION

The Deposition of **Barry S. George, M.D.**, taken in the matter, on the date, and at the time and place set out on the title page hereof.

It was requested that the deposition be taken by the reporter and that same be reduced to typewritten form.

It was agreed by and between counsel and the parties that the Deponent will read and sign the transcript of said deposition.

CERTIFICATE

STATE OF_____:

COUNTY/CITY OF_____:

Before me, this day, personally appeared, **Barry S. George, M.D.**, who, being duly sworn, states that the foregoing transcript of his/her Deposition, taken in the matter, on the date, and at the time and place set out on the title page hereof, constitutes a true and accurate transcript of said deposition.

_____

Barry S. George, M.D.

SUBSCRIBED and SWORN to before me this _____ day of_____, 2004 in the jurisdiction aforesaid.

_____ _____

My Commission Expires Notary Public

DEPOSITION ERRATA SHEET

RE: SetDepo, Inc.
File No. 5205
Case Caption: Michelle R. Freeman, et al., vs. Cardiovascular Clinic, et al.

Deponent: **Barry S. George, M.D.**
Deposition Date: September 1, 2004

To the Reporter:
I have read the entire transcript of my Deposition taken in the captioned matter or the same has been read to me. I request that the following changes be entered upon the record for the reasons indicated. I have signed my name to the Errata Sheet and the appropriate Certificate and authorize you to attach both to the original transcript.

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Deposition of Barry S. George, M.D.

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SIGNATURE: _____ DATE: _____

Barry S. George, M.D.

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R