State of Ohio,)
) SS:
County of Summit.)

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IN THE COURT OF COMMON PLEAS

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Martha Burgess, et al.,	)	
	)	
Plaintiffs,	)	
	)	Case No. CV 02-01-0112
vs.	)	
	)	
Michael A. Oddi, M.D.,	)	
	)	
Defendant.	)	

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DEPOSITION OF MARK BOTHAM, M.D.

FRIDAY, JANUARY 10, 2003

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The deposition of Mark Botham, M.D., a witness herein, called by the Plaintiffs for examination under the Ohio Rules of Civil Procedure, taken before me, Ivy J. Gantverg, Registered Professional Reporter and Notary Public in and for the State of Ohio, by agreement of counsel and without further notice or other legal formalities, at Meridia Hillcrest Hospital, 6780 Mayfield Road, Cleveland, Ohio, commencing at 4:10 p.m., on the day and date above set forth.

APPEARANCES:

On Behalf of the Plaintiffs:

John W. Burnett, Esq. (By Telephone)
Becker & Mishkind
134 Middle Avenue
Elyria, Ohio 44035

On Behalf of the Defendant:

David M. Best, Esq.
David M. Best Company
4900 West Bath Road
Akron, Ohio 44333

MARK BOTHAM, M.D.

a witness herein, called by the plaintiffs for examination under the Rules, having been first duly sworn, as hereinafter certified, was deposed and said as follows:

MR. BEST: Doctor, I mentioned that you didn't remember to bring your file, but that you have access to mine, so he is aware of that.

CROSS EXAMINATION

BY MR. BURNETT:

Q. Doctor, I am John Burnett, I represent the plaintiffs in this case.

Do you understand, sir, that this is a question and answer session under oath?

A. Yes, I do.

Q. Doctor, if I ask you a question and it is unclear or you don't understand it, please tell me that and I will do my best to rephrase it; is that fair?

A. That is fair.

Q. Doctor, if you answer my question, I am going to conclude that you have understood it and you are giving me your best answer; is that fair?

A. That is fair.

Q. Your file is not with you today, but I take it from talking to David that you didn't make any notes, I

think; is that right?
A. That is correct.
Q. Okay.
Did you do any research in preparation for authoring your report, aside from looking at the chart?
A. The only things that I read were those listed in my letter to Mr. Best.
Q. Okay.
A. I have subsequently reviewed two further depositions. But at the time the letter was authored, I had only looked at the things that are listed in that letter.
Q. Bear with me a minute.
Okay, so you looked at records, but you didn't look at any surgical texts or articles?
A. No, I did not.
Q. I take it your practice consists of 51 percent or more clinical time; is that right?
A. Probably 98 percent.
Q. When did you start doing medical-legal work?
A. 1988.
Q. About how many cases a year do you review?
A. You mean review totally, or are you talking about in terms of deposition and court appearance, or just chart review?

Q. Well, I will narrow it down, but in general, I take it you get cases in to review, some you say are meritorious or not and they go away. So in general, on an average year, how many do you review?

A. Fifteen or 20.

Q. How many times have you been deposed, if you can estimate it for me?

A. Boy, a lot. Forty times, maybe.

Q. Do you get involved with cases that are mostly in the Ohio area, or do you go out of state?

A. Primarily in the Ohio area.

Q. Have you worked for David before?

A. No, I have not.

Q. How about the law firm of Jacobson, Maynard?

A. Yes, I have.

Q. How many times had you worked for them in the past?

A. At the time they were active, numerous times. I couldn't tell you exactly a number. But numerous times.

Q. Okay.

Can you break down for me, since 1988, the percentage plaintiff versus defendant in which you have reviewed cases?

A. In the first five to seven years, virtually a hundred percent defense. Subsequent to that, for a

period of time, approximately five years, it became roughly 50/50. And over the last two to three years, it is again virtually all defense work.

Q. Your depositions, we have talked about 40 times. Of those 40 depositions, can you give me an idea of how many, estimate, for the plaintiff and how many for the defendant?

A. I would say probably two thirds to three quarters for the defendants and probably one quarter to one third for the plaintiff.

Q. Now, when you say you have testified for the plaintiff, have they mostly been Ohio plaintiff attorneys?

A. Yes, they have.

Q. How many times have you testified at trial for the plaintiffs?

A. Probably only once or twice. I don't think the other cases went that far.

Q. How about for the defense, actual trial testimony?

A. Numerous times. Again, I can't remember the actual number.

Q. Okay.

Do you keep a master file of the cases you have reviewed?

A. I do not.

Q. Have you kept any of your deposition transcripts?
A. No, I have not.
Q. Have you ever reviewed a case with issues similar to the ones in this case?
A. No, I have not.
Q. I have looked at your CV that was provided by David Best today, and I guess my question to you is, are there any articles that have been submitted or are waiting to be published that are not included on this CV?
A. No, there are not.
Q. Do any of the articles listed in the CV deal with any of the issues that are germane to this case?
A. No, they do not.
Q. Have you been a defendant in a lawsuit, Doctor?
A. Yes, I have.
Q. How many times?
A. Probably five times over the last ten years.
Q. In those cases, were you named individually?
A. Yes.
Q. Have there been cases in which the Cleveland Clinic has been named and you not, but your conduct was called into question?
A. No.
Q. Of these five times you were a defendant in a medical malpractice case, any of those cases, did they

proceed to judgment against you?

A. There has never been any money rendered as a payment or judgment against me in my career.

Q. Have any of the cases gone to trial?

A. Yes, they have.

Q. Can you tell me how many?

A. There were two of them. One which was dismissed during voir dire, and the other one in which I was dismissed during the trial.

Q. I take it you are licensed in Ohio only; is that right?

A. That is correct.

Q. To your knowledge, have there been any complaints made about your conduct to the State Medical Board?

A. There have not been.

Q. Has your license ever been suspended, revoked or called into question?

A. No, it has not.

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

A. No, they have not.

Q. You state in your report, I believe it is on Page 3, it is about five, six lines down, you say, "More thrombus is noted posteriorly and anteriorly which is not able to be extracted."

What was the likely source of that thrombus?

A. Bleeding that developed within the pericardial space subsequent to his operative procedure.

Q. What was the source of the bleeding --

A. I don't think --

Q. -- in terms of probability, Doctor?

A. I don't think there is any way to know that.

Q. Is it likely that it was from the suture line?

A. It is likely that it was from the original operative procedure. There is no way to know where it came from because the patient wasn't explored early on to find out if he was actively bleeding. Early on, being within the first 24 hours.

Q. You called this old thrombus, okay, in your report. Why do you call it old thrombus?

A. Because that is the way it is described by the operating surgeons, organized thrombus. It is not fresh thrombus.

Q. How would fresh thrombus appear?

A. It is like jelly, like a pudding. Old thrombus is more thickened and more fibrous and more rubbery.

Q. And I am sorry, how did they refer to it in the note, well organized?

A. I am sorry?

Q. How did they refer to it in the note, well

organized?

A. In whose note?

Q. Dr. Oddi's note, the operative note of the subxiphoid procedure.

A. I would have to look at his actual description in the operative note. My description is that of an organized thrombus. If you would like, I will be happy to look at his operative note and reiterate it for you.

Q. Would you please do that?

MR. BEST: Right there (indicating).

A. His description, and I will read it, "Upon inspection of the lower portion of the pericardium it was obvious that there was well formed thrombus within the space."

Subsequently he also describes it again in a similar fashion with "a ring forceps, as much as this well formed thrombus was extracted as a possible, measuring approximately 120 to 130 ccs in volume."

Q. And that description causes you to conclude that it is old thrombus?

A. That is correct. That would be the way that I would describe it, as well.

Q. And can you tell me, when you use the word, old, I know this is a tough explanation, but how do you -- how old? Twenty-four hours old? Three weeks old? What?

A. I would suspect three weeks old.
Q. Can you state that in terms of probability?
A. High probability.
Q. So more likely than not, correct?
A. Absolutely.
Q. I also note that no active bleeding was discovered following the removal of the thrombus as well as the 150 ccs of bloody liquid, fair?
A. That is correct.
Q. Let me ask you a question:
You are three weeks out post Ross procedure. If there is evidence of active bleeding at that point in time, does the standard of care require you then to open the chest to do a thoracotomy?
A. Active bleeding at the time of which operative procedure?
Q. The subxiphoid procedure by Dr. Oddi on the evening of the 9th.
A. If there is active bleeding at the time he does the operative procedure, the standard of care would require you to explore that via a sternotomy, not a thoracotomy.
Q. Please explain the difference to me between a sternotomy and a thoracotomy?
A. Sternotomy is a reopening or original opening of

the sternum. Thoracotomy is an approach through the inner spaces of the chest wall.

Q. What about if there had been recent bleeding, what about evidence of recent bleeding, would the standard of care have required a sternotomy?

A. The standard of care would require further exploration other than a subxiphoid exploration only if there is active bleeding at the time of the exploration.

Q. What is your authority for that?

A. What is my authority for that?

Q. Yes, what is your basis for that statement?

A. Seventeen years of doing cardiac surgery and exploring patients with the same or similar problem.

Q. Can you point me to any literature or texts which support that?

A. You mean in terms of whether or not it is an accepted approach?

Q. Yes.

A. Or whether or not it is --

Q. Yes, whether it is an accepted approach, whether it is standard of care.

A. I don't know that there are any authored articles or textbooks that specifically address that issue.

Q. So if there was evidence of recent bleeding and the doctor did not perform a sternotomy, what does the

standard of care then require?

A. Again, I will reiterate what I said. The standard of care requires further exploration only in the presence of active hemorrhage.

Q. Okay, so you don't explore. What do you do?

A. You drain -- you deal with two problems. First and foremost, you deal with the potential or the presence of fluid or blood within the pericardial space that is resulting in either pretamponade physiology or actual tamponade physiology, and your goal is to drain that fluid to alleviate that physiological insult.

The second goal is to address whether or not there is active hemorrhage, ongoing hemorrhage, at the time you do the exploration. Both of those things are undertaken through a subxiphoid approach. That then allows you, given the latter thing, to extend it to a full sternotomy if necessary, if there is active hemorrhage.

Q. Is it possible that this 150 ccs of bloody liquid, in addition to the 120 ccs of clot removed from the pericardial cavity, was evidence of recent bleeding within the last 24 or 48 hours?

A. No, because it is described as well formed thrombus, and it is irrelevant anyway, because there is not active bleeding. The key issue here is active bleeding, ongoing bleeding versus no active bleeding. It

doesn't make any difference whether it is 24 hour old hemorrhage, or 48 hour old hemorrhage, or three week old hemorrhage, if it is not actively bleeding at the time you are there exploring them, there is no reason -- in fact it is contraindicated -- to explore them further.

Q. What was the likely source of the 150 ccs of bloody liquid, the grossly bloody fluid described by Dr. Oddi?

A. The same source that was responsible for the well formed thrombus.

Q. The patient had signs and symptoms of tamponade within 24 hours prior to the subxiphoid procedure, correct?

A. Correct.

Q. Is it more likely than not that the tamponade was caused by a combination of the 150 ccs of bloody liquid and the 120 ccs of clot, as well as any additional clot that was in the pericardial space?

A. Yes, it is.

Q. If the 150 ccs of bloody liquid and the 120 ccs of clot removed as well as the additional clot left in there were responsible for the tamponade, my question to you is, why, if these things were likely present from early on after the surgery, why did it take that long for tamponade to occur?

A. Because over time, that well formed clot acts as an osmotic agent and actually brings fluid, further fluid, serous fluid, into the pericardial space. That is why it happens gradually over time rather than happening abruptly. And that is also why there is no active hemorrhage there, because there is not active hemorrhage going on at the time that that fluid is drained. So the osmotic effect of sucking fluid, serous fluid, into the pericardial space is what causes the gradual accumulation of it and the eventual tamponade.

Q. In terms of probability, what caused, 14 or 19 hours later, the precipitous bleed that caused Mr. Burgess to exsanguinate?

A. I believe that it was the disruption at the suture line of the pulmonary autograft.

Q. What was the likely cause of that?

A. I don't think we have an answer for that.

Q. Do you have an answer in terms of probability as to the timing, why it occurred some 14 or 18 hours after the subxiphoid procedure?

A. I think that is the time that the suture line decided to let go, be it from some sort of infectious process, or be it from a breakdown of the anastomosis, be it from some tissue problem related to the pulmonary autograft. It is space and time. It could have happened

the following day, it could have happened a week later.

Q. Have you spoken with Dr. Oddi about this case?

A. I have not.

Q. Did you review his deposition transcript?

A. Yes, I have.

Q. I think he tells us in terms of probability the likely source of the thrombus and the fluid that he saw during the subxiphoid procedure was from a bleed at the proximal suture line. Is that your understanding, as well, sir?

A. That that was his opinion?

Q. Yes.

A. I would have to read through that in his deposition, or if you would like, you can point it out to me where he stipulated that.

Q. If you will bear with me for a minute, please, Doctor.

I am pointing you to Page 57 of his deposition transcript. Do you have that with you, sir?

MR. BEST: I don't have it. And he doesn't. As I say, he forgot to bring his file.

MR. BURNETT: Okay.

MR. BEST: Sorry, I don't have it.

Q. (Continuing) I will read it to you, Doctor.

From Page 57, beginning Line 6 through Line 22,

and the question is:

"Do you remember anything about the procedure?

"Answer: Only that there was very severe bleeding occurring from the proximal suture line on the aortic side down near the aortic annulus. But in terms of the details of that bleeding, I don't remember anything independent of what's described in Dr. Kamienski's operative note."

And by the way, Doctor, parenthetically, I am referring to the bleed they saw the next day on the 10th.

Then I asked Dr. Oddi this question:

"Do you remember the bleeding being from the suture line site of the anastomosis on that side?

"Answer: Yes.

"Question: Can we agree that it is likely that the blood you saw in the pericardium the day before was coming from that site the day before?

"Answer: Retrospectively I think that's the most likely source."

Doctor, don't you think that Dr. Oddi was in a better position than you to tell us the likely source of the bleed?

A. No.

Q. Okay, why, sir?

A. Because there is no way to know where the bleeding

came from because the patient was not explored within the first 24 to 48 hours, which is where I feel the time frame was for the original bleeding to have occurred. Had the bleeding occurred from a disruption of the suture line at the base of the pulmonary autograft the night before, it would have been ongoing, and it would have been active at the time Dr. Oddi did his pericardial window.

Q. Couldn't this have been a -- well, let me ask you this:

Are you familiar with the term -- bear with me, Doctor -- the term, herald bleed?

A. Sentinel bleed, is that the word you are looking for?

Q. Well, I am using the phrase, herald bleed. It was a phrase used by another expert in this case. Does that mean anything to you?

A. It is probably interchangeable with a sentinel bleed.

Q. I am using it under the heading or with the definition of it as a bleed which before the patient has an exsanguinating hemorrhage, he may have a small amount of bleeding or hemorrhage that manifests itself.

A. That does happen in thoracic surgery, yes.

Q. Is it likely that that happened in this case?

A. No, it is not.
Q. Tell me why?
A. Because it is an arterial hemorrhage from the base of the aortic root, and those things don't have herald bleeds. If you have a suture line disruption, it is a mechanical disruption that continues to bleed, it is not something that starts and stops.
Q. It is not something that can start up, clot, and start over again?
A. Very unlikely.
Q. Did you have a chance to look at what I faxed to David Best today, the sixth edition of Surgery of the Chest by Sabiston and Spencer?
A. Yes.
Q. I am going to point you in the direction of Page 1372, Doctor, and I just wanted to read something to you and see if you agree with it or disagree with it in the context of this case, and talk to you about it.

Quote -- this is referring to tamponade.

"Following initial stabilization with pericardiocentesis a definitive approach to the inciting process is frequently necessary. In the event of hemopericardium, adequate exposure to allow repair of the compromising process and evacuation of blood may require full median sternotomy. Alternatively, left-sided

anterior thoracotomy provides quick, but more limited, access to the heart."

Do you agree with that statement, Doctor?

A. The context in which that statement is written in this paragraph refers to patients who present with acute tamponade. And if you read the paragraph that is on the page prior to that, that acute tamponade is described as occurring secondary to trauma, i.e. either a gunshot wound, or a stab wound, or some other form of traumatic hemopericardium. So you are talking about an acute process where you have active hemorrhage within the pericardial space, and in that case, yes, I do agree with that statement.

Q. Let me direct your attention to the fifth line down on Page 1372, and the sentence beginning, "Regardless of the cause, definitive treatment of cardiac tamponade requires removal of the agent responsible for the cardiac compression;" do you see that?

A. Yes, I do.

Q. Don't you agree that that statement pulls us away from, regardless of the cause of the tamponade, to just dealing with the tamponade?

A. I think that refers to whether or not there is serous fluid, serosanguineous fluid or blood, and regardless of the cause, whether it be benign, malignant,

traumatic or postoperatively, the thing that you have to do is remove whatever is causing the compression, and I would agree with that.

Q. And then again, I think I am disagreeing with you, and I want to test you on this. Your conclusion that the initial section from this paragraph that I read deals only with things like a gunshot or a knife wound, I mean, given that sentence, don't you agree that we are not concerned with the cause of the tamponade, we are going to look at the compromising process, we are just concerned with, we have got a tamponade, now we have to figure out what is causing it?

A. If there is actively hemorrhage, again, it is the -- the timing is more important here. And that is the same reason why on the paragraph down below that, if you read that, it says, "In the setting of more chronic effusion, a subxiphoid approach may be used to evacuate the effusion." That is the exact reason. If you have something that is acute and actively bleeding, as in a traumatic situation, then you do have to address that, and you have to find out what is causing the acute hemopericardium. Otherwise, it will continue to recur, and you will be back in the same situation you were in before.

Seventy-two hours out, certainly in a postoperative patient, is not an acute situation. You

are dealing with more of a chronic situation, in which case the second paragraph is more appropriate. "In the setting of more chronic effusion, a subxiphoid approach may be used to evacuate the effusion."

Q. And then it says, in the next sentence, "With loculated effusions or recurrent effusions, or when recurrence of effusion is likely, the thoracotomy approach may be preferable to a subxiphoid pericardial window," right?

A. If you are unable to break up particular loculations, or you have a recurrence of the effusion, which at least here has failed, a subxiphoid approach, then another approach may be necessary, i.e. a thoracotomy approach or some other form of intervention.

But again, you have to understand, these are not referring to postoperative patients, these are referring to patients who are coming in with problems that are acute, these are patients who have had nonoperative procedures, and this is their first operative intervention.

Q. What does loculation mean in this context?

A. Septations within the pericardial space.

Q. I am sorry, septations?

A. Yes.

Q. Please tell me what that means? I don't

understand you.

A. If you have ever gotten packaging, somebody sends you a glass sculpture in the mail, and it is packaged in a box, and there is some packaging in that that is plastic, and there are a whole bunch of little air sacs.

Q. Yes.

A. Those are septations. It is a septation air sac. And that is what happens when you get septations in a body cavity, a portion of the body fluid is septated from a second portion of the body fluid.

Q. In this case -- assume for a moment that Dr. Oddi was concerned that there was bleeding at the site of the suture line. Isn't that a situation in which, in all probability, recurrence of an effusion is likely?

A. No, it is not, because there is not active hemorrhage at the time he explores it. Why should he think that it would start bleeding again?

Q. Why should he think it would stop?

A. Because it is not bleeding at the time he exlores it.

Q. Okay.

A. It is already stopped. There is no reason for it to start back up, or for him to explore it to try to make it start back up. That in fact probably would be a deviation from the standard of care.

Q. You know, tell me a little bit -- I got sidetracked with you. Tell me a little bit about your practice as of 1998 until the present, has it changed much in the percentage of what procedures you do?
A. No, it has not.
Q. Then let's talk about from 1998 to the present. Tell me, in terms of percentages, what kind of procedures you do?
A. Probably 90 percent cardiac surgery, 20 percent thoracic surgery.
Q. Of the 90 percent cardiac surgery, what percentage is coronary artery by-pass?
A. Seventy percent.
Q. What percentage is valve?
A. Twenty-five percent.
Q. Do you do any Ross?
A. No, I have not. I don't feel that is an operation where the risks are warranted.
Q. Have you cared for any patients post Ross procedure?
A. No, I have not.
Q. To your knowledge, is the risk of bleeding three weeks out from a Ross procedure one that is reported in the literature?
A. I have never seen that reported, this type of

bleeding, three weeks out from a Ross procedure.
Q. Have you read about it?
A. I have not.
Q. Have any of your colleagues told you about it?
A. No, I know they have not.
Q. I think we may have touched on this earlier. If Dr. Oddi had seen this presentation within 24 or 72 hours post Ross procedure, the standard of care then would be to open the patient back up and explore, right?
A. That is what I would do, yes, if there was active hemorrhage or a significant tamponade within 24 to 72 hours, I would reexplore them through the previous sternotomy incision.
Q. Was this considered -- we know this wasn't considered active hemorrhage, right?
A. That is right.
Q. So would this be considered significant tamponade such that you would reexplore them within 24 to 72 hours?
A. Well, the patient had pretamponade physiology, and the goal in terms of therapy for patients like that is not to wait until they develop actual tamponade physiology, but to alleviate the affecting agent and alleviate the potential to develop actual tamponade physiology. And it should be done as soon as possible, as it was.

Q. If you see this within 24 to 72 hours after surgery, standard of care is to do the sternotomy, right?
A. That is correct.
Q. And more likely than not, if you see this within 24 to 72 hours, you are going to find that there is bleeding from the suture line; is that right?
A. That is incorrect.
Q. Why?
A. The overwhelming percentage of hemorrhage post any operation is due to two things, one is chest wall hemorrhage and two is coagulopathy.

This would be further down on the list of things. In fact, I probably would put cannulation site hemorrhage as more likely a situation than I would suture line disruption.

Q. But if it is a suture line disruption, it is a potentially deadly complication, correct?
A. Yes, it is.
Q. And don't you have a duty and obligation to rule out the deadliest threat to your patient?
A. If there is active bleeding within the first 24 to 48 hours or 72 hours?
Q. No, not under the context of active bleeding, because remember, we don't have that here. I am talking about this presentation hypothetically.

A. You just asked me whether or not I would explore them in the first 24 to 72 hours. Now is this a different question?
Q. No, sir, it is still the same question, 24 to 72 hours --
A. You are going to have to ask the question then again, and be specific about the time frame as to when you are wanting me to explore this patient.
Q. Okay, that is the same presentation which we agree that there is no evidence of ongoing bleeding during the subxiphoid procedure, correct?
A. Correct.
Q. Okay. So we have got this same procedure --
A. So, Counselor, one question.
Q. Yes.
A. I am not doing a subxiphoid procedure 24 to 48 or 72 hours out from an operative procedure.
Q. Okay.
A. So you are mixing and matching here.
Q. I am mixing and matching.
A. You are bringing up a 24 to 48 hour operation and then asking me a question about something I do long-term down the road. So you have to pick A or B.
Q. Okay. Okay, let's pick A, you do a full sternotomy.

A. At 24 to 48 hours?
Q. That is right.
A. Okay.
Q. With this presentation, and you see the same things Dr. Oddi saw through the subxiphoid procedure.
A. Which is no active hemorrhage but some blood in the pericardial space.
Q. Right.
At that point in time, what do you do? Do you explore the suture lines?
A. Absolutely not.
Q. Why not?
A. There is no reason to. There is no hemorrhage. There is no active bleeding.
Q. What if you see thrombus along the suture lines?
A. Well, it depends upon how much thrombus there is there, and what happens if I decide to remove the thrombus. If there is a lot of thrombus in the suture line, then I may be concerned about that and may actually try to remove that thrombus. If there is very little thrombus along the suture line, I am not going to do that.
Q. If you remove the thrombus, can that cause bleeding?
A. It depends if you disrupt the suture line.

Q. In removing the thrombus, it is possible to disrupt the suture line and cause bleeding, right?
A. Yes, it is.
Q. Okay.
A. Which is the exact reason why you don't do it unless you have a good reason to do so.
Q. So the thrombus at the suture line, if there is a leak, can actually act as an agent for stopping bleeding from going through the suture line, correct?
A. To a degree, yes.
Q. Now, have you taken care of patients who have developed signs of tamponade three weeks out from a valve procedure, whether it is a -- I know you haven't taken care of anybody with a Ross procedure. Have you taken care of any patients who developed tamponade three weeks out from a procedure?
A. Yes, I have.
Q. How often, for how many times?
A. Within the last 17 years?
Q. Yes.
A. Probably 15 or 20, maybe 25.
Q. And tell me, in general, what you do when you are faced with tamponade post valve procedure three weeks out?
A. I do a subxiphoid pericardial window and place a

tube in the pericardial space.

Q. Have any of your patients ever died?

A. No, they have not.

Q. And again, when I say, died, those you did that procedure on.

A. No, they have not.

Q. Have any of those patients ever required their chest to be opened back up again, a sternotomy?

A. No, they have not.

Q. Have any of them, after you have put a drain in, bled precipitously afterwards?

A. No, they have not.

Q. Have you ever done a subxiphoid procedure in which you removed as much as 120 ccs of clots with more thrombus noted posteriorly and anteriorly which couldn't be extracted?

A. I have done subxiphoid pericardial windows where there has been residual thrombus that has not been extracted, and that has been the operative -- the operative procedure has been completed and those patients have done fine.

Q. Have any of those patients included patients with a double valve procedure, that is two suture lines?

A. I don't recall specifically whether there have been patients with double valves or whether it was just

isolated valve procedures. I group those together.
Q. Okay. Help me with this:
Am I right that anytime you have a valve replacement, there is a long suture line, right?
A. That would be correct.
Q. And I mean, the suture line goes all the way around the valve, right?
A. Well, but that actually -- that suture line, in the way that I do those valves, they are all interrupted sutures, and those are all suture lines that are actually intracardiac, those don't bleed into the cardiac space.
Q. But don't you have to put a suture line all the way around the valve, running or otherwise?
A. Yes, I do.
Q. And there is always risk of bleeding from the suture line?
A. Those are suture lines that are intracardiac, it is not something that bleeds into the cardiac space.
Q. For instance, in a Ross procedure, there is a suture line all the way around the valve, right?
A. That is an entirely different operative procedure.
Q. I know. I am asking about the Ross procedure.
A. Yes, there is, there are a total of four suture lines, large suture lines.
Q. Four large suture lines, okay.

Anytime you do even one suture line, there is a risk of bleeding from the suture line, right?

A. Yes, there is.

Q. In a Ross, then, there are suture lines around both the aortic and the pulmonary valves, right?

A. There are suture lines around the pulmonary autograft, which is what is utilized to replace the aortic valve and the pulmonary cryopreserve homograft.

Q. So two long suture lines?

A. Correct.

Q. So just by mere virtue of the fact there are two long suture lines, there is a greater risk of bleeding in a Ross procedure than in a single valve replacement procedure; is that fair?

A. That is fair.

Q. You know, assuming a full sternotomy, okay, what would Dr. Oddi have had to do to visualize the entire suture line?

A. Again, you are going to have to be more specific about that question. A full sternotomy, at which point in time, 24 to 48 hours out, or 21 days, 20 days out from the operative procedure?

Q. Twenty-one days out from the operative procedure. What would he have done to see the entire suture line, what steps?

A. Well, the only suture line that you can actually see is the distal suture line that anastomoses the pulmonary autograft to the tubular portion of the ascending aorta.

Q. Okay.

A. The suture line at the base of the heart is not visible.

Q. Okay.

And I take it if you do a sternotomy, and there is active bleeding, say it is coming posteriorly, you can tell by looking at it, correct? I mean, you can see it coming from the suture line?

A. You can tell if the bleeding is coming from posterior. You don't know whether it is from the button that connects the left main coronary ostium to the pulmonary autograft, or whether it is from the suture line at the base of the heart. And depending upon how rapidly the bleeding is coming from there, you can't even tell whether it is coming from the distal suture line connecting the pulmonary autograft or the actual aorta itself.

Q. You state in your report that the recognized complication of suture line disruption with a Ross procedure at times may result in catastrophic hemorrhage that is not amenable to surgical correction. That is in

the last paragraph on Page 3 of your report. Please tell me your authority for that statement?

A. Because I placed a number of aortic homografts, and I have been in that situation before, where the suture line at the base of the heart becomes disrupted. And it is a problem that is a very difficult one to address, it is a very difficult one to correct, and at times can result in an unacceptable outcome.

Q. All right, I know you haven't done Ross procedures, but you have done aortic homografts, correct?

A. Yes, I have.

Q. Have you lost a patient because of bleeding where the aortic homograft is, the suture line?

A. Yes, I have.

Q. How many patients have you lost?

A. One.

Q. How many times has bleeding occurred under those circumstances, and you have or someone else has intervened to save the patient?

A. Two times.

Q. Out of how many surgeries, sir?

A. Probably 25.

Q. What happened with that one patient that you lost when that happened?

A. He died from multi-system organ failure.

Q. Did he bleed to death?
A. No, he did not.
Q. Were you able to stop the bleeding?
A. Yes, I was.
Q. How did you stop it?
A. I took down the homograft and put in a St. Jude valve conduit.
Q. All right.
The tissue held?
A. Yes, it did.
Q. What about the other patient that you didn't lose under these circumstances, what happened with him?
A. The bleeding was from the left main coronary button, and I had to redo that.
Q. Have you ever used pledgeted sutures in your practice?
A. Yes, always.
Q. Have you ever had a circumstance in which they did not hold?
A. Yes, I have.
Q. How often?
A. The last 17 years, it depends upon the situation.
Q. Give me an estimate?
A. I would say probably five or ten times where they were not able to hold.

Q. What happened?
A. I had to redo the operative procedure.
Q. Did you lose the patient?
A. No, I did not.
Q. What did you use as a backup for not being able to get pledgeted sutures to hold?
A. I retrimmed the tissue back to a more acceptable site and then used whatever artificial graft material was necessary to extend the procedure so that I could sew to more acceptable tissue.
Q. Was that option available, given the presentation of the tissue described as friable with Mr. Burgess on the 10th?

MR. BEST: I will object. There are no criticisms or issues in this case regarding the technical aspects of the surgery on the 10th. I am going to let him answer this one question, but this isn't an area we will get into.

A. You will have to repeat that question, please.
Q. Sure.

And please understand, everyone, I am only getting into this on the 10th because I want to pull it back to the 9th when there are arguments that the same thing could have happened on the 9th.

My question is, given the presentation of the

friable tissue that was discovered on the 10th, the tissue was described as friable and shaggy, and there was difficulty in getting the sutures to hold, was that an option on the 10th?

A. Was what an option?

Q. To do what you did in those five or ten times where you used pledgeted sutures and they didn't hold.

A. No, because it is at the base of the heart. It is not further downstream. There is nothing to sew it to at the base of the heart. There is not fresh tissue. You are there. There is nowhere else to go.

Q. In terms of percentages, how often have pledgeted sutures worked for you, that has held versus not held?

A. In the overwhelming percentage of cases, they hold.

Q. Have you ever used, as a fallback position from failing pledgeted sutures, biologic glue?

A. Yes, I have.

Q. Is it fair to say that even if you have diseased tissue, the application of biologic glue reinforces the diseased tissues and therefore simplifies the surgical technique and improves immediate and late results?

A. It depends upon the type of biologic glue utilized. The only one I am aware of that actually works in that fashion is not allowable by the FDA to be

utilized in this country.

Q. What glue is that?

A. Gelatin resorcinol formaldehyde glue.

Q. What kind have you used in your practice?

A. Fibrin glue. I have used a new glue that CryoLife makes in their adjunct, but they don't actually stiffen the tissue to a degree that would allow you in this instance to have tissues hold any more firmly.

Q. Well, in your practice, have you ever been faced with a situation in which the use of glue following attempts with pledgeted sutures -- let me back up.

Would your first preference be to use pledgeted sutures?

MR. BEST: For what? What are we talking about?

Q. (Continuing) In a situation in which you are having trouble getting sutures to hold, and I take it your fallback position would then be pledgeted sutures, right?

A. It depends upon where you are working. Certain places, in terms of like coronary anastomoses or coronary aortic buttons, you don't have the luxury of putting pledgeted sutures in there because you don't have room to do it.

Q. In those circumstances, would you try biologic

glue?

A. I might.

Q. Have you ever had circumstances where biologic glue did not hold?

A. Yes.

Q. How often, in terms of percentages, in the times you tried to use biologic glue?

A. I couldn't give you a number for that.

Q. Can you give me a number for how many times you have tried biologic glue, a rough number?

A. Fifteen or 20 times. I am a big proponent of utilizing sutures, though.

Q. Okay.

Forgive me if I asked you this already. Of the 15 or 20 times you tried biologic glue, did you run into cases in which it didn't work?

A. Yes, more often than not. That is why I don't utilize it.

Q. Do you have an opinion in this case as to whether or not the use of pledgeted sutures -- let's assume for a minute Dr. Oddi had done a sternotomy on the evening of the 9th, and attempted to repair a bleeding suture line, okay?

And assume also that the same type of tissue that was visualized the day before, and dealt with -- I am

sorry, the day after, on the 10th, is seen by Dr. Oddi on the 9th, and he has to deal with it. Do you have an opinion as to whether or not the use of biologic glue and/or pledgeted sutures would have resulted in the sutures holding or the biologic glue holding?

A. I am certainly convinced the same outcome would have happened on the 9th as happened on the 10th.

Q. Tell me why, please?

A. Because a very technically sound cardiac surgeon made every effort he could to resolve the situation, and there is no reason to think that it would have been any different had the same thing been done on the 9th by another technically sound cardiac surgeon.

Q. Do you have an opinion as to how long the tissue in that condition was present?

A. From the pathology report, it would suggest that there was chronic inflammation and granulation tissue there that had become problematic from a clinical standpoint sometime further down the road.

Q. Okay, but in terms of probability, can you tell me how long the tissue was as described in the February 10th op note?

A. How long the tissue was what?

Q. Was like it was described in the February 10th op note, the tissue that wouldn't hold the sutures.

A. There is no way to know that. The only time you are actually there to explore it is on the 10th. There is no way to know whether it was like that on the 9th, or the 8th, or the 7th, or the 6th.

Q. So it is possible it wasn't like that on the 9th?

A. No, it is very improbable it wasn't like that on the 9th. It is described pathologically as a chronic inflammatory process with granulation tissue. That is not something that is acute. So in all likelihood, it was present there on the 9th.

Q. A moment ago you told me there is no way to know -- I mean, I am trying to make sure I understand your opinions. Are you telling me more likely than not, to a reasonable degree of medical probability, it was the same on the 9th as it appeared on the 10th?

A. Yes.

Q. And your basis for that is the description by Dr. Kamienski in the op note of the 10th as well as the autopsy report?

A. My basis for that is there is a short time frame between the operative procedure on the 9th and the operative procedure on the 10th. The histology is consistent with there being a chronic problem that caused the suture line to disrupt, and by Dr. Kamienski's description, the tissue was friable enough that it

wouldn't hold the sutures.

Q. Do you have any opinions in terms of probability as to what the cause of the friable tissue and the shaggy appearing tissue was?

A. Well, pulmonary autografts, in and of themselves, are much more friable than other aortic valve replacements, and there certainly could have been a potential for there to be an infectious process at the base of the heart that caused this to become more friable and to develop granulation tissue.

Q. Do you hold that opinion in terms of probability or is that just a possibility?

A. Possibilities.

Q. Are you critical of the use of running sutures used by Dr. Brown?

A. No, I am not.

Q. Do you have any opinions in terms of probability as to whether or not if these had been independent sutures, individual sutures versus running sutures, whether or not this suture line bleed would have occurred on the 10th?

MR. BEST: Well, I object. Whatever Dr. Brown did is certainly not material to this case. There is no claim in this case against Dr. Brown, and it is irrelevant. It is not

designed to lead to the discovery of admissible evidence in this case.

So unless you can articulate a reason why, we are not going to waste time talking about Dr. Brown's surgery.

MR. BURNETT: And the only reason I am asking that is, I don't want an opinion from this witness being elicited at trial which would suggest that the use of running sutures by Dr. Brown was causally related to the bleed. I am trying to flush out his opinions, David.

MR. BEST: Well, I never raised that as a defense, but if you want to ask him --

MR. BURNETT: I understand. I just want to make sure it is not, and I understand that, and I appreciate you saying that.

A. I think different surgeons use different suture lines based upon their individual preference. I use interrupted sutures for homografts, some surgeons use running sutures for homografts. You can get a suture line disruption with either type of proximal or distal suture lines.

Q. But you are not saying from a causation standpoint --

A. I am not saying that if interrupted sutures had been used, this wouldn't have happened.

Q. Have you ever dealt with tissue like this, Doctor?
A. Yes, I have.
Q. Okay. How often?
A. Fortunately, only once.
Q. Tell me about that one time?
A. It was an aortic homograft I did as a root reconstruction in the base of the heart. The aortic suture line disrupted, but it disrupted obviously early on, and the patient was taken back to the operating room 12, 14 hours after the original operative procedure and had the homograft taken down and a valve conduit placed.
Q. That is not the patient you were referring to earlier where they used the St. Jude valve?
A. Yes, it is.
Q. Okay, same incident, then?
A. That is correct.
Q. Help me with this:

When you use a St. Jude valve, are you -- how are you able to circumvent the problem with the shaggy tissue or the friable tissue?

MR. BEST: You know, John, I don't know why we keep talking about this stuff. It is not an issue in the case. So I object to it.

I have tried to give you plenty of latitude, but I am not going to waste my time. It

is crappy weather, I want to get out of town. Let's move on to something else. I am going to instruct him not to answer that without a court order, unless you can argue why it is relevant to the claim against Dr. Oddi.

MR. BURNETT: Here is why I think it is relevant, David. And I am not trying to hold you in there.

I think your other expert has said, and I think this expert is saying, that had Dr. Oddi explored the day before and attempted to repair a bleeding suture line had one been there, he would have run into the same problem he ran into on the 10th, and that is the suture line wouldn't have held because of the tissue.

And what I am trying to get from this witness is his experience with running into this kind of situation, and then being able to circumnavigate the problem.

And I am not going to suggest that someone should have done -- put a St. Jude valve in the night before, I don't think Dr. Oury has said that, that hasn't been a criticism. But I am looking at why the doctor got the St. Jude valve to be secure when the homograft wasn't held by the

suture line.

MR. BEST: It has nothing to do with this case and we are not going to answer without a court order.

MR. BURNETT: Okay.

BY MR. BURNETT:

Q. Bear with me everyone. Hold on, because I think I am almost done.

Do you know Dr. Oury?

A. I know him by reputation, yes.

Q. And what is his reputation, in your mind?

A. He is a surgeon that has had a moderate experience with the Ross procedure.

Q. Have you read any of his articles?

A. Yes, I have.

Q. Did you find them to be well reasoned and well researched and well thought out?

A. They were opinions about how he conducts operative procedures.

Q. Did you agree or disagree with those articles?

A. I don't agree or disagree. They are opinions of surgeons, that is what articles are, they are opinions about what people think about cardiac surgery. It is not a matter of agreeing or disagreeing with them.

MR. BURNETT: Okay, that is all I have.

MR. BEST: All right, thank you.

MR. BURNETT: Okay. So long, everyone. Thank you, Doctor, for your time.

THE WITNESS: You bet. Thank you.

MR. BURNETT: Everybody have a safe trip out of there.

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(DEPOSITION CONCLUDED)

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Mark Botham, M.D.

CERTIFICATE

State of Ohio,)
) SS:
County of Cuyahoga.)

I, Ivy J. Gantverg, Registered Professional Reporter and Notary Public in and for the State of Ohio, duly commissioned and qualified, do hereby certify that the above-named MARK BOTHAM, M.D., was by me first duly sworn to testify to the truth, the whole truth, and nothing but the truth in the cause aforesaid; that the deposition as above set forth was reduced to writing by me, by means of stenotype, and was later transcribed into typewriting under my direction by computer-aided transcription; that I am not a relative or attorney of either party or otherwise interested in the event of this action.

IN WITNESS WHEREOF, I have hereunto set my hand and seal of office at Cleveland, Ohio, this 13th day of January 2003.

Ivy J. Gantverg, Notary Public
in and for the State of Ohio.
Registered Professional Reporter.
My commission expires November 5, 2003.