IN THE COURT OF COMMON PLEAS

OF CUYAHOGA COUNTY, OHIO

PATRICIA A. YURICK, Executrix
of the Estate of
MARTIN A. YURICK,

Plaintiff,

vs. Case No.

CLEVELAND CLINIC FOUNDATION, 326719
et al.,

Defendants.

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Deposition of DAVID J. MOLITERNO, M.D., called for examination under the statute, taken before me, Denise M. Munguia, a Registered Merit Reporter and Notary Public in and for the State of Ohio, pursuant to notice and stipulations of counsel, at the Cleveland Clinic Foundation, 9500 Euclid Avenue, Cleveland, Ohio, on Wednesday, May 5, 1999, at 2:20 o'clock p.m.

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APPEARANCES:

On behalf of the Plaintiff:

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DAVID J. MOLITERNO, M.D., of lawful age, called for examination, as provided by the Ohio Rules of Civil Procedure, being by me first duly sworn, as hereinafter certified, deposed and said as follows:

EXAMINATION OF DAVID J. MOLITERNO, M.D.

BY MR. FINELLI:

Q. Doctor, for the record, can you state your full name and spell your last name?

A. David John Moliterno, M, as in Mary, O L I T E R N O. 14:21:10

Q. You're a young guy, aren't you? Relatively, I guess.

My name is Dan Finelli, I represent the plaintiffs in this case which have named Cleveland Clinic Foundation as defendants. I'm going to be asking you a series of questions this afternoon. If you don't understand any question, please stop me, I'll rephrase it or repeat it so that you understand it before you answer it. Fair enough? 14:21:20 14:21:32

A. Fair.

Q. Most importantly, you need to keep your voice up for the court reporter and your responses need to be verbal responses -- 14:21:41

A. Okay.

Q. -- so the court reporter can take down your responses. Okay?

A. Okay.

Q. I am going to do things a little bit different than my usual depositions. I'd like to talk first about the drug ReoPro and then talk about the clinical trials and the study trials that were involved with those types of medications.

A. Sure.

Q. Can you tell me what ReoPro is?

A. It's an antiplatelet drug.

Q. What's its specific action?

A. It binds, ReoPro binds to the IIb/IIIa. Is that good enough? It's Roman numeral II, small B, slash, Roman numeral III, small A.

It binds the receptors on platelets inhibiting them from binding their usual ligand, the usual thing that it binds, fibrinogen, so that the platelets can't couple easily with other platelets.

Q. Okay. Fair enough to say, then, the ReoPro inhibits the mediator which

causes -- which does not cause platelet aggregation? 14:22:51

A. You'll have to redo that one for me. Sorry.

Q. Okay. ReoPro blocks glycoprotein IIb/IIIa, correct? 14:22:57

A. Yes. Correct.

Q. Thereby blocking the final common pathway which facilitates platelet aggregation?

A. Correct. 14:23:10

Q. So that giving ReoPro diminishes the ability of the platelets to aggregate?

A. That's correct.

Q. Are you familiar with the EPIC trial? 14:23:21

A. Yes.

Q. Was the Cleveland Clinic involved in the EPIC trial?

A. Yes.

Q. As a center? 14:23:27

A. Yes.

Q. When was the EPIC trial initiated?

A. Don't know.

Q. Do you know when it was completed?

A. I don't know the exact day, no. 14:23:37

Q. Okay. 14:23:39

A. I mean I can give you a ballpark for most of the studies, but I just don't remember the details. Sorry.

Q. Were you yourself involved with the EPIC trial? 14:23:46

A. Not at the time of its workings, no. I mean I helped with patient enrollment, but I wouldn't have been in the design or creation of the study. But I have certainly worked on it and the publications from it since. 14:23:56

Q. Let me tell you what I think the EPIC trial is and correct me if I'm wrong.

A. Sure. 14:24:08

Q. It was a randomized, double randomized study evaluating the efficacy of ReoPro in patients undergoing angioplasty, the purpose, to see whether or not that could diminish the restenosis rate postangioplasty? 14:24:21
Correct?

A. No, I think the primary endpoint of the study, as I understand, was trying to prevent ischemic complications, that's the IC of EPIC, the evaluation of the stroke to 14:24:37

prevent ischemic complications. Not necessarily the prevention of restenosis, which would be another sequelae perhaps of percutaneous interventions. 14:24:39

Q. So that the primary composite was? 14:24:51

A. Death, myocardial infarction and urgent target vessel revascularization, and there were a few other minor points such as placements of stent, placement of an intra-aortic balloon pump, things such as that. 14:25:07

Q. And in the randomized study they used a bolus of ReoPro along with an infusion of ReoPro or a bolus of ReoPro along with a placebo infusion or a placebo bolus along with a placebo infusion? 14:25:23

A. That's correct.

Q. What they found was that the treatment utilizing the ReoPro bolus and the ReoPro infusion was associated with a higher incidence of bleeding complications, the risk being inversely related to byway? 14:25:37

A. That's an oversimplification, but that's part of it, yes.

Q. Is it fair to say that using the ReoPro bolus and infusion compared to the 14:25:53

placebo there was an increased risk of bleeding complications? 14:25:55

A. There was an increased risk of major bleeding associated with vascular sites or hollow organ bleeding among those getting ReoPro bolus plus infusion as compared with those getting placebo. 14:26:06

Q. Are you familiar with the article by Dr. Eric Topol from the Cleveland Clinic in 1995 titled The Prevention of Cardiovascular Ischemic Complications with New Platelet Glycoprotein IIb/IIIa inhibitors? 14:26:22

A. I may be, but I'm not sure which one. He wrote several that year with similar titles, so if you told me maybe where and when it was published, I could have a better connection for you. 14:26:36

Q. How about if I show you the article?

A. Perfect. 14:26:43

Q. All right.

A. I'm not very familiar with that one, but I can still answer your questions about it.

Q. Okay. 14:27:07

A. You want me to leave it here or we can trade it back and forth just so I can figure out which one that is? 14:27:09

MR. JONES: I'll figure it out for myself, too. Go ahead. 14:27:16

Q. Basically that article discussed the results of recent clinical trials, mostly the EPIC trial --

A. Yes.

Q. -- evaluating the efficacy and safety of glycoprotein IIb/IIIa inhibitors in patients undergoing PTCA, correct? 14:27:23

A. Yes.

Q. Okay. Based on that article and the conclusions of the EPIC trial, was it not the principal disadvantage of treatment with the ReoPro bolus and infusion was it doubling in the incidence of major bleeding? 14:27:42

A. It is among the limitations, yes.

Q. Therefore it was necessary as a conclusion of the EPIC trial to minimize bleeding complications by either reducing the heparin dose or adjusting the dose of the glycoprotein IIb/IIIa inhibitor? 14:28:01

A. Not necessarily. Now, let me help 14:28:16

clarify. 14:28:18

Q. Okay.

A. And I'll speak to you.

Because bleeding was reportedly higher, efforts were made to try to minimize 14:28:29 bleeding while maintaining efficacy, but because the bleeding was not planned in advance, but somewhat of a surprise, the adjudication of bleeding events wasn't quite as strict as it could have been, for example 14:28:51 guidelines for blood transfusions weren't organized in advance, so that subsequent trials paid particular attention to categorization of bleeding, guidelines for transfusions. Among things that were decided to test in future 14:29:05 studies were lowering the heparin dose, removing the vascular sheath quickly, because that is the leading cause of major bleeding, and perhaps adjusting the dose of the infusion among lighter weight patients from a standard 14:29:21 ten microgram per kilogram to the per kilogram basis as opposed to one dose for each patient.

Q. Weight adjusted dose?

A. Thank you, weight adjusted infusion. 14:29:35

Q. And that all came about as a conclusion of the EPIC trial? 14:29:38

A. I don't know if that's true or not.

Q. In the EPIC trial, heparin dosing was not weight adjusted? 14:29:44

A. To my understanding of the protocol, I think that's true.

Q. Okay. And what they found was light patients, at least less than 99 kilograms, had more blood loss? More bleeding? 14:29:56

A. Relative to which group, I guess?

Q. I think relative --

A. For example, if you add ReoPro into the formula, it did not seem to increase the bleeding among lightweight patients. There was a similar amount of bleeding for all. It wasn't an independent predictor. 14:30:11

Q. Correct, but as compared to all three regimens that were used, lighter people had more problems with bleeding? 14:30:24

A. In general, so for heparin alone, I think what was found in the studies, that all three groups showed a similar amount of bleed. It was higher than we would like to see for lightweight patients, but wasn't disparate 14:30:36

among the groups. Does that make sense? 14:30:39

Q. Yes.

A. Okay.

Q. So that lower body weight was associated with higher levels of 14:30:47 anticoagulation as measured by ACT?

A. For the same given dose of heparin, yes.

Q. And higher doses of heparin on a per kilogram basis was associated with higher 14:31:01 rates of major bleeding, with no efficacy benefit?

A. In this study?

Q. Uh-huh.

A. Yeah, I don't think that was a 14:31:13 hypothesis of this, I mean I don't think that was --

Q. I mean a conclusion you could call it?

A. I'd have to see it to be sure. 14:31:21

Q. I guess what I'm trying to summarize is that in this study it was observed that higher than necessary doses of heparin were associated with bleeding in those patients where ReoPro was used as well? 14:31:57

A. I can't agree with that. 14:32:02

Q. Why not?

A. Because you said higher than necessary and that's speculative. We don't know what necessary is, for example. There are 14:32:07 no prospective studies comparing various heparin doses for efficacy and safety outcome.

The derivation of the dose of heparin used is an empiric one based on observational data during cardiopulmonary 14:32:24 bypass by anesthesiologists. So the correct dose of heparin has never been fully tested.

Q. I'm looking at your CV here that you gave me and it's up to date, correct?

A. Yes. 14:32:42

MR. FINELLI: I'd just like to mark this as Plaintiff's Exhibit 1.

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(Thereupon, Plaintiff's Deposition Exhibit 1 was marked for purposes of identification.)

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Q. In 1995 you were a staff physician here at the Cleveland Clinic, correct?

A. At that time I was a staff 14:32:59

physician. I joined in July of 1994. 14:33:01

Q. Right. So in 1995 you would have been a staff physician?

A. (Nodding affirmatively.)

Q. In the section of interventional 14:33:08 cardiology?

A. (Nodding affirmatively.)

Q. Okay. At that point in time, in 1995, then, what did you learn from the EPIC trial? 14:33:20

A. That this class of drug dramatically lowered the risk of death, myocardial infarction or urgent target vessel revascularization beyond contemporary therapy. In EPIC we saw 35 percent reduction in those 14:33:34 adverse events.

Subsequent analyses of those data had shown that mortality alone is reduced by about sixty percent at three years among patients who present with unstable angina. 14:33:47

Q. What did you learn with relation to the bleeding or hemorrhage?

A. Yes. Again, since that wasn't, I think, carefully designed, let us say, because it wasn't suspected to be, we didn't need to 14:34:02

know perhaps, that we needed to, in designing future studies, more carefully collect the data. 14:34:06

Q. When you say it wasn't designed carefully, there was a protocol dose of ReoPro that was given as a bolus, correct? 14:34:15

A. (Nodding affirmatively.)

Q. There was a protocol dose of ReoPro that was given as an infusion?

A. That's correct. 14:34:26

Q. There was a protocol dose of heparin that was given as an infusion?

A. I don't know about the protocol dose of heparin, but certainly for the treatment groups the ReoPro was certainly designed in advance, but what I was trying to get at with regard to categorization of bleeding, for example, this wasn't adjudicated and, to my knowledge, and, for example, guidelines for blood transfusions weren't given such that there was a large variation among hospitals for when they decided to transfuse patients. 14:34:37 14:34:49

So that subsequent studies then, I think more carefully tried to control these 14:35:05

assessments to get a more accurate handle on adverse events. Whereas I think the primary endpoint of EPIC was looking for efficacy. 14:35:08

Q. All right.

A. Again, a reduction in death, MI or urgent target vessel revascularization. 14:35:19

Q. But as a side, what came out in EPIC was shown that ReoPro bolus and infusion doubled the increase of bleeding?

A. Was associated with an increase in bleeding. 14:35:33

Q. Associated with increased bleeding compared to placebo?

A. But it was unclear whether there was because of the vascular sheaths were being left in overnight, because of the heparin needed to be weight adjusted, because of a number of variables, but just in contemporary practice at that time there was an association with increased bleeding, yes. 14:35:42 14:35:55

Q. And would you agree as a result of the EPIC trial, then, further trials focused, at least partially focused, on decreasing the dose of heparin to a low dose, weight adjusted dose? 14:36:13

A. Yes, I think several efforts were made to reduce vascular access site bleeding, which again is a major bleeding in these studies, by reducing the time an indwelling sheath was left in the femoral artery, by weight adjusting the dose of heparin, by weight adjusting the infusion of ReoPro, by guiding the level of hematocrit at which transfusions would be given, by making meticulous access to the femoral artery so that you wouldn't have an increased risk of bleeding. 14:36:17 14:36:31 14:36:52

So I think a number of efforts, in answer to your question, were made to try to minimize the bleeding.

Q. But the vascular access site wasn't the only site of bleeding that was involved with EPIC? 14:37:02

A. The overwhelming majority are hollow organs, almost all bleeding associated with EPIC is hollow organs, specifically the vasculature, number one, and then coming in number two and three would be the gastrointestinal tract and the genitourinary tract, all the hollow organs, whereas solid organs are almost never seen to bleed, we would 14:37:14 14:37:28

call them rare, and none have been shown to be increased with ReoPro, specifically the spleen, the liver, the brain, things that are solid organs. 14:37:32

Q. Were there any patients that had intracerebral hemorrhage in EPIC? 14:37:42

A. Yes. There were two, to my knowledge, in the placebo group, there was one in the bolus alone group, and there were another two in the ReoPro bolus plus infusion, there was a third one reported in that group, but the patient never received ReoPro. 14:37:56

So it was deemed from that study that there was no difference between -- sorry, among the three groups. 14:38:11

Q. But whether it was access site, hollow organs, as you say, or spleen, liver, brain, the studies that followed EPIC were using variables in the dosage of heparin and ReoPro to help reduce the incidence of bleeding, no matter where it occurred? 14:38:40

A. I don't know that. I think the goal was to reduce major bleeding, which was primarily associated with vascular access site, so that's why among the major changes, again, 14:38:53

were removing the sheath to not giving post procedural heparin, unless necessary, to giving weight adjusted heparin, as we have talked about, and weight adjusted ReoPro infusion. 14:38:57

Q. All right. Are you familiar with the PROLOG study? 14:39:09

A. Yes.

Q. What was the PROLOG study?

A. The PROLOG was the first attempt in a small scale fashion to do those things we just mentioned. 14:39:19

Q. And that used ReoPro with standard, standardized heparin dosage versus ReoPro with low dose heparin?

A. With reduced dose heparin, yes. 14:39:33

Q. And what were the results of PROLOG?

A. Yeah, I don't know them exactly, it was a small study, but I think in short what was found is that by removing the vascular access site, by reducing the heparin dose, that there was less bleeding as seen in EPIC. With those modifications. 14:39:43

Q. Without the reduction of efficacy?

A. I think that's a fair conclusion, 14:40:01

but because it was such a small study, I'm not sure that the statistical power would be robust enough for that. I don't know, to be honest. 14:40:02

Q. Okay. PROLOG was a pilot study for EPILOG? 14:40:13

A. Yes.

Q. EPILOG used the same randomized protocol?

A. I believe so. I know the EPILOG protocol, but PROLOG, since it was such a small study, I never focused on it too much. 14:40:21

Q. All right. If I said they used the same randomized protocol, there's no reason to disagree?

A. I wouldn't disbelieve you, thank you. 14:40:31

Q. And I think in EPILOG they also randomized it between ReoPro and standard dose heparin versus ReoPro and weight adjusted heparin? 14:40:41

A. I think they were all weight adjusted, to my knowledge. I think that the regimens were as follows: Placebo, standard dose heparin a hundred units per kilogram; ReoPro, standard dose heparin, a hundred units 14:40:53

per kilogram; and ReoPro and reduced heparin, 70 units per kilogram. 14:40:56

Q. Approximately two-thirds of the standard dose?

A. Seventy percent. 14:41:03

Q. Seventy percent. Okay. Except EPILOG used a much greater patient population in their trial?

A. I'm sorry, much greater?

Q. Much greater population than PROLOG? 14:41:11

A. Sorry, thank you, yes. I thought you were talking in comparison with EPIC.

Q. No.

A. A larger study, yes. 14:41:18

Q. Results were the same? What were the results in EPILOG?

A. Well, EPILOG, as you probably know, was prematurely discontinued, so the study was never truly completed, not quite as robust. 14:41:27 Sample size had been greater because it was deemed perhaps unethical to give patients placebo and they should get ReoPro as a data safety monitoring, board said. In brief, efficacy was preserved in the lower dose 14:41:41

heparin group as compared with the higher dose heparin group. 14:41:44

Q. And also did it not reduce significantly the incidence of bleeding?

A. As compared with? 14:41:54

Q. With the standard dose.

A. I think in comparison with EPIC, but the standard dose heparin group, I don't remember the exact numbers, but the bleeding was lowered, yes. 14:42:04

Q. Using the low dose weight adjusted heparin in EPILOG?

A. I'm sorry, I would have to look at the manuscript to actually see the actual numbers again, but I don't remember if they were, I don't think there was a difference between the bleeding in the low dose and the standard heparin dose between the two, but I would have to look at it. They looked at minor bleeding, major bleeding, they looked at a number of things, and I'm sure we can have the manuscript, I just don't have it on the top of my head. 14:42:14 14:42:25

Q. All right. I think the incidence of bleeding was significantly reduced with 14:42:32

ReoPro and low dose adjusted heparin compared to ReoPro and standard dose heparin. 14:42:34

A. Okay.

Q. Okay. But you're unsure of that conclusion, is what you're saying -- 14:42:43

A. Well, as I say --

Q. -- without looking at the --

A. -- there are a number of different parameters, looked at major bleeding, minor bleeding, blood transfusion, platelet transfusion, and it's just hard for me to remember the exact numbers. 14:42:50

Q. All right. What was CAPTURE? What was that trial or study?

A. CAPTURE was a European-based study that, once identifying patients who were deemed to be at high risk for procedural complications of angioplasty after a diagnostic catheterization, were then randomized a placebo or to ReoPro in an interval of 18 to 24 hours before going on to their intervention, they had their intervention, then received one hour of ReoPro after the procedure and then it was discontinued. 14:43:01 14:43:17

Q. Did any conclusion -- has CAPTURE 14:43:32

been concluded? 14:43:33

A. The study is concluded, yes.

Q. Have the results of CAPTURE altered or changed the way you use ReoPro, the protocol of ReoPro and heparin in your angioplasties? 14:43:46

MR. JONES: Objection. You're not giving us a time frame?

MR. FINELLI: No. Since the conclusion of CAPTURE.

MR. JONES: Objection. Go ahead. 14:43:56

A. Well, I think that -- no.

Q. I would think not, but --

A. I think EPIC and EPILOG have primarily driven the way in which practice in North America goes and I don't think the 14:44:11 CAPTURE protocol has been adopted in the United States.

Q. All right. Other than EPIC, PROLOG, EPILOG and CAPTURE, have there been any other trials or clinical studies that have been 14:44:25 completed or ongoing regarding glycoprotein IIb/IIIa inhibitors?

A. Yes.

Q. What are they?

A. There are too many to mention. 14:44:35

There are like 30 pharmaceutical companies developing IIb/IIIa receptor antagonists in phase I, II, III and IV studies, so I would say the contemporary literature probably has data maybe on 50,000 randomized cases. 14:44:36 14:44:48

Q. Are any of those as large as EPIC or EPILOG?

A. Yes.

Q. Which ones? If you know.

A. Well, the oral IIb/IIIa trials, so ORBIT, somewhere around nine, ten thousand patients, EXCITE, similarly nine, ten thousand patients. 14:44:58

Q. ORBIT, EXCITE, I'm sorry?

A. Yes. EXCITE, PARAGON, P A R A G O N, PRISM, PRISM PLUS, I could go on for quite a while. I think I reported on medical studies of these in about 30,000 of randomized patients about a year ago. 14:45:12

Q. These trials or studies that you have just mentioned, have they all been subsequent to EPILOG? 14:45:29

A. Yes.

Q. In 1994 were there any other glycoprotein IIb/IIIa inhibitors studied other 14:45:33

than ReoPro? 14:45:37

A. Yes, but I don't know in what phase, maybe in phase I or preclinical studies, but none were, to my knowledge, in 94.

Q. Or 95. 14:45:51

A. Yeah, 95 probably would have been the early studies with the current FDA approved drug Aggrastat, A G G R A S T A T, and Integrilin, so the impact and restore studies would have been started about that time, I would guess. 14:46:05

Q. But regarding the EPIC trial, ReoPro was the only glycoprotein IIb/IIIa --

A. That's the only antiplatelet drug used. 14:46:14

Q. -- that was utilized in the study?

A. That's correct.

Q. Did you hear my complete -- I wanted to finish my question first.

A. Sorry. 14:46:21

Q. I don't know if you heard, my question, let me repeat it, was in the EPIC trial, ReoPro was the only glycoprotein IIb/IIIa inhibitor utilized in the study?

A. Yes. 14:46:32

Q. In patients undergoing PTCA procedure, angioplasty, where ReoPro is used along with any concomitant heparin, if substantial bleeding occurs that cannot be controlled by pressure, you would agree, then, that the ReoPro and the heparin should be stopped? 14:47:06 14:47:25

A. Yeah, could you repeat the question?

Q. Okay. Sure. 14:47:40

A. Just because I think it was somewhat broad. So first I'll just say that heparin is always used with ReoPro, almost always used.

Q. All right. Let me repeat it. In patients undergoing angioplasty, PTCA, where ReoPro and heparin is used, either as a bolus or an infusion, okay, and significant bleeding occurs, which cannot be controlled by pressure, such as at a vascular site, you would agree then that the infusion of ReoPro and heparin should be stopped? 14:47:47 14:48:05

A. I would say generally yes. I mean it's a risk and benefit, it depends on why it's being given and what the significant, in 14:48:17

quotation marks, risk of bleeding is, but I think, yeah, in general you want to stop the anticoagulants for a bleeding person. 14:48:21

Q. Going back to your CV, after completing medical school and your internship, you did a residency in internal medicine, correct? 14:48:53

A. Yes.

Q. And then you did a fellowship at Parkland Memorial Hospital in cardiovascular medicine from 1990 to 93? 14:49:00

A. Yes.

Q. And then subsequent to that you did a fellowship in interventional cardiology at the Cleveland Clinic from 93 to 94? 14:49:11

A. Yes.

Q. That was two years, right? Or one year?

A. It was one year.

Q. One year. All right. 14:49:18

Are you familiar with the American Heart Journal?

A. Yes.

Q. Is it a monthly journal?

A. I believe so, yes. 14:49:30

Q. Do you review it? 14:49:31

A. Do I review the manuscripts for it?

Q. Well, do you review the American Heart Journal when it comes out monthly?

A. Sometimes. I don't subscribe to it, how is that, but, yes, I do review manuscripts for it, but I don't read every issue, no. 14:49:44

Q. Do you review any other monthly journals? 14:49:49

A. I subscribe to and try to read, when I have time, the New England Journal of Medicine, the Circulation, the American Journal of Cardiology, Lancet. Annals in Internal Medicine, I forgot to say that. 14:50:05

Q. Would the American Heart Journal be included in those that you mentioned?

A. (Nodding negatively.)

Q. Why not?

A. Just I guess it's a limit to the amount of one's time to, you know, subscribe and read the journals, and I would kind of give it a lower rating in the respectability. 14:50:15

Q. Relative to what, the articles that are published? 14:50:29

A. The ones that I mentioned that I do read, the New England Journal of Medicine, for example, and the Circulation are what we would call the top tier or the tier II and the American Heart Journal would maybe fall down to a third level journal because it's just not quite as well respected, I think. 14:50:29 14:50:39

Q. Well, respected in terms of the articles that are published in the journal?

A. I think relative to other journals like the New England Journal of Medicine, for example, right. 14:50:49

Q. I think I asked you this before, Cleveland Clinic was involved with EPIC?

A. Correct. 14:51:05

Q. Was it involved with PROLOG?

A. Yes.

Q. Was it involved with EPILOG?

A. Yes.

Q. You yourself were not involved with EPIC? 14:51:14

A. That's correct.

Q. Were you involved with EPILOG?

A. I mean I was a fellow here at the time EPIC was being done, but I wasn't on the 14:51:20

steering committee or on any type of investigative committee. 14:51:24

Q. Were you involved with EPILOG as a staff physician?

A. As a staff physician I would have enrolled patients I believe in EPILOG, yes, that would have been during that time. The study I think was discontinued in December of 95, so yes. 14:51:31

Q. EPILOG was discontinued in December of 95? 14:51:43

A. I think that's correct, yes.

Q. Do you know Dr. Cassandra Pileski?

A. I can't recollect that person.

Q. Apparently she is the referring physician of Mr. Yurick. 14:51:59

A. Okay. So she's maybe a Kaiser physician perhaps.

Q. Kaiser physician?

A. And hence I may not know her. 14:52:06

Q. You don't know if she's an employee of Kaiser or of the Cleveland --

A. I do not.

Q. Or of the Cleveland Clinic Foundation? 14:52:13

A. I do not know. 14:52:13

Q. Okay. To your knowledge, were any Kaiser physicians involved in the care of Mr. Yurick relative to his angioplasty on January 15th of 96? 14:52:26

A. Could you repeat the question?

Q. To your knowledge were any Kaiser physicians involved in the care of Mr. Yurick on his admission of January 13th, 1996 relative to his angioplasty? 14:52:39

A. Yes, I believe he was admitted to the Kaiser service during that hospitalization, yes. So he would have been cared for by Kaiser physicians.

Q. During that admission, as part of the cardiac catheterization and angioplasty that was performed on Mr. Yurick, to your knowledge would any Kaiser physicians have been involved in those procedures? 14:52:48

A. I don't think so. I think I was the physician who performed his catheterization and angioplasty. 14:53:00

Q. Would any of those, would any Kaiser physicians have been involved with the post procedure care of Mr. Yurick following his 14:53:14

catheterization and angioplasty? 14:53:1

A. Yes.

Q. And in what way?

A. Not uncommonly, there is a primary team caring for the patient, which may have 14:53:28 specialists also, and there may be the proceduralist or the interventionalist, such as myself, and we would each have participation in his care.

Q. All right. 14:53:42

A. So they would not relinquish their care, in other words, for him.

Q. We'll get into that in just a little bit, but in general, after the cardiac catheterization -- do you recall Mr. Yurick -- 14:53:55

A. Of course.

Q. -- by the way? Do you recall the procedures performed on January 15th, 96? The catheterization and the angioplasty?

A. I have some recollection of them, 14:54:05 yes.

Q. All right. Following the procedures, the records reflect that he was then transferred to the general cardiology floor? 14:54:15

A. To a cardiac telemetry floor where interventional patients go, Kaiser and nonKaiser patients. 14:54:16

Q. And he would have been monitored during that stay there on the telemetry floor? 14:54:26

A. Yes.

Q. All right. To your knowledge, would any Kaiser physicians have been involved in his care while he was on the telemetry floor post procedure? 14:54:38

A. Yes. I don't know to what degree. I don't remember to what degree. But yes. So, for example, they may have been called to see him. We both have responsibilities, if you will, for him, so some of which may have been assigned to me and some to others. 14:54:56

Q. Okay. As far as residents or fellows caring and treating for Mr. Yurick, they would have been all residents and fellows of the Cleveland Clinic Foundation? 14:55:11

A. That's correct.

Q. When did you yourself begin utilizing ReoPro as a drug for angioplasties?

A. Soon after it was FDA approved. How many days, I don't know. I mean certainly 14:55:30

I had used it, but in a blinded fashion, as you asked earlier, in EPILOG, but in an open label fashion, I would say days after it was FDA approved. 14:55:38

Q. Roughly when was it FDA approved? 14:55:46

A. Good question. Maybe spring of 95. I honestly don't remember. This was spring of 96. Yes, it had to be before Mr. Yurick's procedure, I just don't remember when.

Q. Mr. Yurick's procedure was January 15th, 96. Can you give me an estimate of how many cases, of how many angioplasty cases you had done prior to Mr. Yurick where you utilized ReoPro? 14:56:08

A. I don't, but I could find that information for you in the database. 14:56:20

Q. Okay. If you could please do that and then let your attorney know, then he can give me that information.

MR. JONES: Sure. 14:56:29

Q. Okay. Once it was FDA approved, somewhere in the spring of 95, as you mentioned, what was your regimen as far as utilizing ReoPro and heparin?

A. To the best of my recollection, as 14:56:48

it was FDA approved at the time. 14:56:49

Q. Do you recall the regimen or protocol?

A. I mean I think it was a .25 milligram per kilogram for the bolus and ten micrograms per kilogram for the infusion, but I would have to look it up. I don't remember what it was back then. But I think, as we have talked about earlier, there was a standard weight adjusted bolus and a standard nonweight 14:56:56 14:57:13 adjusted infusion, as was FDA approved and used in the EPIC study.

Q. So following FDA approval, you could have used standard dose heparin or low dose weight adjusted heparin? 14:57:28

A. Well, the only data we had at that time was EPIC.

Q. All right. I guess I'm looking for an answer to my question, though. Following FDA approval, would you have used standardized 14:57:41 heparin as well as weight adjusted low dose heparin?

A. Yes.

Q. Prior to Mr. Yurick's angioplasty, January 15th, 96, had you experienced patients 14:58:07

that developed intracerebral hemorrhage going under angioplasty with ReoPro and heparin? 14:58:13

A. Could you repeat the question?

Q. Okay. Prior to Mr. Yurick's procedure on January 15th, had you experienced any patients prior to his procedure where you had done angioplasty with ReoPro and heparin that developed intracerebral hemorrhage? 14:58:23

A. I personally had not. We had the cases that we talked about from the EPIC study, so we knew that there was intracerebral hemorrhage occurring in all three groups, and it's a known risk with interventions in general. 14:58:41

Q. Following FDA approval, you mentioned you used ReoPro and heparin as part of a regimen when you did angioplasties. Did your protocol or regimen of ReoPro and heparin in angioplasties ever change or be altered from when you first started using it? 14:59:04 14:59:25

A. Could you repeat the question?

Q. Okay. I'm kind of confusing myself.

From when you first started using ReoPro and heparin as part of an adjunct in 14:59:33

your angioplasty procedures, have you ever changed since that time your regimen and protocol of ReoPro and heparin? 14:59:38

A. Yes.

Q. How have you changed it? 14:59:46

A. Following the publications of EPILOG and the FDA's changing of the labeling subsequently, ReoPro infusion is now weight adjusted, as is the heparin dose, vascular access sheaths are removed procedural and post procedural heparin is not used unless clinically necessary. 15:00:04

Q. I didn't hear the last part.

A. And post procedural heparin is not used unless deemed clinically necessary. 15:00:17

Q. And what would be clinically necessary? To use ReoPro?

A. Yes, I think nowadays a vessel that cannot have or receive an intracoronary stent where you still have residual concern for thrombosis. 15:00:30

Q. And that protocol, you said you yourself, changed following EPILOG and FDA second approval; is that what you said?

A. I think the label was changed at 15:00:45

some point between EPIC and EPILOG. I don't know exactly when. 15:00:46

Q. And EPILOG, I think you mentioned earlier, was completed around 12-95?

A. Well, the enrollment. 15:00:58

Q. It was discontinued?

A. Enrollment was discontinued at the recommendation of the DSMB, I think, in December of 95.

Q. Has your regimen and protocol of ReoPro and heparin as adjunct to your angioplasty changed since your procedure on Mr. Yurick? 15:01:13

MR. JONES: Objection. You can answer. 15:01:25

A. It would be similar to the question you just asked. EPILOG has been published since Mr. Yurick's case and FDA has changed the label since his case, so yes, by translation, yes, I have changed since Mr. Yurick's case. 15:01:40

Q. So the studies of EPILOG were published subsequent to Mr. Yurick's case?

A. Correct.

Q. How about the studies of EPIC? Were they published prior to Mr. Yurick's case? 15:01:53

A. I believe so. It should be referenced right in here. It was published in the New England Journal in 1994. 15:01:58

Q. Have you utilized any other glycoprotein IIb/IIIa inhibitors other than ReoPro? 15:02:11

A. Yes.

Q. What have you used?

A. Integrilin, I N T E G R I L I N. Tirofiban, T I R O F I B A N. Lamifiban, L A M I F I B A N. Zemolifiban, Z E M O L I F I B A N. I think that's it. 15:02:24

Q. Do you still use ReoPro?

A. Yes.

Q. These other inhibitors that you mentioned, are they part of studies? Or clinical trials? 15:02:46

A. I have used them both in part of studies and since FDA approval of the other two agents, which are FDA approved, tirofiban and Integrilin. 15:02:59

Q. Intercerebral hemorrhage can occur with the use of heparin?

A. Correct.

Q. It may occur with the use of 15:03:12

Coumadin? 15:03:14

A. Correct.

Q. May occur with the use of ReoPro?

A. Correct.

Q. What are the symptoms of 15:03:20
intracerebral hemorrhage?

A. I think they can be variable and I'm not sure I could clearly distinguish the symptoms as opposed to nonintracerebral hemorrhage, stroke, but neurologic dysfunction, 15:03:38
so they would include perhaps a disorientation, confusion, slurred speech, motor dysfunction, things that would be neurologic in origin.

Q. Can they include headache?

A. Yes. 15:03:57

Q. Can they include nauseousness?

A. Yes.

Q. Can they include emesis?

A. Yes.

Q. Can they include elevated blood 15:04:02
pressure?

A. Probably, yes.

Q. Getting back to the regimen and protocol, we talked about you utilizing ReoPro and heparin, talked about the dosage and the 15:04:34

infusion, so forth. How, after the FDA approval when you started utilizing ReoPro, how did you monitor the anticoagulation effect pre, during and post angioplasty procedure? 15:04:38

A. What anticoagulation effect? 15:04:54

Q. You would agree that ReoPro, in combination with heparin, affects the anticoagulation?

A. There are a number of measures of anticoagulation, I just want to make sure. For example, there is no readily available way to monitor ReoPro's level of antiplatelet effect, but I assume what you're asking is the level of heparin effect in the cath lab. 15:05:03

Q. Okay. Heparin affects anticoagulation? 15:05:22

A. Yes, a number of things do, like Coumadin.

Q. Okay. Does not ReoPro affect anticoagulation? 15:05:32

A. It affects platelet function, yes.

Q. Which in turn affects anticoagulation?

A. It can to a degree. I have published the papers showing it can affect some 15:05:43

measures of anticoagulation, and I'm not trying to mince words here, but I just want to make sure we are on the same wavelength here. 15:05:47

Q. Okay. But when you perform angioplasties utilizing ReoPro and heparin in combination, do you not want knowledge of the patient's anticoagulation status? 15:05:58

A. Whenever you do any angioplasty, you like to make sure you have a therapeutic window of anticoagulation since you are introducing risk for coagulation with artificial devices, wires, balloons and such, yes. 15:06:15

Q. As well as risks for bleeding?

A. Yes. 15:06:26

Q. As a result of using heparin and ReoPro?

A. Yes.

Q. So --

A. As a result of using heparin. For example, if you were to use ReoPro, if you could imagine using ReoPro without heparin, you may not measure level of anticoagulation because there wouldn't be anything available to measure. 15:06:30 15:06:48

Q. Okay. 15:06:51

A. I'm just trying to help.

Q. Yes. Hypothetically, if you were using ReoPro --

A. Yes. 15:06:56

Q. -- would you expect your activated clotting time to be affected?

A. (Nodding negatively.)

MR. JONES: Well, make sure you answer out loud. You're shaking your head. 15:07:02

A. Sorry. I'm sorry. I would not expect to see a significant change in the activated clotting time with ReoPro alone in a patient who has no heparin, right.

Q. Right. Would you expect in ReoPro alone to see a change in the PTT? 15:07:14

A. I would not.

Q. Okay. A change, would you expect using ReoPro alone to see a change in the PT?

A. I would not. 15:07:25

Q. Using ReoPro and heparin, would you expect to see a change in the activated clotting time?

A. From the heparin.

Q. Well, would you expect to see a 15:07:37

change in the ACT? 15:07:39

A. With heparin and ReoPro, yes. As opposed to with no heparin and ReoPro.

Q. Would you expect to see a change, with ReoPro and heparin, would you expect to see a change in the PTT? 15:07:49

A. Yes.

Q. Would you expect to see a change, using ReoPro and heparin, would you expect to see a change in the platelet number? 15:08:02

A. Not necessarily.

Q. All right. Then let's get back to my original question. When you are using ReoPro and heparin in patients that you are performing angioplasty on, do you want to monitor the anticoagulation effect on a patient? 15:08:18

A. You assess the activated clotting time to make sure you are in desired clinical window, yes. 15:08:35

Q. So you utilize activated clotting time as part of your assessment?

A. Yes, part of routine angioplasty, almost all patients would have a measure of activated clotting time, in my practice. 15:08:50

Q. Would you also want to monitor the PTT? 15:08:52

A. Not necessarily.

Q. Do you monitor the PTT --

A. Not necessarily. 15:08:58

Q. -- in your practice?

A. Not necessarily. Among patients receiving heparin, they will have a measure of anticoagulation, be it PTT or a surrogate.

Q. Or? 15:09:14

A. A surrogate. A whole blood assay that is somewhere between an activated clotting time and a PTT.

Q. Okay. And when would you assess that? When would you monitor that? Prior to the procedure? 15:09:25

A. So we're back to talking about coronary interventions now. Okay?

Q. All right. Let me, what I'm trying to get at is you mentioned that an angioplasty where you use ReoPro and heparin, you want to monitor the anticoagulation within a certain window, okay? And you said one of the ways you monitor that is through the activated clotting time? 15:09:37 15:09:55

A. The only way in a cath lab is through the activated clotting time, yes. 15:09:57

Q. All right. And when do you monitor the ACT?

A. At various times during the case. 15:10:10

Q. Do you get an ACT preprocedure?

A. You'd have to define what the procedure is.

Q. Angioplasty where you are using ReoPro and heparin. 15:10:51

A. You mean before the patient comes to the cath lab or do you mean before the balloon is inflated or do you mean --

Q. Before you have any invasive --

A. Not necessarily, no. 15:11:02

Q. When would be the first time you want to check an ACT?

A. When I was first hopeful that I would be in the therapeutic window. So, for example, before giving heparin, I wouldn't bother to measure the ACT if I expected to see no effect. 15:11:17

Q. Okay. This is getting a little -- let's do it this way, Doc. We're talking in general, not just Mr. Yurick. Let's talk about 15:11:35

1996, when you were doing angioplasties using ReoPro and heparin. Okay? 15:11:45

A. (Nodding affirmatively.)

Q. Prior to you initiating the procedure, when would the patient be placed on heparin? 15:11:59

A. After vascular access is obtained, after a guiding catheter is found to be satisfactorily in position, but before a balloon inflation or a device was used to manipulate the coronary plaque. 15:12:13

Q. Okay. So the patient wouldn't come into the cath lab already on a heparin drip?

A. They should not be on a heparin drip. 15:12:25

Q. Would they be bolused with heparin prior to coming into the cath lab?

A. They should not be receiving heparin from me until vascular access is obtained. 15:12:36

Q. Okay. And when you say from me, you mean the patient shouldn't be receiving heparin at all?

A. Well, they may need to, it depends, so for example, somebody comes from the 15:12:45

emergency room, they may be receiving heparin if they are needing an emergency intervention. I'm not trying to be obstinate here, but when you ask me preprocedure, that could be, you know, days or weeks before. 15:12:48 15:12:59

Q. But as part of your protocol, if they are admitted with no heparin, the first time you would give them heparin is after vascular access was obtained?

A. That's correct. 15:13:14

Q. And how would you give the heparin?

A. Via intravenous bolus.

Q. Would it be weight adjusted?

A. In 1996? It might have been.

Q. If it was weight adjusted, what dosage would you give? The 70 milligram per kilogram? 15:13:33

A. The 70 units per kilogram would be the best guess for 1996, yes.

Q. And then following the bolus, would you give them an infusion? 15:13:46

A. I'm sure I did in some cases, I'm sure I didn't in others, so I guess --

Q. Why in some cases you would and why not in others? 15:13:59

A. For the same reason we use heparin in any patient, to make them anticoagulated. 15:14:00

Q. How would you know if they were anticoagulated?

A. By measuring a parameter of anticoagulation. 15:14:11

Q. What parameter would you have measured?

A. An ACT or a PTT or none at all, depending on the level of anticoagulation that we were using. 15:14:24

Q. So you would give them a bolus of heparin once vascular access was obtained?

A. (Nodding affirmatively.)

Q. And then whether or not to continue them on a heparin infusion would depend on their anticoagulation state? 15:14:41

A. No, their need for further anticoagulation. So for example, if there was concern that maybe they needed ongoing heparin, continued heparin. 15:14:51

Q. So how would you determine that?

A. I think it's a clinical adjustment to decide if they have risk for thrombosis or an event where you want the anticoagulant. 15:15:03

Q. So you wouldn't routinely check a parameter such as PTT or ACT? 15:15:06

A. I would say that we would. It depends on the extent of anticoagulation they are given post procedure, the duration of anticoagulation they are going to be given, so for example, if somebody is only going to be on anticoagulation for a short period of time, you may not bother to measure it because by the time this assay would come back, you would already have decided to stop it and you wouldn't act on that result, for example. 15:15:15 15:15:25

Q. We're talking about angioplasty now, correct?

A. That's correct. But you were speaking very generally and so I'm trying to give you some general answers on what I did in 1996. 15:15:39

Q. I just don't understand why, if you're doing angioplasty, why some people you want short anticoagulation and some people you want long anticoagulation. 15:15:48

A. Okay.

Q. Why is there a difference?

A. Not every patient is the same. Not 15:15:59

every patient needs heparin, some need more, some people need less and some people need it for shorter and greater duration of time. That's what clinical medicine is about. 15:16:03

Q. Absent checking parameters, such as ACT or PTT, can you tell clinically if a patient is sufficiently anticoagulated? 15:16:14

A. I guess it depends by sufficiently. I don't know what sufficiently, if somebody is having, say, ongoing chest pain or recurrent chest pain, you would be concerned that maybe they're not adequately being anticoagulated, that might be a suspicion for whether or not they are sufficiently anticoagulated. 15:16:32

Q. All right. Well, let's narrow our example down, then, to you are doing angioplasty with somebody with unstable angina. 15:16:46

A. Yes.

Q. What type of anticoagulation would you want on that type of patient? 15:16:57

A. In 1996? Somebody with unstable angina?

Q. Uh-huh.

A. I think it's probably not dramatically different among patients today, 15:17:05

they would receive intravenous heparin. 15:17:08

Q. So would you bolus them, once vascular access was obtained?

A. Now we're talking about intervention. 15:17:15

Q. Right. As part of your procedure. Your angioplasty procedure.

A. So all angioplasty patients are going to receive heparin. Unstable angina or not. 15:17:25

Q. They are going to receive a bolus after vascular access is obtained?

A. Yes.

Q. Okay. Thank you. In patients with unstable angina that are undergoing your 15:17:32 angioplasty, are you going to then give them an infusion of heparin following the bolus?

A. Not necessarily.

Q. All right. And again, it determines whether or not you think they are 15:17:48 sufficiently anticoagulated?

A. Depending on whether or not there's a clinical need for ongoing anticoagulation.

Q. All right. If you think there is, you would check a parameter to make sure they 15:17:57

are within the window of anticoagulation? 15:18:01

A. Yes, as you asked before, I may or I may not, it depends, again, on the duration, the strength of the coagulation, et cetera.

Q. And if you did check a parameter, 15:18:12 one of the parameters would be ACT?

A. Correct.

Q. And what would be an acceptable value for you as far as the ACT is concerned relative to acceptable anticoagulation? 15:18:21

A. It depends on the clinical context. So as I told you, some patients you may not monitor it in. We have, for example, here in 1999 several ranges of PTT that we shoot for in patients, you know, kind of a low, medium, a 15:18:37 high therapeutic, so I think it goes according to clinical scenario.

Q. Okay.

A. If you're talking about heparinization of patients with infusions. 15:18:46

Q. All right. Let's go back to 1996. We're doing angioplasty using ReoPro and heparin on a patient with unstable angina.

A. Uh-huh.

Q. And as we mentioned, as you 15:18:57

mentioned, once vascular access is obtained, you bolus them with heparin. All right. For this example let's say you want to continue heparin infusion. 15:19:00

A. After the procedure? 15:19:10

Q. No, during the procedure, but after the bolus.

A. Okay.

Q. Okay? So you're going to bolus them and then start a heparin drip. 15:19:18

A. I may.

Q. All right. For this for example I am saying you are.

A. Okay. Thank you.

MR. JONES: The hypothetical, obviously. 15:19:26

A. Thank you. Got it. Thank you.

Q. All right. You bolus them and then you start a heparin drip. During the procedure, okay, are you going to check a parameter, either ACT or PTT? 15:19:38

A. I may.

Q. And when would you not?

A. If I thought I was going to discontinue the infusion or the infusion was at 15:19:46

such a low rate that I didn't think it was going to be meaningful to check, so whether or not I was going to use the information would be whether or not I would request it. So for example, if I thought I was going to stop the infusion soon thereafter, so that it didn't matter the result, I may not have checked it. 15:19:49 15:19:58

Q. How about if you were going to continue the infusion post procedure?

A. It depends for what length of time which I was going to continue it. As I said before, it might take, for example, four to six hours to get a PTT back from a laboratory, and if I knew in my mind I was only going to continue the heparin for a shorter duration, I may not have requested a PTT because by the time the results would have returned, we would have already had the decision to stop it, so it wouldn't have affected our management. 15:20:11 15:20:22

Q. Now, we prefaced all this by saying you are using ReoPro and heparin in combination, correct? 15:20:33

A. Okay.

Q. All right. Let's go back to the beginning, doing a angioplasty, you would bolus 15:20:42

them with heparin after vascular access is obtained. When would you first give them ReoPro? We're talking 1996 now. 15:20:48

A. Well, they were given at the same, they were given very close to the same time, heparin and ReoPro would be given nearly the same time, within minutes of each other. 15:21:00

Q. So you would give ReoPro after the vascular access is obtained as well?

A. Correct. 15:21:13

Q. As a bolus?

A. Correct.

Q. Would you continue ReoPro as an infusion after the bolus is given?

A. Yes. 15:21:21

Q. How long would you continue the ReoPro infusion?

A. In 1996, for 12 hours.

Q. Okay. And then you would discontinue it? 15:21:42

A. Yes.

Q. And the heparin, as you mentioned earlier, is variable depending on whether you feel they need to be anticoagulated or a short time or a long time? 15:21:53

A. Correct. 15:21:55

Q. Let's talk about Mr. Yurick specifically, now. Were you involved in his care at all on October 17th, 1995?

A. Not to my knowledge. 15:22:39

Q. You have his records in front of you. In October, on October 17th, 95 Mr. Yurick had a angioplasty performed here at the clinic?

A. Okay. 15:22:52

Q. First diagonal branch of the LAD. Do you know if ReoPro was utilized during that procedure?

A. I do not believe so.

Q. Do you know if he developed any major bleeding after that procedure? 15:23:02

A. I do not know.

Q. When was your first involvement with the care of Mr. Yurick?

A. I don't know. I believe it was obviously before his intervention in January of 96. 15:23:18

Q. The admission of January 13th, 96?

A. Yes.

Q. Do you know what his diagnosis was? 15:23:39

A. When? 15:23:43

Q. When he was admitted on January 13th, 1996.

A. Yes.

Q. What was it? 15:23:47

A. Unstable angina.

Q. Relative to his angioplasty of October 17th, 95, do you have any knowledge of whether that procedure, during that procedure Mr. Yurick was involved in any clinical trials? 15:24:00

A. I don't know.

Q. Relative to his angioplasty on January 15th, 96, was that part of any clinical trial?

A. Not to my knowledge. 15:24:13

Q. If it was, you would have had knowledge, correct?

A. I don't know if he was in other clinical trials before or not. Not to my knowledge. I mean if he was in a lipid 15:24:23 lowering trial or something like that, not to my knowledge.

Q. Let me be more specific. To your knowledge, when you did the angioplasty on January 15th, 96, was Mr. Yurick involved in 15:24:33

any clinical trials studying the drug ReoPro? 15:24:36

A. No.

Q. Same question relative to angioplasty on October 17th, 95?

A. Not to my knowledge. 15:24:46

Q. Do you have the interventional report, procedure report? I'd like to just go through that.

A. Which do you mean?

Q. I'm sorry, the interventional 15:25:04 procedure report of 1-15-96.

A. Do I have this?

Q. Yes.

A. Probably, yes.

Yes, I have that. 15:25:20

Q. Is it the same as this?

A. Yes, same date.

Q. Prior to doing the angioplasty, you performed a catheterization?

A. Yes. 15:25:39

Q. Cardiac catheterization. Did you have any cardiology fellow with you to assist you?

A. Yes.

Q. Who was that? 15:25:49

A. Should be listed in the report. I believe his name was Jason Wischmeyer. 15:25:52

Q. There's a Sorin Brenner.

A. He would have done the dictations. Interventional fellow does the dictations. But there is a diagnostic fellow who would relinquish his dictating responsibilities to the interventional fellow. I thought his name was Jason Wischmeyer for the diagnostic catheterization. 15:26:05 15:26:22

Q. Wischmeyer.

A. Yes. Thanks. It's on this right here.

Q. Okay. But the interventional fellow would have been Sorin Brenner? 15:26:34

A. Dr. Brenner, that's correct.

Q. Who performed the cardiac catheterization?

A. I did.

Q. And what was your finding? 15:26:37

A. A severe narrowing in the, it's listed here at 80 percent stenosis in the first diagonal branch.

Q. Was that the same area where he had the stenosis in October of 95? 15:26:52

A. Yes. 15:26:57

Q. And then based on the catheterization results and findings, you decided to perform an angioplasty --

A. Correct.

Q. -- of that lesion?

A. Correct.

Q. Why did you decide to use ReoPro for the angioplasty?

A. Because he had unstable angina and 15:27:33
because of the results of the EPIC trial.

Q. Okay. When was Mr. Yurick first given ReoPro?

A. After vascular access was obtained and the equipment was put in position for his 15:27:56
coronary intervention.

Q. Is that noted on the records?

A. I'm sure it is.

MR. JONES: You have to get out this one we missed. The record I just gave 15:28:05
him, Doctor, which should be in the front of the chart now.

THE WITNESS: Sure. Or we can look at it on the order sheets.

MR. JONES: Or on the order sheets. 15:28:16

Q. The physician orders? 15:28:19

A. Yes, it should be listed in the physician orders. I'm sorry, you said you put them in front.

MR. JONES: Yes, I have, the one we got. No, that's not -- 15:28:29

MR. FINELLI: That's a physician order.

MR. JONES: Yeah, that's an order to bring it. But you asked when it was given. 15:28:37

A. That's not when it was given.

Q. I just want to know when it was --

A. When it was given.

Q. How about this order? It says it's given at 11:40. 15:28:50

MR. JONES: Uh-huh, that's correct.

A. Yes, 11:40.

Q. Is that located, noted in the lab flow sheet?

A. Yes. 15:28:58

Q. Okay. ReoPro --

A. At 11:40, right.

Q. How many milligrams?

A. Looks like 8.2.

Q. As a bolus? 15:29:10

A. That's correct. 15:29:11

Q. Is there any documentation of when vascular access was obtained?

A. Yes, it would be in perhaps the report. Looks like 10:45, but we can -- 15:29:25

MR. JONES: What are you looking for?

THE WITNESS: Oh, that one sheet where it says I obtained access. Looks like 10:40. 15:29:37

Q. Okay. And where would that be?

A. I'm sorry.

Q. Would that be over here?

A. Yes. Thanks.

MR. JONES: It's also here. 15:29:44

A. Yes, it's on both, it's both in this record and in that record here.

Q. So ReoPro was given an hour after vascular access?

A. Yes. 15:29:56

Q. As a bolus?

A. Yes.

Q. Did the patient come to the cath lab already on heparin?

A. No. 15:30:06

Q. When was heparin first given? 15:30:07
A. When he was admitted to the hospital, I believe. On January -- I think I saw it in the admission orders.
Q. Strike that. I mean what I meant to say was when was heparin first given as part of the procedure, your procedure? 15:30:19
A. Okay.
Q. There's a notation of 11:42. I don't know if that's the first. 15:30:48
A. Yes, thank you, 11:42. That does help.
Q. 11:42?
A. Yes.
Q. So he would not have arrived with the heparin drip to the cath lab? 15:31:00
A. Correct.
Q. And you gave a bolus of 5,000 units?
A. Yes. 15:31:08
Q. IV? All right. And then subsequent to that or simultaneous with that you began a ReoPro drip?
A. Correct.
Q. And what was the dosage of the 15:31:19

ReoPro? I can't read that. 15:31:21

A. That's the standard, the standard dose of ten.

Q. Micrograms per kilogram?

A. Uh-huh. No, per minute, it was not kilogram. It wasn't weight adjusted, it was just a standard infusion. 15:31:33

Q. Ten microgram per minute?

A. Thank you. Yes. So for 720 minutes or 12 hours, yes. 15:31:43

Q. Okay. Following the heparin bolus, was he placed on heparin infusion?

A. Not to my knowledge.

Q. And then following that flow sheet, at 11:51 it appears that an ACT was obtained of 286? 15:32:11

A. Uh-huh.

Q. Why did you obtain an ACT in this patient?

A. As we talked about previously, to assess the extent of anticoagulation. 15:32:24

Q. The 286, was this a comfortable window of anticoagulation?

A. No, in 1996, as you know with EPIC, the ACT was most often in the high 300s, 15:33:00

whether with or without heparin, and so our target then would have been in the 350 range for coronary intervention. 15:33:0

Q. So based on that ACT of 286, you feel he was not sufficiently anticoagulated? 15:33:2

A. Correct.

Q. Did you do anything to give him anything for more anticoagulation?

A. Well, first we -- yes, we did. But at that same time he was developing chest pain with electrocardiographic changes and that in combination with his ACT of 286, he was given an additional 2,000 units of heparin intravenously. 15:33:4

Q. As a bolus? 15:33:55

A. As a bolus, yes.

Q. That would have been when, around 11 -- before 11:59?

A. Correct. Sometime after the ACT of 286. 15:34:03

MR. FINELLI: Off the record for a second.

(Discussion had off the record.)

Q. Doctor, I'm showing you this flow sheet here where there's some writing, again 15:36:11

there's a timetable, where it has the ACT of 286. To your knowledge this was, this record here, this sheet was produced at the same time these other records were produced, January 15th, 96? 15:36:14 15:36:25

A. Yes.

Q. All right. So following the ACT of 286, you wanted to increase his anticoagulation so you gave him an additional bolus of heparin, 2,000 units? 15:36:38

A. Yes.

Q. At any time during the procedure did you adjust the ReoPro --

A. No.

Q. -- infusion? 15:36:48

At any time after that heparin of 2,000 units was given, did you give him any more heparin?

A. No.

Q. Either bolus or infusion? 15:36:57

A. Not to my knowledge, no.

Q. So that would have been the last heparin he would have received?

A. Yes.

Q. That 2,000 units, somewhere right 15:37:04

before 11:59? 15:37:07

A. Correct.

Q. It appears on the next page, following that catheterization flow sheet, an ACT was obtained around 12:10? 15:37:17

A. Correct.

Q. Timewise.

A. Yes.

Q. And the ACT level was 374?

A. Yes. 15:37:26

Q. Any concern to you regarding his anticoagulation with that level?

A. No.

Q. Why was that ACT obtained?

A. Because the 2,000 units more of heparin were given. 15:37:41

Q. Did you feel, based on that level, that Mr. Yurick was within an acceptable window of anticoagulation?

A. Yes. 15:37:58

Q. Looking at the cardiac catheterization lab notes now.

A. Okay.

Q. About halfway down on the left-hand column there appears to be a notation reading 15:38:37

ACT check 4 p.m.? That would be right there, I think. 15:38:40

A. Thanks. Yes.

Q. Okay? If no additional heparin was given after the 2,000 units, why would an ACT level need to be checked at 4 p.m.? 15:38:50

A. To be certain, it was safe to remove his vascular access.

Q. So other than the 7,000 units of heparin that was given prior to noon on January 15th, Mr. Yurick received no further heparin? 15:39:36

A. Not to my knowledge, no.

Q. Other than the two ACTs that were obtained, did you obtain any PTTs?

A. Not to my knowledge, no. 15:40:38

Q. Did you check any platelet counts during the procedure or after the procedure?

A. Not during the procedure, but quite likely after the procedure, yes.

Q. When would they have been checked? 15:40:57

A. I don't know. I can look and see. Exact interval, usually it's done hours thereafter.

Q. You're not stating that relative to when he develops his neurological problems? 15:41:08

A. (Nodding negatively.) It's just unclear to me when in current protocols and what I would remember now, we check platelets usually two hours into the infusion of ReoPro, and whether or not that protocol was in place at this time I don't know. But it's pretty standard to check platelet counts subsequent to coronary intervention with ReoPro. But to my knowledge he never had an abnormal platelet count. 15:41:1[illegible] 15:41:20 15:41:4[illegible]

Q. When did you first become aware -- strike that.

When did the angioplasty procedure finish?

A. When did he leave the procedure room? 15:42:23

Q. When did you complete the procedure?

A. According to the notes, it says somewhere around 1305 completed procedure. So somewhere around 1305, according to that record. 1306 maybe on that one. Here the patient looks like they are leaving the room at 1330. 15:42:39

Q. Looking at the catheterization lab 15:43:14

notes and flow sheets. 15:43:16

A. Okay.

Q. In reviewing those now, do you find anything abnormal relative to his anticoagulation? 15:43:27

A. No.

Q. Anything abnormal relative to the procedure itself?

A. No.

Q. Anything relating to complications developed? 15:43:37

A. Not to my knowledge.

Q. I've been handed prior to the deposition a computer printed flow sheet. At the top it says cardiac catheterization report, Martin Yurick, date 1-15-96? 15:44:17

A. Yes.

Q. When would this have been generated?

A. During the procedure. 15:44:31

Q. You were looking at the original?

A. Yes.

MR. JONES: I'm going to object. I mean it's a computer record. There is no hard copy or original per se. It's all on a 15:44:44

computer. We copied it, we copied this off just before we came down here. 15:44:47

Q. Okay. I'm going to have you look at the physician orders just quickly. He's admitted on 1-13-96, at the bottom it says consult Kaiser cardiology. 15:45:13

A. Yes.

Q. Possible cath. Was there, to your knowledge, was there any cardiologist from Kaiser involved in Mr. Yurick's care during this admission? 15:45:22

A. During this hospitalization?

Q. Correct.

A. During this hospitalization, yes.

Q. Of 1-13-96? 15:45:32

A. During this hospitalization, yes.

Q. Who would that have been?

A. I have to refer to the chart.

On 1-13-96 he was seen by Dr. Ann Mostow, M O S T O W. 15:46:05

Q. Let me just get that. Is that in the clinic sheet section?

A. It is. It looks like it's on the second page of his. It looks like this. There. 15:46:24

Q. Okay. Dr. Mostow you said? 15:46:25
A. Yes.
Q. Is that a male or a female?
A. It's a woman.
Q. Kaiser cardiologist? 15:46:32
A. Correct.
Q. Did you have any discussions with her relative to Mr. Yurick's care?
A. Yes.
Q. And do you recall the conversation at all? 15:46:44
A. No.
Q. What would be the purpose of Dr. Mostow evaluating Mr. Yurick?
A. Came in with a cardiac related problem and a consultation was made to cardiology and she responded to that consultation. 15:46:55
Q. Did Dr. Mostow feel that Mr. Yurick needed catheterization, cardiac catheterization? 15:47:07
A. I presume so. It says that she explained the risks and benefits of a cath and possible intervention, so I assume that that was her belief. 15:47:19

Q. And that's probably why you were referred or consulted? 15:47:20

A. Yes.

Q. Dr. Mostow didn't have any participation in the cardiac catheterization or angioplasty? 15:47:26

A. No.

Q. Looking in the physician orders, post coronary intervention orders.

A. Okay. 15:48:06

Q. Under heparin protocol. Are you with me?

A. Yes.

MR. JONES: That's it.

Q. Okay. Are these orders orders that are initiated once the patient returns to the telemetry unit? 15:48:32

A. Yes.

Q. What was the heparin protocol orders? 15:48:45

A. Says the activated clotting time was to be checked at 1600 hours.

Q. We discussed that earlier.

A. Just reading through those orders.

Q. Sure. 15:49:05

A. Now, it says to notify the nurse if it's below that and the sheath would be removed. Two hours after that he was to be rebolused with a thousand units of heparin and to be maintained at a drip of 600 units per hour until 6 a.m. the following morning. If he was free of chest pain, it were to be discontinued then. 15:49:06 15:49:15

Q. All right. So he was to be rebolused with heparin at a thousand units and then started on a drip, heparin drip? 15:49:29

A. That's correct.

Q. All right. When was that supposed to start?

A. Two hours after the sheath was removed and adequate hemostasis was obtained. 15:49:39

Q. And looking further down, sheath removal protocol, when would the sheath, when was the sheath ordered to be removed?

A. When adequate, when adequate lowering of the activated clotting time occurred. The first assessment would have been at 1600 to see if you are low enough to remove it. 15:49:53

Q. What would have been an acceptable 15:50:03

range of the ACT to allow the sheath to be removed? 15:50:05

A. I think at that time it had to be under 175.

Q. So prior to 4 o'clock the sheath would not have been removed? 15:50:14

A. That's correct.

Q. And therefore he would not have been given any heparin prior to 4 p.m., 1600 hours? 15:50:24

A. Right, the minimum should have been greater than 1800, plus the amount of time it took to obtain hemostasis, so it wouldn't have been till maybe 1830 at the minimum.

Q. Looking further down in the order sheets, if we're looking at 1-15-95 at 4:25 p.m.? 15:50:49

A. Yes.

Q. There's an order to DC ReoPro?

A. Yes. 15:51:02

Q. Was that when the ReoPro would have been discontinued?

A. Well, it may have been stopped sooner than that. But this was when the order was written. Perhaps the physician had it 15:51:10

stopped and then wrote the order subsequent to that. Because of the nature of the case. 15:51:13

Q. All right. We're looking again at 1-15-96 where he's admitted to MICU?

A. Yes. 15:51:25

Q. There's an order to transfuse platelets, about two-thirds of the way down?

A. Yes. Yes.

Q. Prior to this order, was Mr. Yurick given any platelet transfusion? 15:51:40

A. I don't know. I'll look and see.

It looks like on the previous page that you had talked about, it says 14 units platelets ASAP. Here. It looks likes that says 14 units of platelets as soon as possible. 15:52:02

Q. That would have been at 4:25 p.m., as written?

A. Yes.

Q. When did you first become aware of Mr. Yurick's neurological problems, post angioplasty? 15:52:27

A. Sure. Somewhere around 4 p.m. on January 15th.

Q. And what note do you have? The one where you cosigned? 15:53:06

A. Yes.

Q. From, looks like an R.N., May?

A. Yes. So somewhere around there, it's unclear when I would have known they were to be neurologic, but that obviously developed over the ensuing minutes. 15:53:08 15:53:18

Q. You cosigned this note, correct?

A. Yes.

Q. 1-15 at 4 p.m.?

A. But I'm not sure whether it was clear then, your question was whether or not I was aware of a neurologic, but it's just unclear exactly timewise, but I just noted that as being around 4 p.m., but I'm not sure exactly when during that it was deemed to be neurologic. 15:53:33 15:53:39

Q. Just so I'm clear --

A. Yes.

Q. -- your cosignature here would have been placed when? Subsequent to this note being written at 4 p.m., correct? 15:53:46

A. Yes, a cosignature would be on top of another signature, right.

Q. So from what I'm understanding, at 4 p.m. you were aware of this situation going 15:54:00

on? Or were you not?

A. At 4 p.m. it looks like the note was written, but I'm not certain relative to how many minutes before or after I would have been aware. 15:54:02 15:54:12

Q. Would this Nurse B. May here, would she have contacted you as part of writing this note?

A. Yes.

Q. So sometime around 4 p.m. you would have been aware of the patient's complaints? 15:54:30

A. That's correct.

Q. And the patient's complaints, based on this note, were nausea? Nausea, right?

A. Yes. 15:54:47

Q. And emesis?

A. Yes.

Q. And elevated blood pressure?

A. Well, his complaint was nausea, but at the same time he was found to have elevated blood pressure, yes. 15:54:55

Q. This is an R.N. writing this note, correct?

A. Correct.

Q. And an EKG was obtained? Who would 15:55:12

have ordered the EKG? 15:55:16

A. Well, I would have ordered it through Barbara May.

Q. And apparently, according to this note, there were no acute changes? 15:55:26

A. Correct.

Q. Based on this information that she relayed to you sometime around 4 p.m., did you have any concerns regarding Mr. Yurick's condition? 15:55:41

A. Yes.

Q. What were you concerned about?

A. Well, that he was still nauseated, as he had been before the intervention, during the intervention, and now after the intervention, so that would have been my concern. In addition, to make sure he wasn't having any cardiac or other problems. 15:55:50

Q. And based on the EKG, it did not appear he was having any cardiac problems? 15:56:05

A. Correct.

Q. Why were you concerned about his nausea?

A. Just because we don't like patients to be nauseated. 15:56:12

Q. Did you develop any differential as to why he was nauseous? 15:56:16

A. I don't remember, but I'm sure I did. I mean I don't know exactly what the differential was, but certainly a concern was that he had ongoing cardiac problems since his presenting symptom was nausea. At the time of previous procedures he had nausea. I think in October of 95, for example, he had nausea, so -- 15:56:28 15:56:44

Q. As a result of his --

A. Unstable angina.

Q. -- unstable angina? So as a result of that, were you concerned that he may be restenosing? 15:56:54

A. Not restenosis, but having threatened closure of the artery.

Q. Ischemia?

A. Yes, ischemia, thanks.

Q. Were you concerned about bleeding? 15:57:04

A. No, but that would be in the differential for causing nausea. Some people do get nausea with bleeding.

Q. And they can get nausea with intracerebral bleeding? 15:57:18

A. Well, I was thinking of retroperitoneal because intracerebral is so rare, but nausea is such a nonspecific complaint. 15:57:20

Q. Okay. 15:57:29

A. Especially since he had had it before the procedure.

Q. What was done as a result of those complaints at 4 p.m.?

A. Well, the -- 15:57:36

Q. Besides the EKG?

A. The assessment was made.

Q. By whom?

A. By Barbara May and myself, and I see, as we discussed, the EKG was ordered and assessed. 15:57:44

Q. Did you, when you say you assessed him, did you assess him physically in person --

A. Yes.

Q. -- or over the phone? 15:57:52

A. Physically in person.

Q. So you were there to see him in the room?

A. Maybe not exactly at this time, but somewhere in this time, yes. 15:58:02

Q. Okay. 15:58:04

A. But exactly when I was called and when I saw him relative to this note writing, I can't say for certain. I can try to discern that for you, if you want. I can't give you an 15:58:15 exact time.

Q. Other than those two signatures on that page --

A. Yes.

Q. -- correct me if I'm wrong, your 15:58:34 next signature, accompanied by your note, is 1-15-96 at time 2010?

A. Yes.

Q. Which would be 8:10 p.m.?

A. Right. 15:58:50

Q. So are you saying around this time, 4 p.m., give or take, what, 30 minutes, you would have seen Mr. Yurick?

A. I can't say the give or take, but around that time I saw him, but the time with 15:59:01 which I wrote a note wasn't of importance to me at that time, you know, seeing him and taking care of him and then writing a note later was.

Q. Sure.

A. Sure. 15:59:15

Q. The next note is written at 4:10. I think it's by the same lady, Miss May? 15:59:27

A. Yes.

Q. And you cosigned that as well?

A. Correct. 15:59:38

Q. And that is because she is called because of an elevated blood pressure reading from the A line?

A. Yes.

Q. He's given Procardia. Is that ordered by you? 15:59:46

A. Yes.

Q. Any concerns regarding the elevated blood pressure?

A. Yes, that's why he received the Procardia. 15:59:54

Q. So you are treating the elevated blood pressure with the Procardia. Did you have any concerns about why the elevated blood pressure? 16:00:05

A. Sure.

Q. Those were what?

A. I don't remember, but I think I can just speak generally, since it's now been several years, but people have elevated blood 16:00:22

pressure, you don't want them to develop into ischemia or bleeding perhaps, so you try to lower the pressure. 16:00:24

Q. Based on these records, when was it determined or considered that Mr. Yurick was developing an intracerebral bleed or hemorrhage? 16:00:47

A. Well, I don't know if I can answer that specifically, but I can say that concern at 4:15 for neurologic abnormality, because he was then confused, at least by these notes and times, I would say is when I would first be concerned about neurologic dysfunction. 16:01:01

Q. At 4:15?

A. Yes. 16:01:17

Q. Based on the note --

A. This is a time the note was written, but whether it was 412 or 414 or 416 I can't quite say for certain.

Q. And who wrote that note? 16:01:26

A. The assumption would be Barbara May, but it's not signed.

Q. Okay. I just want to look at the original document.

A. Sure. 16:01:37

Q. As you can see, my copy's not good. 16:01:37

A. I agree.

Q. 4:15, you agree that it states patient became confused, not responding appropriately to verbal commands, check CBC, 16:01:44 call Dr. Brenner for his assessment. Correct?

A. That's correct.

Q. Okay. Why would you not have been called if you were called earlier?

A. She may have known that I was 16:01:57 unavailable doing, I don't remember, another catheterization or maybe perhaps speaking to the family or just not available as quickly perhaps as she knew Dr. Brenner was. And then on the side I noticed that it says ACT, oh, I'm 16:02:08 sorry, Accu-Chek, I can't say what this is, ACT 106.

Q. I don't know if that's a -- is that an ACT?

A. I don't know, to be honest. Maybe 16:02:19 an Accu-Chek because they are worrying about glucose perhaps.

Q. That's at 4:15. At 4:20 there's a note, patient became obtunded approximately fifteen to twenty minutes ago? 16:02:30

A. Yes. 16:02:33

Q. Had emesis prior to this time?

A. Yes.

Q. And you cosigned that as well?

A. Yes. 16:02:43

Q. Do you know who that was written by?

A. Sorin Brenner.

Q. That would have been your interventional fellow? 16:02:47

A. Correct. Looks like two different -- looks like I came and left again because there's a different ink pen when I signed that.

Q. Okay. Between the time that 16:03:00 Mr. Yurick arrives at the telemetry floor from his angioplasty to 4:15, that interval of time, looking through the notes, are there any Kaiser physicians that evaluate Mr. Yurick?

A. We could look at nurses notes, but 16:03:21 I don't see any Kaiser physician writing here, but whether or not they evaluated and didn't leave a note, we could look at perhaps the nurses bedside notes. She may or may not have mentioned who came and left the room. 16:03:33

Q. Actually the note 1-15-96, 4 p.m. appears to be the first note written subsequent to him arriving at the floor after the procedure? 16:03:48

A. Clinical note. 16:03:56

Q. Clinical note, right?

A. But there are separate nurses notes like I have received this patient, this is my assessment, and I think we can probably --

Q. Thanks for clarifying that, but I meant clinical note. 16:04:05

A. I'm just not sure the distinction between a nurse clinical note and the -- because they're both written by nurses.

Q. Okay. You are so thorough, Doc. 16:04:14

A. No, I'm just trying to answer your questions as directly as possible.

Q. I know. All right.

A. Because in fairness, there probably are other notations by other healthcare givers. 16:04:24

Q. Sure.

A. But thank you, that was a compliment.

Q. You are looking for what, physician notations? 16:04:56

A. Nurses notes. You had asked me a question if he had been reevaluated somewhere between his arrival to the floor and this first note of 4 o'clock, and there, you have beat me to them. 16:04:57 16:05:04

Q. I'm showing you what's marked as nursing progress records. And we're going to -- appears to be 1445?

A. Yes.

Q. Okay. And if you can interpret that, and I don't expect you to, but -- 16:05:17

A. This is a copy, but it looks like it says 1445 patient returns from PCAT, sheath 7 French in left groin site without, without --

MR. JONES: Want my help? 16:05:37

Q. Do you have the original? It would be better.

MR. JONES: Go ahead, I think he figured it out. I think it's an abbreviation for draining. 16:05:45

A. -- without draining and without hematoma and sheath transduced, ReoPro at 72, normal saline at 150.

Q. Patient 72 or 22?

A. Sorry, thank you. 22 cc's per 16:05:55

hour, I think is what it specifically says, normal saline at 150 cc's per hour. Patient without complaints of chest pain, shortness of breath, dizziness, nausea, diaphoresis. 1500, patient complains of nausea and small clear emesis. Blood pressure is 178/91. 16:05:55 16:06:07

Q. Is that a narrow elevated BP?

A. I don't think so. I think it may be.

Q. Okay. Appears Reglan was given? 16:06:22

A. Yes.

Q. And that's at 1500 hours?

A. Correct.

Q. Which would be 3 o'clock p.m.?

A. Correct. 16:06:31

Q. All right. Then there's a note, 1525?

A. Oh, this is an A maybe, arterial blood pressure.

Q. Okay. 1525, arterial blood pressure remains elevated? 16:06:40

A. Yes.

Q. Is that Dr. Moliterno's service or --

A. Yes, Dr. Moliterno's service. And 16:06:51

up to see. 16:06:54

Q. Patient EKG done?

A. Yes.

Q. Patient remains nauseated?

A. Yes. 16:07:00

Q. Very diaphoretic?

A. (Nodding affirmatively.)

Q. At that point in time, are those symptoms consistent with intracerebral bleed?

A. Not necessarily, no. 16:07:08

Q. May they be?

A. Anything is possible, so yes, they may be.

Q. Okay. My question is is it possible Mr. Yurick, this gentleman, was 16:07:16 already having intracerebral hemorrhage 3 o'clock, 3:30 in the afternoon?

A. It's speculative, I guess, but possible, sure.

Q. Why is it speculative? 16:07:27

A. Because he has no complaint, and I have to go back and read that, I guess.

Q. I'm sorry. I don't want to take it away from you.

A. Because there is no distinguishing 16:07:37

features to say that he is having a neurologic dysfunction. 16:07:39

Q. Well, his arterial blood pressure's elevated, correct?

A. About ten million Americans. 16:07:51

Q. The patient's nauseous, correct?

A. He is, yes.

Q. Diaphoretic?

A. Yes.

Q. Elevated blood pressure? 16:08:04

A. Yes.

Q. Are those symptoms, is it, those symptoms consistent with intracerebral hemorrhage? May they be consistent with intracerebral hemorrhage? 16:08:16

A. I don't think, I don't think so. They may be, but I don't think so.

Q. Would you have intracerebral hemorrhage prior to developing symptoms?

A. I don't know. I don't know the percentage of patients developing intracerebral hemorrhage who have or have not heralding symptoms such as these. 16:08:26

Q. Would you agree with me, though, by 4:15 this gentleman had significant 16:08:38

intracerebral hemorrhage? 16:08:41

A. I would not say that was conclusive. I would say at whatever time he had neurologic dysfunction, whether or not at that juncture you can say it's from 16:08:49 intracerebral hemorrhage, that's another story.

Q. I'm sorry, you can or cannot say?

A. At 4:15 I cannot say that he has intracerebral hemorrhage by any means.

Q. At 4:15 we know he's obtunded, 16:09:00 correct?

A. He's confused, he's reportedly confused, yes.

Q. I'm sorry, at 4:20 he's obtunded?

A. Yes. 16:09:10

Q. Fair to say he has intercerebral hemorrhage at 4:20?

A. The question, if I may repeat your question, was did we know he had an intracerebral hemorrhage at that time, and the 16:09:19 answer is no. I mean that's what a neurologist was called for and a head CT was done for. If we'd have known, we may not have needed those things.

Q. Should it have been considered? 16:09:29

MR. JONES: At what time? 16:09:31

MR. FINELLI: 4:20.

A. Yes.

Q. Should it have been considered at 4:15? 16:09:38

A. The exact time of which I'm not sure, but certainly when the patient became confused, I think it's very reasonable to consider neurologic dysfunction from ischemic or hemorrhagic or drug induced cerebrovascular ischemia. 16:09:54

Q. About 4 p.m. when he's nauseous, has emesis and has elevated blood pressure, should it have considered hemorrhage?

A. Not necessarily, no. 16:10:12

Q. Why not? This is a gentleman that had --

A. Because the probability is so increasingly low, but it's -- I mean should have been considered within odds of a thousand to one? I'm not sure. 16:10:19

Q. So you considered it a red herring at that point in time?

A. I would consider it to be strikingly unusual for those symptoms to be 16:10:28

indicative of someone having intracerebral hemorrhage, yes. 16:10:30

Q. Let me just turn to your note 1-15-96 at 2010.

A. Okay. 16:11:25

Q. You notice you write hours after angioplasty Mr. Yurick had nausea and vomiting and altered mentation?

A. Yes.

Q. And had evidence of intracranial bleeding and had been swiftly and aggressively treated? 16:11:45

A. Yes.

Q. How was he swiftly and aggressively treated? 16:11:54

A. Neurology was promptly called, his ReoPro was discontinued, and a CAT scan was ordered and the neurosurgical, we have an acute neurointerventional team that was called.

Q. This was all done subsequent to him being obtunded at 4:20 p.m.? 16:12:12

A. Yes.

Q. All right. Looking at the hospital expiration summary, it's written by Dr. Pileski, she writes attempts were made to 16:12:41

reverse his anticoagulation. My question is what attempts were made to reverse his anticoagulation? 16:12:50

A. Obviously I didn't dictate that, but you can see from the record what was done. 16:13:02

Q. What was done? Just the platelet transfusion and the discontinued the ReoPro?

A. That's correct.

Q. Again, that was all done subsequent to him being obtunded at 4:20 p.m.? 16:13:12

A. That's correct. He also was, I think, given, at least by my note, fresh frozen plasma.

Q. Along with the platelet transfusion? 16:13:27

A. That's correct.

Q. Again, after the 4:20 p.m. note of him being obtunded?

A. That's correct.

Q. Did you speak with Mrs. Yurick after the death of Mr. Yurick? 16:13:37

A. I don't -- oh, yes, after his death, sure.

Q. Tell me about that conversation.

A. I don't remember when, but I spoke 16:13:50

with her several times, twice specifically in my office at her request, to review some of the events of the case with her initially. I think one of her children was on spring break or in town, I don't remember which, and he and she and perhaps a third person came again to review some of these events and the case in general. 16:13:51 16:14:06

Q. Prior to this deposition, did you review the medical records of Mr. Yurick?

A. I'm sorry. 16:14:27

Q. Prior to preparing -- as preparation of this deposition, did you review the medical records of Mr. Yurick?

A. Yes, some.

Q. Would you agree that other than the focal lesion in the diagonal branch of the LAD in October and again in January of 96, October of 95 and January of 96, other than that lesion, Mr. Yurick's past medical history was unremarkable? 16:14:37 16:14:58

A. I don't remember.

Q. Is there any --

A. He has atherosclerosis. I know of at least two hospitalizations we have discussed today for an acute coronary syndrome related to 16:15:09

atherosclerosis. We have seen hypertension. I can't recollect his other past medical history. 16:15:13

Q. All right. Let me dissect that a little bit. You said he has atherosclerosis?

A. Yes. 16:15:24

Q. It was documented atherosclerosis in the first diagonal branch of the LAD?

A. Severe atherosclerosis was diagnosed in the first diagonal branch of his LAD, that's correct. 16:15:34

Q. Okay. Where else in the vascular system did he have evidence of atherosclerosis?

A. I have to review. Would you like me to?

Q. Sure. 16:15:43

A. Okay.

Q. Did he have any evidence of carotid disease?

A. The circumflex is described as having a 30 percent stenosis in the proximal portion. The left anterior itself is described as having a 30 percent stenosis in its midportion. 16:15:59

Q. Would you consider those lesions as mild? 16:16:11

A. I would consider them on the mild/moderate range, yes. I would describe them as being overt evidence of atherosclerosis. 16:16:11

Q. Certainly no intervention necessary? 16:16:19

A. Correct. No revascularization intervention. Medical intervention, blood pressure and all those medical interventions.

Q. Medical therapy, but no invasive intervention? 16:16:33

A. Correct.

Q. Other than what you have just told me about his coronary arteries, any evidence of atherosclerosis elsewhere, i.e. the carotids, lower extremities? 16:16:41

A. I don't know of them being evaluated. My recollection, I don't know of them being evaluated.

Q. But none of the records reflect, records that you have there, reflect any evidence of -- 16:16:49

A. I don't know.

Q. Well, you have them in front of you. Can you tell me if they do? 16:17:00

A. It would take a while to read through them all because he wasn't under my primary care, I don't know if he ever had, for example, any other evaluations for atherosclerosis. 16:17:09

Q. If he did have significant atherosclerosis in those areas, would it be mentioned in the admission note of 1-13-96?

A. Not necessarily, and it may not be determinable by such methods as carotid ultrasound, small cerebrocoronary vasculature is often difficult to discern even with the best of medical diagnostic capabilities. 16:17:21

Q. And you spoke with Mr. Yurick prior to doing the procedure? 16:17:34

A. Yes, I did.

Q. You would have evaluated him prior to doing the procedure?

A. In some respects, yes, I did.

Q. Did he voice any complaints that would relate to carotid disease to you? 16:17:45

A. Not to my recollection.

Q. Did he voice any claudication complaints?

A. Not to my recollection, but I don't 16:17:55

know if I necessarily asked him about claudication. I don't remember. 16:17:56

Q. You did the AA cardiac catheterization through the groin?

A. That's correct. 16:18:03

Q. Would you not want to be concerned about severe atherosclerosis of the aortoiliofemoral system --

A. Yes.

Q. -- prior to doing a catheterization through the femoral artery? 16:18:10

A. Yes, sir.

Q. Were you concerned about any atherosclerosis in his aortoiliac system?

A. Was I concerned? Not necessarily concerned, but do I think there are some present? Most likely. Was it severe? Not to my knowledge. 16:18:22

Q. No more severe than any man his age? 16:18:35

A. I disagree. Likely it is more severe than any man his age based on his coronary atherosclerosis, you know that those patients in general have more systemic atherosclerotic disease than a man of their 16:18:45

age.

Q. Do you know if Mr. Yurick was diabetic?

A. You probably know. I don't remember that. 16:19:02

Q. You mentioned that he had hypertension and I think that was relative to the nursing note at the time he had arterial blood pressure elevation subsequent to his catheterization. Do you know if he had a history of essential hypertension? 16:19:13

A. I don't.

Q. Do you know if he was on any antihypertensive medication prior to the admission of 1-13-96? 16:19:23

A. I don't.

Q. Has the Cleveland Clinic ever been sued, Doctor, where you have been alleged to have provided negligent care, other than this, this case? 16:19:44

A. Not to my knowledge.

Q. You would agree that Mr. Yurick developed severe intracerebral hemorrhage following the angioplasty?

A. I don't know the degree, what 16:20:25

severe means, but he certainly had an intracerebral hemorrhage following his angioplasty, yes. 16:20:26

Q. And Mr. Yurick had an autopsy?

A. To my knowledge he had a limited evaluation of his brain, but not, for example, the aortoiliac system as discussed earlier. 16:20:37

Q. And would you agree that the cause of death of Mr. Yurick was intracerebral hemorrhage? 16:20:48

A. Yes.

Q. Would you agree that his --

A. Or complications resulting therefrom.

Q. Secondary to intercerebral hemorrhage? 16:20:53

A. Yes.

Q. Would you agree that his intercerebral hemorrhage was due to Mr. Yurick being overanticoagulated? 16:20:59

A. No.

Q. Why not?

A. Because I don't think he was overanticoagulated.

Q. Why do you think he developed a 16:21:08

cerebral hemorrhage following his angioplasty? 16:21:1(

A. I don't know.

MR. FINELLI: No further questions.

MR. JONES: He'll read it, if he orders it. 16:21:22

(Deposition concluded at 4:20 p.m.)

- - - - -

CERTIFICATE

The State of Ohio,)

SS:

County of Cuyahoga.)

I, Denise M. Munguia, a Notary Public within and for the State of Ohio, duly commissioned and qualified, do hereby certify that the within named witness, DAVID J. MOLITERNO, M.D., was by me first duly sworn to testify the truth, the whole truth and nothing but the truth in the cause aforesaid; that the testimony then given by the above-referenced witness was by me reduced to stenotypy in the presence of said witness; afterwards transcribed, and that the foregoing is a true and correct transcription of the testimony so given by the above-referenced witness.

I do further certify that this deposition was taken at the time and place in the foregoing caption specified and was completed without adjournment.

I do further certify that I am not a relative, counsel or attorney for either party, or otherwise interested in the event of this action.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal of office at Cleveland, Ohio, on this 12th day of May, 1999.

Denise M. Munguia

Denise M. Munguia, Notary Public
within and for the State of Ohio

My commission expires May 23, 2000.

I N D E X

SIGNATURE OF WITNESS

The deposition of DAVID MOLITERNO, 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.

AFFIDAVIT

The State of Ohio,)

) SS:

County of Cuyahoga)

Before me, a Notary Public in and for said County and State, personally appeared **DAVID MOLITERNO, M.D.**, who acknowledged that he/she did read his/her transcript in the above-captioned matter, listed any necessary corrections on the accompanying errata sheet, and did sign the foregoing sworn statement and that the same is his/her free act and deed.

In the TESTIMONY WHEREOF, I have hereunto affixed my name and official seal at this_____ day of_____ A.D 1999.

_____

Notary Public

_____

My Commission Expires:

DEPOSITION ERRATA SHEET

RE: **Patricia A. Yurick, Executrix of the Estate of Martin A. Yurick vs. Cleveland Clinic Foundation, et al.**

RRS File No.: **1239**

Deponent: **DAVID MOLITERNO, M.D.**

Deposition Date: **May 5, 1999**

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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V

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Y

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David J. Moliterno, M.D.

General

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Personal Data

Date of birth: October 29, 1960
Place of birth: Flint, Michigan
Social Security Number: 362-74-4081
Spouse: Judith Ann Moliterno, R.N., B.S.N.
Children: Nathaniel and Benjamin

Education

Undergraduate

College of Arts and Sciences
University of Michigan, Ann Arbor, Michigan
B.S. Honors, Biology, 1978-1982

Medical School

Medical College of Virginia
Virginia Commonwealth University, Richmond, Virginia
Doctor of Medicine, 1983-1987

Post Doctoral Training

Internship

Vanderbilt University Hospitals
Vanderbilt University Medical Center, Nashville, Tennessee
Intern in Internal Medicine, 1987-1988

Residency

Vanderbilt University Hospitals &
Nashville Veterans Affairs Medical Center
Vanderbilt University Medical Center, Nashville, Tennessee
Junior and Senior Resident in Internal Medicine, 1988-1990

PLAINTIFF'S EXHIBIT
/
Moliterno-559

Post Doctoral Training

continued

Fellowships

Parkland Memorial Hospital &
Dallas Veterans Affairs Medical Center
University of Texas, Southwestern Medical Center, Dallas, Texas
Fellow in Cardiovascular Medicine, 1990-1993

Department of Cardiology
Section of Interventional Cardiology
The Cleveland Clinic Foundation, Cleveland, Ohio
Fellow in Interventional Cardiology, 1993-1994

Professional Activities

Faculty Appointments

Staff Physician
Section of Interventional Cardiology
Department of Cardiology
The Cleveland Clinic Foundation, Cleveland, Ohio, 1994-present

Medical Director, Angiographic Core Laboratory
Section of Cardiac Catheterization
Department of Cardiology
The Cleveland Clinic Foundation, Cleveland, Ohio, 1994-present

Assistant Professor of Medicine
Department of Cardiology
Cleveland Clinic Health Science Center
The Ohio State University, 1994-present

Staff Physician
Department of Cardiology
MetroHealth Medical Center
Cleveland, Ohio, 1995-present

Accomplishments

Honors

Psi Chi - National Honor Society, 1982
Merck Scholastic Achievement Award, 1985
Bristol Cardiology Fellow Award, 1991
Syntex Cardiology Fellow Award, 1992

Listed in "Best Physicians in America", 1998

Certificates & Licensure

Advanced Cardiac Life Support, 1993
Advanced Trauma Life Support, 1992
Board Certification in Internal Medicine (ABIM), 1991
Board Certification in Cardiovascular Medicine (ABIM), 1993
State of Tennessee, medical license, 1988 (inactive)
State of Texas, medical license, 1990 (inactive)
State of Ohio, medical license, 1993-present

Academic Activities

Memberships

American College of Cardiology, Fellow (FACC)
American College of Physicians, Fellow (FACP)
American Heart Association
    Arteriosclerosis and Thrombosis Council
    Clinical Cardiology Council
American Medical Association
European Society of Cardiology, Fellow (FESC)

Frequent Journal Reviewer

American Heart Journal
American Journal of Cardiology
Chest
Circulation
Coronary Artery Disease
Journal of the American College of Cardiology
Journal of Invasive Cardiology
Lancet
Thrombosis and Haemostasis

Editorial Boards

Section Editor, Clinical Trials,
Journal of Thrombosis and Thrombolysis

Investigatorships & Committees

Recent Past:

1. Clinical Events Committee: Global Use of Strategies to Open Occluded Arteries in Acute Coronary Syndromes (GUSTO II); CIBA-Geigy, Boehringer-Mannheim, Advanced Cardiovascular Systems.

2. Clinical Events Committee: A Randomized, Double-Blind, Comparative Safety and Efficacy Evaluation of Integrelin in Patients Receiving Thrombolytic Therapy for Acute Myocardial Infarction (IMPACT-AMI); COR Therapeutics.

3. Angiographic Core Laboratory Director: Evaluation of PTCA to Improve Long-term Outcomes by c7E3 Glycoprotein Receptor Blockade (EPILOG); Centocor, Eli Lilly.

4. Study Co-Principal Investigator: Prevention of Reocclusion and Inhibition of Thrombus and Myocardial Events (PRIME) Trial; A Randomized Trial of Efegatran Sulfate Versus Heparin in Acute Myocardial Infarction; Eli Lilly.

5. Angiographic Core Laboratory Director: Reteplase vs Alteplase Investigation During Myocardial Infarction Trial (RAPID 2); Randomized, Double-blind Study Comparing the Efficacy of Double Bolus Reteplase to Accelerated tPA in Patients with Acute Myocardial Infarction; Boehringer Mannheim.

6. Study Co-Principal Investigator: Platelet Aggregation Receptor Antagonist Dose Investigation for Reperfuison Gain in Myocardial Infarction (PARADIGM) Study: A Randomized Double-Blind Phase II Trial Evaluating the Use of a GP IIb/IIIa Inhibitor, Lamifiban Vs Placebo for Patients with Acute Myocardial Infarction; Hoffmann-LaRoche.

7. Study Principal Investigator: Platelet IIb/IIIa Antagonism for the Reduction of Acute Coronary Syndrome Events in a Global Organization Network (PARAGON); Randomized Double-Blind Trial to Evaluate the Use of GP IIb/IIIa Inhibitor, Lamifiban Vs Placebo for Patients with Acute Coronary Syndromes; Hoffmann-LaRoche.

8. Chairman, Steering Committee: Global Unstable Angina Registry and Treatment Evaluation (GUARANTEE) Study: A Survey of Treatment Practice Patterns for Patients with Unstable Angina; Eli Lilly.

9. Angiographic Core Laboratory Director: Liposomal Intervention Followed by Thrombolysis (LIFT) Trial: A Phase II, Placebo-Controlled, Multicenter Study of TLC C-53 as an Adjunct to Thrombolytic Therapy in Patients with Acute Myocardial Infarction; The Liposome Company.

Investigatorships & Committees

continued

10. Study Co-Investigator: Gene Quest - Genetic Analysis of Complex Human Traits: Application to Premature Atherosclerotic Heart Disease; Millennium Pharmaceuticals.

11. Site Principal Investigator: Determinants of the Time of Myocardial Infarction Onset. Part II: Modifiers of Myocardial Infarction Onset; National Heart, Lung and Blood Institute of the National Institute of Health.

12. International Steering Committee: Global Use of Strategies to Open Occluded Arteries in Acute Coronary Syndromes (GUSTO III): A Randomized Trial of Reteplase (r-PA) Versus Accelerated Alteplase (t-PA) for the Treatment of Acute Myocardial Infarction. Boehringer-Mannheim.

Current:

13. Angiographic Core Laboratory Director: ReoPro in Acute Myocardial Infarction and Primary PTCA Organization and Randomized Trial (RAPPORT); Eli Lilly and Centocor.

14. Angiographic Core Laboratory Director: A Phase II Randomized, Open-Label Angiographic Trial Evaluating The Benefit of ReoPro™ Bolus Plus 12-Hour Infusion With And Without Thrombolytic Therapy For Acute Myocardial Infarction (GUSTO-IV Pilot); Centocor and Eli Lilly.

15. Study Co-Principal Investigator: SYMPHONY: Sibrafiban Versus Aspirin to Yield Maximum Protection From Ischemic Heart Events Post-Acute Coronary Syndromes; Genentech and Hoffmann-LaRoche.

16. Study Co-Principal Investigator: Platelet IIb/IIIa Antagonism for the Reduction of Acute Coronary Syndrome Events in a Global Organization Network (PARAGON-B); Phase III Randomized Double-Blind Trial to Evaluate the Use of Lamifiban Vs Placebo for Patients with Acute Coronary Syndromes; Hoffmann-LaRoche.

17. Angiographic Core Laboratory Director: Evaluation of IIb/IIIa Platelet Inhibition for Stenting (EPISTENT) Trial: A phase IV clinical trial of Abciximab, intracoronary stent placement, or both in elective percutaneous coronary revascularization procedures; Centocor, Eli Lilly.

18. Study Co-Principal Investigator: The 2nd SYMPHONY: Sibrafiban (Xubix™) Versus Aspirin to Yield Maximum Protection From Ischemic Heart Events Post-Acute Coronary Syndromes: A randomized trial of chronic (1-year) administration of oral IIb//IIIa inhibition versus aspirin; Genentech and Hoffmann-LaRoche.

Investigatorships & Committees

continued

19. Angiographic Core Laboratory Director: Local Delivery of Heparin in Stenting for Sub-Optimal result or Threatened Closure Post-PTCA using the LocalMed Infusasleeve: a Multicenter Randomized Pilot Study (LIHPS); LocalMed.

20. Scientific Advisory Board Member, International Academy of Cardiology, Inc. and the 1st International Congress on Heart Disease, May, 1999.

21. Angiographic Core Laboratory Director: Feasibility Study of the EndoTex Coiled Sheet Stent in the Treatment of Carotid Arterial Stenosis (ESCS-I); EndoTex Interventional Systems.

22. Scientific Advisory Board Member, International Academy of Cardiology, Inc. and the 2nd International Congress on Heart Disease, June, 2000.

23. Site Principal Investigator: The Safety of Enoxaparin Therapy in Patients Undergoing Percutaneous Coronary Intervention and Receiving Concomitant Abciximab Therapy (NICE-4). Rhône-Poulenc Rorer Pharmaceuticals.

24. Angiographic Core Laboratory Director: A Prospective, Randomized, Double Blind, Mulit-Center Study Comparing the Effects of Atorvastatin versus Pravastatin on the Progression and Quantification of Coronary Atherosclerotic Lesions as Measured by Intravascular Ultrasound (REVERSAL) Study. Parke-Davis Pharmaceutical Research and Pfizer Central Research.

25. Angiographic Core Laboratory Director: Norvasc for Regression of Manifest Atherosclerotic Lesion by Intravascular Sonographic Evaluation (NORMALISE) Study. Pfizer US Pharmaceuticals.

26. Site Principal Investigator: Heparins and Reperfusion Trial (HART-II): A comparison of unfractionated heparin and enoxaparin among patients receiving tissue plasminogen for acute myocardial infarction. Rhône-Poulenc Rorer Pharmaceuticals.

27. Scientific Advisory Board Member: 3rd International Congress on Coronary Artery Disease; Salzburg, Austria, October, 2000.

28. Steering Committee: A prospective, multicenter, observational study evaluating platelet function with Accumetrics Ultegra-Rapid Platelet Function Assay (RPFA) in patients undergoing coronary interventions using platelet glycoprotein IIb/IIIa inhibitors. Accumetrics, Inc.

University, Scientific Society, & International Lectures

1. September, 1995
   The Austrian Society of Cardiology and The Working Group on Coronary Circulation of the European Society of Cardiology; Vienna, Austria
   Definition and Specification of Coronary Lesions: Angiography and Beyond

2. September, 1995
   Ohio State University; Columbus, OH
   Use of IIb/IIIa Platelet-Receptor Antagonists in Interventional Cardiology

3. December, 1995
   The George Washington University Medical School; Washington, D.C.
   Platelet Integrins and Receptor Antagonists in Cardiovascular Medicine

4. January, 1996
   23rd Annual Scientific Meeting of Egyptian Society of Cardiology; Luxor, Egypt
   Contemporary Percutaneous Revascularization: State of the Art

5. May, 1996
   Institute di Ricovero e Cura a Carathere Scientifico; Como, Italy
   Anti thrombotic Therapy in Acute Coronary Syndromes: IIb/IIIa in AMI

6. October, 1996
   Scientific Experts Panel Advisory Meeting; Glaxo Pharmaceuticals; London, England
   Biologic Role and Potential Indications for Chronic Platelet IIb/IIIa Antagonism in Cardiovascular Medicine

7. December, 1996
   The Cardiac Center of Creighton University; Omaha, Nebraska
   Anticoagulation: The role of IIb/IIIa Platelet Inhibitors

8. January, 1997
   Georgia Heart Institute University Hospital; Augusta, Georgia
   Contemporary Diagnosis & Therapy of Acute Myocardial Infarction

9. April, 1997
   61st Annual Scientific Meeting of Japanese Circulation Society; Tokyo, Japan
   Megastudies in Ischemic Heart Disease: When are Meta-Analyses Adequate?

10. June, 1997
    XIXth Annual Congress of the International Society on Thrombosis and Haemostasis; Florence, Italy
    Conjunctive Use of Platelet Glycoprotein IIb/IIIa Antagonists and Thrombolytic Therapy for Acute Myocardial Infarction

University, Scientific Society, & International Lectures

continued

11. June, 1997
    The University of Texas & The Texas Heart Institute; Houston, Texas
    Emerging Strategies in the Treatment of Acute Coronary Syndromes

12. August, 1997
    XIXth Congress of the European Society of Cardiology, Stockholm, Sweden
    Non-Cardiac Uses of ReoPro: Cerebrovascular Interventions

13. October, 1997
    The University of South Dakota, Sioux Falls; South Dakota
    Strategies to Improve Myocardial Reperfusion in Acute Infarction

14. December, 1997
    The Singapore Society of Cardiology; Singapore, Singapore
    Antiplatelet and Antithrombin Therapies: The Next Generation

15. May, 1998
    The University of Texas, Southwestern Medical Center, Dallas, Texas
    Contemporary Strategies to Maximize Perfusion and Reperfusion in Acute Coronary Syndromes

16. May, 1998
    Henry Ford Hospital, Detroit, Michigan
    Current Antiplatelet and Antithrombin Therapies in Unstable Angina and Myocardial Infarction

17. May, 1998
    The Philippine Heart Association 29th Annual Scientific Meeting, Manila, Philippines
    The 2nd Annual Rodolfo Soto Visiting Professor Lecture: Confronting the Challenges of Acute Ischemic Syndromes

18. June, 1998
    The 9th Annual Meeting of the Society for Vascular Medicine And Biology, San Diego, California
    Antiplatelet Therapies in Cardiology and Vascular Medicine

19. September, 1998
    The 2nd International Congress of the Polish Cardiac Society; Katowice, Poland
    Clinical Application of IIb/IIIa Inhibitors in Acute Coronary Syndromes

20. October, 1998
    Scientific Experts Advisory Panel Meeting, Yamanouchi Pharmaceuticals; Amsterdam, The Netherlands
    Broadening the Application of IIb/IIIa Inhibitors in Vascular Medicine

University, Scientific Society, & International Lectures

continued

21. October, 1998
    Annual Scientific Session of the American College of Emergency Physicians; San Diego, California
    From Clinical Trials to Clinical Practice: What Have We Learned from the EPIC, EPILOG, CAPTURE, 4P Trials?

22. January, 1999
    Bowman Gray School of Medicine
    Wake Forest University, Winston-Salem, North Carolina
    Contemporary Antiplatelet and Antithrombin Therapies in Acute Coronary Syndromes

23. January, 1999
    University of North Carolina at Chapel Hill, Chapel Hill, North Carolina
    New Options in Antiplatelet Therapies for Acute Coronary Syndromes

24. March, 1999
    The University of Cincinnati School of Medicine, Cincinnati, Ohio
    Tailoring Therapies of Acute Myocardial Infarction for Individual Patients

Publications

Abstracts

1. Brogan WC, Lange RA, Kim AS, **Moliterno DJ**, Hillis LD. Alleviation of cocaine-induced coronary vasoconstriction by nitroglycerin. Journal of the American College of Cardiology 1991; 17:174A.

2. **Moliterno DJ**, Leffert CC, Lange RA, Willard JE, Boerwinkle EA, Hillis LD, Hobbs HH. Plasma lipoprotein[a] in black subjects with and without angiographic evidence of coronary atherosclerosis. Circulation 1992; 86 (Suppl I):337.

3. **Moliterno DJ**, Lange RA, Meidell RS, Willard JE, Leffert CC, Boerwinkle EA, Gerard RD, Hobbs HH, Hillis LD. Relation of lipoprotein[a] to infarct artery patency in survivors of myocardial infarction. Circulation 1992; 86 (Suppl I):803.

4. **Moliterno DJ**, Willard JE, Lange RA, Negus BH, Boehrer JD, Glamann DB, Landau C, Rossen JD, Winniford MD, Hillis LD. Potentiation of cocaine-induced coronary vasoconstriction by cigarette smoking. Circulation 1993; 88 (Suppl I):I-254.

5. **Moliterno DJ**, Sapp SK, Topol EJ. The paradoxical effect of thrombolytic therapy for unstable angina: meta-analysis. Journal of the American College of Cardiology 1994; 23:288A.

6. **Moliterno DJ**, Califf RM, Anderson K, Sigmon KN, Aguirre F, Weisman HF, Topol EJ and EPIC Study Investigators. Activated clotting time is increased during coronary interventions with platelet IIb/IIIa antagonism: results from the EPIC trial. Journal of the American College of Cardiology 1994; 23:106A.

7. De Franco AC, Nissen SE, Tuzcu EM, Lefkovits J, **Moliterno DJ**, Guyer S, Ellis SG. Ultrasound plaque morphology predicts major dissections following stand-alone and adjunctive balloon angioplasty. Circulation 1994;90 (Suppl I):I-59.

8. Goodhart DM, Nissen SE, De Franco AC, Guyer S, **Moliterno DJ**, Tuzcu EM. Diagnosis of angiographically elusive left main and ostial left anterior descending lesions by intravascular ultrasound. Circulation 1994;90 (Suppl I):I-450.

9. Berkalp B, Nissen SE, De Franco AC, **Moliterno DJ**, Franco I, Raymond RE, Sutton J, Lincoff AM, Guyer S, Tuzcu EM. Intravascular ultrasound demonstrates marked differences in surface and lumen shape following interventional devices. Circulation 1994;90 (Suppl I):I-58.

10. **Moliterno DJ**, Stebbins A, Maynard C. The influence of race on efficacy and complications of thrombolytic therapy: results from the GUSTO trial. Circulation 1994;90 (Suppl I):I-109.

Publications

Continued

Abstracts

11. De Franco AC, Tuzcu EM, **Moliterno DJ**, Guyer S, Elliott JM, Nissen SE. Do new interventional devices "facilitate" balloon angioplasty? Ultrasound evidence of no reduction in vessel recoil. Circulation 1994;90 (Suppl I):I-58.

12. Tuzcu EM, Berkalp B, **Moliterno DJ**, Goormastic M, De Franco AC, Nissen SE. Can angiography reliably detect and quantify coronary calcification? A comparative intravascular ultrasound study. Circulation 1994;90 (Suppl I):I-277.

13. De Franco AC, Tuzcu EM, **Moliterno DJ**, Elliott JM, Berkalp B, Franco I, Raymond RE, Whitlow PL, Guyer S, Nissen SE. Overestimation of lumen size after coronary interventions: implications for randomized trials of new devices. Circulation 1994;90 (Suppl I):I-550.

14. **Moliterno DJ**, Califf RM, Anderson K, Aguirre F, Weisman HF, Topol EJ and EPIC Study Investigators. Special considerations for diabetics receiving platelet IIb/IIIa antagonists during coronary interventions: Results from the EPIC trial. Journal of the American College of Cardiology 1995;25:155A.

15. Mayer EL, Robinson K, Jacobsen DW, Tuzcu EM, De Franco AC, **Moliterno DJ**, Guyer S, Nissen SE. Low plasma homocysteine levels predict reduced atheroma burden in patients undergoing coronary interventions: evidence from coronary intravascular ultrasound. Journal of the American College of Cardiology 1995;25:81A.

16. **Moliterno DJ**, De Franco AD, Tuzcu EM, Ellis SG, Eccleston DS, Raymond RE, Whitlow PL, Nissen SE. Intravascular ultrasound evidence of significant oversizing of angioplasty balloons in female patients. Journal of the American College of Cardiology 1995;25:94A.

17. Tuzcu EM, De Franco AC, Mayer E, **Moliterno DJ**, Hobbs RE, Bott-Silverman C, Stewart RW, McCarthy PM, Nissen SE. Older donor age predicts increased risk for coronary vasculopathy in the year following transplantation: serial examination by intravascular ultrasound.. Journal of the American College of Cardiology 1995;25:333A.

18. De Franco AD, Tuzcu EM, **Moliterno DJ**, Raymond RE, Franco I, Guyer S, Ellis SG, Whitlow PL, Nissen SE. "Directional" coronary atherectomy removes atheroma more effectively from concentric than eccentric lesions: intravascular ultrasound predictors of lesion success. Journal of the American College of Cardiology 1995;25:137A.

Publications
continued

Abstracts

19. **Moliterno DJ**, Granger C, Califf RM, Elliott JM, Stebbins A, Topol EJ for the GUSTO Investigators. Improved prognosis for heavy weight patients receiving thrombolysis in acute myocardial infarction - bigger is better: results from GUSTO. Journal of the American College of Cardiology 1995;25:232A.

20. Migrino RQ, Ross AM, Miller DP, Goel JM, and **Moliterno DJ** for the GUSTO Investigators. Lack of circadian variation in thrombolytic efficacy: results from the GUSTO angiographic substudy. Circulation 1995;92:I-777.

21. Lincoff AM, Tcheng JE, Ellis SG, **Moliterno DJ**, Kitt MM, Debowey D, Topol EJ for the IMPACT II Investigators. Randomized trial of platelet glycoprotein IIb/IIIa inhibition with Integrelin for prevention of restenosis following coronary intervention: the IMPACT II angiogrpahic substudy. Circulation 1995;92:I-607.

22. **Moliterno DJ**, Sgarbossa EB, Armstrong PW, Granger CB, Van de Werf F, Califf RM, Topol EJ for the GUSTO II Investigators. A major dichotomy in unstable angina outcome: ST depresssion vs. T-wave inversion--GUSTO II results. Journal of the American College of Cardiology, 1996;27:182A.

23. Steinhubl SR, **Moliterno DJ**, Teirstein PS, Guarneri EM, Aguirre FV, Ferguson JJ, Perin EC, Strickman NE, Keriakes D, Tcheng JE, Ellis SG, Topol EJ. Stenting for acute myocardial infarction: the early United States multicenter experience. Journal of the American College of Cardiology, 1996;27:279A.

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