THE STATE OF OHIO.)
)
COUNTY OF SUMMIT.)

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IN THE COURT OF COMMON PLEAS

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Lynn Gmerek, et al.,)
)
Plaintiffs,)
)
vs.) Case No. CV-2002-03-1482
)
Emory Leuchtag, et al.,)
)
Defendants.)

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Deposition of KENNETH G. ZAHKA, M.D., a witness herein, called by the Defendants as if upon cross-examination under the statue, and taken before Irma A. Fares, a Notary Public within and for the State of Ohio, pursuant to the agreement of counsel and pursuant to the further stipulations of counsel herein contained, on June 17, 2003, at 11:00 a.m., at Rainbow Babies & Children's Hospital, 11100 Euclid Avenue, Cleveland, Ohio, 44106.

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APPEARANCES:

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On behalf of the Plaintiffs.

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On behalf of the Defendants.

ALSO PRESENT:

Beverly Mayle.

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I-N-D-E-X

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E-X-H-I-B-I-T-S

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P R O C E E D I N G S

KENNETH G. ZAHKA, M.D.,

being by me first duly sworn, as hereinafter certified, deposes and says as follows:

CROSS-EXAMINATION

BY MR. MAZANEC:

Q. Doctor, I want to make sure I pronounce your name correctly. How do you pronounce your last name?

A. Zahka.

Q. Zahka.

I'm Tom Mazanec. I'm here in the case of Gmerek versus Leuchtag. And I represent Emory Leuchtag, an attorney; but we're really questioning you about an underlying case, about Allison's medical condition for which my client, Emory Leuchtag, was originally hired to look into whether or not any medical malpractice was committed, specifically looking into the issue of Dr. Jacobstein.

I'm here really to ask you some questions about Dr. Jacobstein's care and the events that happened back this 1997.

And I have some of the reports you prepared, and you're free to look at them, anything

in your file to help refresh your memory. I'm not trying to trick you in any way. I just want to find out what you know and if you have any opinions about Dr. Jacobstein's care. That's really what I'm here for today.

A. I understand.

Q. If you have any further questions of me or want clarification, please feel free at any time.

Also please keep in mind, although I've looked through this file, I'm not real good at medicine. A lot of the terms here are confusing to me. And if you could make things simple sometimes in your explanations and try to give me examples, I would appreciate if you can do that.

I just want to start with your background a little bit, Doctor. Just give me briefly your background, like medical school, that kind of thing.

A. I graduated from Johns Hopkins School of Medicine in 1975. I did my pediatric training at Johns Hopkins Hospital, and I finished in 1978. I did my pediatric cardiology training at Johns Hopkins Hospital, and I finished that in 1981.

I passed my pediatric boards and then

my pediatric cardiology boards in 1981. And I joined the faculty at Johns Hopkins Hospital and the School of medicine At that time. And I stayed there until 1990, when I came here to Rainbow Babies & Children's Hospital in Cleveland to be the director of pediatric cardiology.

Q. And you've been a director since that time?

A. That's correct.

Q. Now, briefly, in connection with this case, can you tell me what information or records you've reviewed?

A. I have our medical record --

Q. Okay.

A. -- which includes some information from the University of Michigan at about the time of her discharge from her last hospitalization there; and I also have, over the -- over the years that I've known Allison, spoken with her family about the time that she got sick in December of 1997.

Q. I guess to get some background so I understand the medical picture a little bit, from what I could see looking at the records, Allison's had some problems with her heart that were discovered even while she was in the wound.

Is that right? There were some things even before she was born?

A. Allison was born with hypoplastic left heart syndrome.

Q. What does that mean?

A. It means that the left side of the heart did not form normally.

Q. It didn't form properly?

A. Yes.

And that is the heart defect that is -- that is one of the heart defects. It's among the most lethal untreated and was one of the last heart defects to be effectively managed surgically. But since 1980, the progress that's been made in the management of children who have hypoplastic left heart syndrome has been fairly dramatic. And now there is hope for these children, where at one time there was no hope.

Q. Okay. Just so I understand, "at one time," you're talking about prior to 1980?

A. It was prior to 1980 all children with hypoplastic left heart syndrome died, and they usually died in the first week or two of life.

Q. So let's say up in '95 -- since she was born in '95 -- what was the general survival

rate at that point in time?
A. There is now a very staged approach to the treatment of children with hypoplastic left heart. And the published results would indicate that about 80 percent of children in 1995 survived the first step, and then the survival of the subsequent steps was around 95 to 98 percent at each stage. And there are typically three stages.
Q. I was going to ask you what those are.
A. The first stage is called the Norwood operation.
Q. And once again, for my benefit, what is a Norwood operation?
A. That's an operation which reroutes the blood so that it bypasses the blockage of blood flow to the body. And it's the most difficult of the three stages.
And the operation was first described by Dr. Norwood when he was at Boston Children's Hospital in the late -- in the very late seventies.
Q. Okay.
A. And the second stage either goes by the name of a Hemi-Fontan, H-e-m-i, dash, F-o-n-t-a-n, or Glenn operation, G-l-e-n-n. And that begins the process of separating the blue blood from the red

blood in the heart.

And the last stage is called the Fontan operation, F-o-n-t-a-n, and that completes the separation of the blue blood from the red blood and allows the blood that comes back from our body to go directly into the lungs without the benefit of a pumping chamber or any arteries, and then the blood that comes back from the lungs goes into the receiving chambers of the heart, into the pumping chamber, since there's only one pumping chamber, and then out to the body.

Q. Okay.

A. So instead of having two pumping chambers, two receiving chambers and four heart valves, this series of operation allows children to survive and do in many cases reasonably well with one pumping chamber and two heart valves.

Q. Half of what --

A. Correct.

Q. -- you or I would have?

A. Correct.

Q. Is that something that typically --

Well, bad question.

Is that a condition that remains present throughout that person's life; they always would

have half?
A. You are correct.
Q. Okay. It's not like you become an adult at 21, and they do a different operation to make them all work?
A. The only situation where a person who is born with hypoplastic left heart would have a heart that was built normally would be if they had a heart transplant.
Q. Okay. But absent that, these babies can survive. And do they typically, then, have a normal life expectancy, in your experience?
A. We don't yet know that. We know what challenges they face in terms of heart muscle problems, heart valve problems, heart rhythm problems.
Q. Is that because it's too early, the kids are too young?
A. We've defined many of those.
And I think you know from looking at Allison's record that she's faced a number of those challenges and has been able to overcome some of those challenges or all the challenges so far.
But in terms of how long she will live

and the quality of her life compared to other children with hypoplastic left heart and compared to the general population, we don't yet know that because they've only been -- children with hypoplastic left heart have only been effectively cared for in this manner for 15 years.

Q. Okay.

A. The early -- You know, the early '80s was still not a good time for children with my hypoplastic left heart syndrome.

Q. So there's not enough data yet, not enough time has past to say if a normal child born in the 1995 will live 80 years, 50 years, 60 or 70?

A. Correct.

Q. There is just no statistics there?

A. Correct.

Q. But can you say it's less -- whatever that number is, it's less than a normal life expectancy or not?

A. I think that most pediatric cardiologists would say that the life expectancy of somebody born with hypoplastic left heart syndrome, even with effective treatment in the current era, would be less than the general population.

Q. Now, in Allison's case, you refer to some other challenges and problems that would still exist even with the successful surgery.

What are those other problems that still exist?

A. The one problem that is known is that some of the children have a significant degree of valve leakage. And that is one of the important parts of Allison's course and why she remained so ill after her third-stage surgery and why she had to have subsequent surgery and a valve replacement. She also developed a slow heart rhythm and had to have a pacemaker placed.

Q. I saw something about a pacemaker. And that's for the slow heart rhythm?

A. That's for the slow heart rhythm.

And she had some narrowings in her lung arteries that had to be ballooned prior to one of her surgeries.

She had some heart muscle problems that began around the time of her last surgery, which she has gradually recovered from with medical therapy as the workload in her heart has become more normal for her.

Q. Okay. In this particular case with

Allison, the three stages that you talk about, these three operations, were they done at the University of Michigan by Dr. Bove?

A. Bove, B-o-v-e.

Q. Were they -- As you could look at the records, were they successful? Did they -- Each of the three surgeries, did they work?

A. I think that the surgeries did work.

His hope to repair her tricuspid valve effectively so that she would not need to have a tricuspid valve replacement was not realized, but that wasn't because of any shortcoming of Dr. Bove's talents. That was because of Allison's unique heart.

Q. Are you aware of what Dr. Jacobstein -- what he was doing for Allison back in '97?

A. In terms of the -- the time that -- the day that he -- that she had her problem that she was admitted to the ICU?

Q. Andy time before that what he was following her for.

A. I don't have any of those records of his care at that time.

Q. Okay. Do you know Dr. Jacobstein?

A. Yes, I do know Dr. Jacobstein.

Q. Have you worked with him in any professional capacity before? Have you ever referred patients back and forth or worked in any professional way?

A. We're part of the community of pediatric cardiologists. He's never worked for me nor have I ever worked for him. And there have been patients that have gone back and forth between Cleveland and Akron.

Q. Other than in Allison's case, have you seen his care? Have you been able to observe his work, the results of his work?

A. I do take care of other patients that have -- in the past been taken care of by Dr. Jacobstein.

Q. Have you formed any general opinions about his professional abilities?

A. Can you be more specific in that?

Q. And that may be a poor question.

I guess what I'm trying to find out is, putting aside this case, which I'll get to in a second, have you formed any opinions from working with Dr. Jacobstein, looking at some of his work or going back and forth with patients, on his general professional capabilities within the community of

pediatrics?

A. Let me give you an insight based on the families that I have taken care of after he's taken care of them.

Q. Okay.

A. Obviously when -- when somebody comes 50 miles away when they could see somebody nearby them, you know, that indicates some level of dissatisfaction with -- with the care that he gave.

Now, I know as a cardiologist that we're -- none of us are perfect and not always is there a perfect fit between any given cardiologist and any given family, so that there are -- there are times when I hear from families of their concerns and -- but in general, his capabilities as a cardiologist are certainly adequate.

Q. Okay. Now, you mentioned --

December 4th is the date we're going to be talking about the events with Allison.

And my question to you is: Prior to December 4th -- I understand there was an echo done in November sometime, November 25th, somewhere around there.

Have you ever seen that?

A. No, I have not.
Q. Okay. I want to get to the events of December 12th -- I'll get right to the point. In looking at the events of December 4th, you've looked at those records, I take it, from Dr. Jacobstein in the hospital.
A. The only records that I've seen -- and I actually didn't see them until today in the preparation for the deposition -- was the discharge summary from the hospitalization in Akron.
Q. Okay.
A. The other records that I had relied on to take care of her were the records from the University of Michigan.
Q. Okay. So you looked today at the discharge summary. And that's -- Was that December 5th or December 4th? I can't remember.
MR. MEEKER: 4th. Well, there's one from the 4th and the 5th. He looked at the 4th today, Tom.
MR. MAZANEC: Okay. Thank you. I appreciate it.
Q. In looking at those records, do you have any criticisms of Dr. Jacobstein's care that he rendered on the 4th?

A. I think that the -- the records don't describe in any detail the care that he provided.
Q. Okay. In conjunction with looking at the records and talking to the family or any other records you've seen, have you formed any opinions as to the care Dr. Jacobstein gave to Allison on December 4th?
A. My understanding from talking to the family is that after they took her to the emergency room that morning, they took her to Dr. Jacobstein's office and that he did not examine Allison. He formed an opinion about how she was doing based on talking to the family and, I imagine, talking to the emergency department and sent her home at that time.
Q. Assuming that that's the case, is that all you know about the facts, what the family -- what you just related to me?
A. Yes.
Q. Assuming those facts, then, do you have any criticisms of what Dr. Jacobstein did that morning?
A. I do think that not examining her was outside of the standard of care for somebody with her degree of heart abnormality.

Q. And the basis for that would be, as you just said, someone with her problems, with her degree of heart abnormality, when she went up to see Dr. Jacobstein, he should have at least given her an exam?

A. Yes.

Q. And what would that exam consist of?

A. I think that he should have taken her vital signs again and should have examined her with regard to her pulses and her profusion, with regard to the size of her liver and the presence of any change in her heart sounds, in murmurs and her lung fields.

He is in the unique position of being able to effectively compare her condition at that time to her previous visits.

Q. I didn't hear the last thing you said about checking the heart sounds and the lung field.

A. Heart sounds, the murmurs and lung fields.

Q. So what you just said, this checking would then be compared to her condition on previous visits?

A. And then he can, on that basis, make a decision about whether her heart failure is

adequately controlled and whether she is able to cope with her heart failure from a respiratory status; and if she did have a respiratory infection, whether she was going to be able to cope with that respiratory infection.

Q. Do you have the records with you from December 4th? I was going to dig mine out.

A. Attorney Meeker has given me the discharge summary from December the 5th, 1997.

MR. MEEKER: I'm sorry. We're trying to give you the 4th, I guess.

A. Admitted December 4th, discharged December 5th.

Q. And that's from Children's Hospital?

A. Children's Hospital of Akron.

Q. Did those records indicate whether there were -- any of the vitals or things you just mentioned to me about the liver all and that, any of them checked by anyone else?

A. This discharge summary does not review her physical examination.

Q. Let me ask you another question, Doctor. The University of Michigan Hospital, have you looked at this one?

MR. MEEKER: What date was that one, Tom?

MR. MAZANEC: That's the admission on the 5th through the 11th, when she went to Michigan right away -- or the 4th, I guess.

Q. Do you recall ever seeing that before?

A. I don't think that I have this from the University of Michigan.

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Thereupon, a document was marked for purposes of identification as Defendants' Exhibit A.

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MR. MEEKER: Tom, I want to clarify something on the record so there's no mistaken.

We earlier gave the doctor of copy of the 12-5 discharge summary, and the doctor was indicating from Children's, and that is what we had shown the doctor this morning, so we did not show him the emergency record, but we now have found the emergency record from the 4th, if you want the doctor to see that. He hasn't seen that.

MR. MAZANEC: Yeah. Let's take some time.

Q. I would like you to see it so we have an accurate record.

Take your time and look at that, Doctor. I want to make sure you have the appropriate information.

(Discussion was held off of the record.)

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Thereupon, documents were marked for purposes of identification as Defendants' Exhibits B and C.

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BY MR. MAZANEC:

Q. Doctor, I just want to make sure you have all the records you need to form any opinions you need.

I've given you the records marked Exhibit B from Michigan when she was admitted on the 5th and stayed to the 11th; and then Mr. Meeker has provided to you today the records from Children's on December 4th, the emergency room record and the discharge record.

Did any of those records assist you in trying to ascertain whether or not Dr. Jacobstein performed an exam, first of all?

MR. MEEKER: Excuse me. Tom, I didn't want to interrupt.

MR. MAZANEC: Go ahead.

MR. MEEKER: I think the Michigan admission record was marked A.

MR. MAZANEC: That's correct.

MR. MEEKER: I thought you said B a minute ago.

And then the discharge summary from 12-5 from Children's is B, and the emergency record from Children's is A -- or C -- excuse me -- on 12-4.

MR. MAZANEC: Exactly right.

A. No. Michigan discharge summary, which I no longer have --

Q. I'm sorry, Doctor.

A. -- is A; the emergency department visit is B --

MR. MEEKER: All right.

A. -- the discharge summary is C.

MR. MEEKER: Thank you.

Q. Thank you.

A. And the answer to your question, from my brief perusal of these three documents, is that I don't see anything on here that documents Dr. Jacobstein's examination.

Q. Okay. Do any of them document any of the, I guess, tests, the vitals, things you were

mentioning, whether or not they were done at Akron Children's by anyone else?

A. The emergency department visit has a pulse, a respiratory rate that was initially marked at 36 and then crossed out to 80. It has a weight; a temperature, which was normal at 37.1; and it has a physical examination by a physician whose name I cannot read.

Q. I guess my follow-up question, Doctor, then, is: If some of these tests or signs you talked about were done in the emergency room, would it be necessary for Dr. Jacobstein to do it again himself or could he look at those records?

A. I think that most cardiologists would not be comfortable with the clinical examination of another physician who was not a cardiologist. And as an example, it says here, grade four over six, continuous murmur.

And we know from her type of heart defect that -- that she doesn't have a continuous murmur.

And also it says, Liver not felt well, question mark, two centimeters. And I think that if the person doing the examination was uncomfortable with that assessment, then it would have been appropriate to repeat it.

And under "Assessment," it -- it says cchd, hypoplastic left heart, chf; and then it says "viral illness," but it has a question mark in front of the "viral illness," suggesting that the person wasn't sure about the role of heart failure as opposed to a viral illness.

Q. I want to ask you a few questions about Allison's symptoms on December 4th. Like I said, look at any records you need to. This is not a guessing game. And if you need something that one of us has that you don't have, I'll try to give it to you, if I have it.

As far as Allison's symptoms when she presented on the 4th, the first time, do you know if there was any decrease in fluid intake that she had? Was that noted anywhere?

A. The emergency department visit, the chief complaint written down by the nurse who was doing the screening says, Onset of coughs since last p.m. --

Q. Okay.

A. -- something with cough; maybe vtg, maybe vomiting with cough.

Q. That's what -- I have a note in my notes for vomiting.

A. No increased T at home. I assume that means temperature.

And then her assessment is, alert two-year-old female; color slightly dusky; hoarseness noted at times, with grunting respirations, congested cough.

And then the physician's notes: Status, post cardiac surgery times three; presents with one-day history of cough with gagging, fussiness, poor po, solid intake with fast breathing. Question mark, increased puffiness of face; last cardiac surgery in May. I can't read the next four words. Usual saturation, low 90s; no increase in cyanosis today; meds: lasix, aldactone, captopril; question mark, doses; recently finished a course of augmentin for otitis. And he goes into his physical exam.

Q. Let me ask you a question maybe in a different way. The information I've been supplied indicates that she didn't have a decrease of fluid intake that day.

My question is: Do you have any information, looking at the records, that that's incorrect? Is there anything in the records? Do you know that?

A. It doesn't -- As of nine o'clock in the morning, it doesn't say anything about that. That would be fairly early in the day after she had presumably woken up from sleep. It doesn't say that she took her normal bottle that morning or normal cup that morning or whatever.

Q. Is there anything in the records that you saw that indicates that Allison had a pending respiratory or cardiovascular problem, anything that was pending on the 4th, when she came in the first time?

A. I think that the -- the respiratory rate and the grunting initially would raise some concerns about the -- her current status.

My biggest concern would be, what did her parents see that prompted her -- prompted them to bring her in? And did the physicians adequately understand what her parents' concerns were at that time?

Q. You indicated that Dr. Jacobstein didn't perform an exam and should have performed his own exam and made comparisons.

A. Could you restate that?

Q. I think what I heard you saying, from my view -- like I said, I'm not trying to put words

in your mouth; and correct me if I'm not saying it properly -- you said you were critical of Dr. Jacobstein for not performing his own exam of Allison, taking the signs you talked about and then making a comparison with other visits.

A. Correct.

Q. Can you state, if he would have done that, if anything would have changed in this case? Do you know that?

A. That is -- That is certainly speculation --

Q. Right.

A. -- but to say that she was her normal self in the morning when the parents brought her, asking for help and assessment, and then all of a sudden in two hours turned and became deathly ill, I don't think that that's a reasonable conclusion. I think you have to conclude that this is one continuous event that was mis-assessed in the morning by the people taking care of her.

Q. Okay. And to follow up on that line, if it wouldn't have been mis-assessed, if it would have been appropriately assessed, in your opinion, what -- would there have been any difference in Allison's condition as to what happened to her?

A. I think it's very unlikely that she would have had her respiratory arrest. I think that it's unlikely that she would have required an interosseous line; and ideally, she could have had medications adjusted and started to help her cope with her difficulties before they became critical for her.

Q. By "critical," you mean necessitating going to and -- for --

A. Necessitating having to be intubated and having to have emergency lines placed into her bones, intervenous lines placed into her bones.

Q. You see where I'm going with this, Doctor. I'm trying to find out, in your opinion, if the situation would have been discovered on the 4th, what would have been different about Allison's care? That's what I'm trying to understand. And you told me some of the things. Are there any other things that you see would have been different?

A. I think it's clear that Allison needed her tricuspid valve repaired and replaced.

Q. And that's regardless --

A. And that was regardless. And that was why she was so sick.

Q. Okay.
A. And the reason that she got into trouble that morning was because of her congestive heart failure and her inability, because of the burden of her leaking tricuspid valve and her underlying heart problem, the inability of her heart to push around enough blood to keep her healthy so that she could breathe normally and eat normally.
Q. Okay. So in your opinion, if the situation would have been caught on the 4th --
A. She could have avoided her interosseous line --
Q. Okay. Just so --
A. -- and likely could have avoided being intubated.
Q. And just so I understand that, interosseous line and the intubation that took place where?
A. In the emergency department or the intensive care unit after the rescue squad brought her back later that afternoon.
Q. So those events of the afternoon could have been avoided of the problems that you're talking about once she was brought back?
A. Yes, I believe that is so.

Q. Would she have still ended up at the University of Michigan with the hospitalization that she did on the 5th -- would that have been the same regardless whether or not the situation was caught?

A. I think that that's speculation --

Q. Okay.

A. -- and --

MR. MEEKER: Tom, excuse me.

A. -- I don't know if that's the only reason why she went to the University of and --

MR. MEEKER: Excuse me. My only interruption was, do you mean her going to the and -- on the 5th or do you mean when she went back at the end of the month to have the valve replaced?

MR. MAZANEC: The 5th. I'll clarify that.

Q. What I'm trying to find out -- maybe I'm doing it in an inarticulate fashion; I apologize for that -- is, I'm trying to sort of change history; and if her condition would have been appreciated earlier, found out what would have been different in Allison's case. And you've been kind enough to tell me about the events now

on the afternoon of the 4th; she wouldn't have to have the IVs in her bones, I think you mentioned it, and some of the other problems.

And now we know that she went to Michigan and was LifeFlighted, was there on the 5th for six days.

Would that whole sequence have been eliminated or was it necessary -- Because of the tricuspid problems or the problems she had, would she have had to go through that anyway?

A. My understanding from talking to her family and from talking to Attorney Meeker is that an important part of the decision to transfer her to and -- was a sense of helplessness and hopelessness on the part of the team at Akron Children's Hospital.

And under most circumstances, you would expect that an intensive care unit could manage congestive heart failure at a children's hospital and that she would only need to go to and -- for her surgery. But I think that the intensive care unit and Dr. Jacobstein, from my understanding from talking to the family, conveyed a sense of hopelessness that the family was not at that point prepared to accept, and they probably had a role

in having her transferred to and -- as well.

That -- I wasn't there. And I don't know how accurate that is as a description of how those events occurred.

Q. Okay. Other than the things you mentioned about to me at the emergency room, which was the IV in the leg and intubation, are there any --

A. The respiratory arrest, the difficulty with the blood flow, the need for an interosseous line, the need for intubation, those could have been avoided with more prompt treatment.

Q. Okay. Is there anything else that could have been avoided besides those things?

A. That's a very broad question that -- I would say my answer to that right now is no, but I would reserve the ability to go back and review the records in more detail and say, well, this aspect, that aspect or that aspect maybe have been avoided, but I think that those were the big issues.

Q. Her progress with her problems; she went to Michigan had this surgery later; she had the surgery in December. Her condition as she is now, is she any different but for

the events of December 4th? In other words, it played a role on December 4th, you've been kind enough to tell me now -- you've laid out for me specifically what problems you saw associated with the failure of Dr. Jacobstein and people there to correctly assess her condition. And I understand that.

I'm trying to look now at the big picture, the way Allison is now. Is she any -- Is that incident a temporary thing, in other words, or is that something that will cause permanent problems?

A. I don't know the exact answer to your question.

With regard to her neurologic development, for example, I know that children who have hypoplastic left heart syndrome, who have medical challenges have neurologic difficulties and this -- this event was only one of the parts of that whole process.

The biggest thing that I saw when I started taking care of her was the impact that this had on her leg because of the interosseous site and the -- if you will, the changes that that had on her leg and the difficulty it made

in her walking and in her rehabilitation.

Q. And I appreciate that. That's what I'm trying to find out.

From your viewpoint, there's been some changes that lasted beyond December 4th with regard to her leg?

A. That would be correct.

Q. Okay.

A. That's -- That's the easiest thing to be clear about.

Q. Okay. Tell me about those. How long did it last? What were the problems with her leg?

A. I think even -- even to this day, she has scarring in that area and I think has some degree of weakness in that area from the changes that happened in her leg as a result of her interosseous line. But it took -- it took months for that to heal. It wasn't a simple puncture.

Q. Did it heal after months?

A. I think that that's actually a question that's better asked of an orthopedic doctor, because it doesn't look fully healed to me, but I'm a cardiologist.

Q. Right.

Does she still have some weakness in

her leg, as far as you know?

A. I think that that's also a question that's better asked of a neurologist rather than my high-level assessment.

Q. On behalf of the defendant, I've retained a couple experts, and I just wanted to know if you've looked at their reports.

Dr. Thomas Kimball, do you know who he is, in Cincinnati?

A. Yes.

Q. He's prepared a report for me in this case.

Have you had a chance to look at that?

A. I was shown that report this morning by Attorney Meeker.

Q. Do you --

I know it's a long report. If you're not prepared to discuss it, that's fine. We can do it another time.

I guess my question: Did you have any disagreements with his findings? Do you have any concurrence with him? Do you have any observation about his report?

A. I only looked at it very briefly, but I looked at it primarily to see if he understood

the evaluation process that Dr. Jacobstein had put into Allison's care that morning.

It wasn't clear to me that he -- he was aware that Dr. Jacobstein had not been involved as deeply in this evaluation.

Q. Okay. So looking at Dr. Kimball's report, you're not sure if he was completely aware of what involvement or the lack of involvement Dr. Jacobstein --

A. That would be correct.

Q. Okay. You're aware that he concluded, at least based on his review of the records, Dr. Jacobstein didn't breach the standard of care?

A. I'm not -- I did not read the report to that level of detail to come to that conclusion.

Q. Okay. Doctor, have you had a chance to review Dr. Jacobstein's -- He wrote two letters to Dr. Susan Vargo, one on December 16th, '97, and one January 5th, '98.

I just wondered, in connection with this case if you've looked at either of those.

A. No, I've not seen those.

Q. I don't know if it will help you or not, but if you'd like to look at them -- I'd be happy

to have you look at them. It doesn't make any difference.

And for the record, one of them is marked January 5th, '97, but that's a typo because her age is two and a half.

(Discussion was held off of the record.)

- - -

Thereupon, documents were marked for purposes of identification as Defendants' Exhibits D and E.

- - -

BY MR. MAZANEC:

Q. Just for the record, Doctor, one of them is dated January 5, '97. I believe '97 is the wrong year because it says in the body of the letter that she was two and a half, and we know she was born in '95. I want you to be aware of that mistake in that letter.

(Discussion was held off of the record.)

Q. Have you had a chance to look at those, Doctor?

A. Yes.

Q. Do they assist you in any way in forming any opinions in this case as far as what Dr. Jacobstein did or didn't do?

A. I don't think so.
Q. Okay.
A. The letter dated December 16th was after she had been in and --.
Q. Correct.
In fact, there's a note on the second page of that letter, Dr. Vargo talking about the events of November 4th, handwritten note.
A. And it refers to the visit of -- the office visit of November 26th, '97.
Q. Right.
And then the letter in January talks about a visit December 23rd, '97.
A. Correct.
Q. Neither of those shed any light on the events of December 4th, then; isn't that correct?
A. I don't think they shed any further light, no.
Q. So I understand your testimony today, you believe Dr. Jacobstein should have performed his own exam? As a pediatric cardiologist, he had an obligation to examine Allison on December 4th?
A. Correct.
Q. And his failure to do so is a breach of

standard of care?
A. Correct.
Q. And assuming he would have done the examination, then he would have done his own battery of tests; not relying on what the doctors in the emergency room did or the medical people, he would done his own tests and the signs that you talked about earlier and made a comparison of those to prior visits?
A. Correct.
Q. That should have been done.
And if that would have been done, you believe that some of the events that -- later on, on the 4th, could have been avoided, and you were kind enough to tell me what they were.
It sounds like the main lingering one was the problem with her leg, the weakness. That's the one thing you know that still lingers on from December 4th, 1997?
A. And whatever neurologic struggle this added to her overall difficulties.
Q. You're right.
If there are any. But that's not in your field?
A. Correct

Q. That's not something you're going to offer opinions on? That's for someone else to talk about if they exist?

A. Correct.

Q. In your sphere, though, it looks like we're looking at the problem with the leg that remains, the weakness of the leg, because of those events of December 4th?

A. And whatever other impact the respiratory arrest had on her.

Q. Okay. So the respiratory arrest could have been avoided?

A. I would have thought the respiratory arrest could have been avoided.

Q. Okay. Once again so I understand, there was a respiratory arrest and a cardiac arrest, both, on the 4th?

A. I think you know that the records say that there was no cardiac arrest.

Q. Oh, I thought there was some mention of a cardiac arrest.

A. I think it actually -- The notes from the discharge summary that I saw this morning said that there was no cardiac arrest.

Q. So we're just talking about a respiratory

arrest, then?
A. Correct.
Q. So that could have been avoided, the respiratory arrest, and what flows from that obviously could also have been avoided, the other problems, some of them which are in your sphere and some of them which aren't, that flow from that?
A. Correct.
Q. Do you have any other opinions with regard to the care of Dr. Jacobstein on December 4th that I haven't asked you about? I may have missed something.
A. Not at this time; although, I would reserve the opportunity to comment on things that may come up.
Q. Sure. And if something comes up, then you'll be kind enough to let Mr. Meeker know so we'll have another deposition or report or whatever?
MR. MEEKER: Sure.
MR. MAZANEC: Thank you.
That's all I have.
I appreciate it, Doctor.
MR. MEEKER: As usual, Doctor, you have

the opportunity to read, if you care to, or you can waive that. Your preference; you just need to state on the record.

THE WITNESS: I would prefer to read it.

(Signature not waived.)

- - -

Thereupon, the deposition was concluded at approximately 12:00 p.m.

- - -

C E R T I F I C A T E

- - -

THE STATE OF OHIO:
SS:
COUNTY OF FRANKLIN:

I, Irma A. Fares, a Notary Public within and for the State of Ohio, duly commissioned and qualified, do hereby certify that the within-named, KENNETH G. ZAHKA, M.D., was by me first duly sworn to testify to the truth, the whole truth, and nothing but the truth in the cause aforesaid; that the testimony then given by the above-referenced witness was by me reduced to stenotype 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, this 10th day of June A.D., 2003.

Irma A. Fares

Irma A. Fares, Notary Public
Within and for the State of Ohio.
My Commission Expires 4/26/04

EXHIBITS A,B,C,D,E FOR ZAHKA DEPO

UNIVERSITY OF MICHIGAN HOSPITALS

ANN ARBOR, MICHIGAN

Ref: Chlebek, Allison M.
Reg No: 2 552 592 9

ADMISSION DATE: 12/05/97

DISCHARGE DATE: 12/21/97

DIAGNOSES:

1. Hypoplastic left heart syndrome, status post Fontan procedure, status post fenestration closure.
2. Respiratory arrest of unknown etiology.
3. DIC.
4. GI hemorrhage.
5. Severe tricuspid regurgitation, status post catheterization.

PROCEDURES / OPERATIONS:

1. Ventilation.
2. Drainage of right pleural effusion.
3. Placement of right-sided chest tube.
4. Upper GI endoscopy.
5. Cardiac catheterization.

DISCHARGE MEDICATIONS: Lasix 15 mg (10 mg/cc) p.o. b.i.d., Aldactone 5 mg (5 mg/cc) p.o. b.i.d., omeprazole 10 mg (10 mg/tablet) p.o. q.d., ciprofate 100 mg (100 mg/cc) q. 6 hours, captopril 0.5 tablet (12.5 mg per tablet) p.o. q. 8 hours, nystatin apply to diaper area t.i.d. and Silvadene apply to right leg with dressing b.i.d.

ALLERGIES / SENSITIVITIES: There are no known drug allergies.

CONDITION OF PATIENT AT DISCHARGE: Stable, chronic condition.

REASON FOR ADMISSION: Respiratory arrest.

BRIEF SUMMARY OF HISTORY AND PHYSICAL: Allison is a 30-month-old girl with hypoplastic left heart syndrome, status post Fontan on March 18, 1997, status post fenestration closure on April 16, 1997 secondary to hypoxia with known distal LPA stenosis and severe tricuspid regurgitation despite two previous valvuloplasties at the time of Hemi-Fontan and Fontan procedures. She was well until December 3, 1997, when she developed cough and congestion with emesis on one occasion. She was afebrile at that time. She was evaluated in her local Emergency Department, and her chest x-ray at that time appeared unchanged. She had a normal saturation and a negative RSV screen. She was discharged home. On December 4, 1997, Allison's parents found her cyanotic with shallow respirations, and she was taken to the Emergency Department at Akron Children's Hospital where her initial systolic blood pressure was approximately 40, and her initial glucose 9. It was felt that she had had a primary respiratory arrest event with no cardiac arrest. She was intubated and an IO line placed in the Akron Emergency Department. She was given D25 and IV fluid bolus. She was admitted to the Pediatric Intensive Care Unit at Akron Children's, and a left subclavian CVP and left femoral arterial line replaced. Her blood pressures were noted to be labile, and she was started on dobutamine, dopamine and Nipride drips there. She was also noted to be in DIC and was given FFP, cryoprecipitate and vitamin K. In the Pediatric Intensive Care Unit, she had a temperature spike for the first time to 39.2 degrees Celsius, and cultures were drawn, and ceftriaxone begun.

DEFENDANT'S EXHIBIT A
ALL-STATE LEGAL SUPPLY CO.

Immunizations: Up-to-date.

Medications on Admission: Medications taken at home prior to admission included captopril 6.25 mg p.o. t.i.d., baby aspirin 0.5 tablet p.o. q.d., Lasix 1.7 cc p.o. b.i.d. and Aldactone 2 cc p.o. b.i.d.

Social History: Significant for an intact family with Allison's father present throughout her admission. She has a 10-year-old sibling with coarctation and severe developmental delay. Her mother was five months pregnant at the time of admission. Allison apparently also has some degree of developmental delay and does attend preschool.

Physical Examination: On initial physical examination per Dr. Mooradian, temperature was 40 degrees Celsius, heart rate was 188, respiratory rate was 30, and blood pressure was 101/44. Sat was 97%, and weight was 9.2 kg. She was intubated and sedated and in no apparent distress. The ET tube and NG tube were in place. On HEENT examination, the head was normocephalic and atraumatic. She had puffy eyelids, and the pupils were small but reactive. Lung fields were coarse bilaterally with decreased aeration at both bases on the right worse than the left. Heart examination was remarkable for an increased right ventricular impulse, normal S_1, single S_2 with a II/VII regurgitant murmur at the left sternal border and no diastolic murmur or gallop appreciated. On abdominal examination, the belly was distended with the liver palpable 6-7 cm below the right costal margin with a firm edge. The extremities were cool with 1+ pulses. Capillary refill was approximately 5 seconds with mild pretibial edema. Genitourinary examination was significant for a severe diaper rash.

Allison was transferred to the University of Michigan for further care from Akron's Children Hospital.

HOSPITAL COURSE (By Systems):

1. Respiratory System: Allison remained intubated secondary to fluid overload and pulmonary toilet requirements for copious secretions until December 9, 1997. She had some respiratory distress immediately following extubation and was given racemic epinephrine and then three doses of Decadron. She continued to have an oxygen requirement on transfer from the Pediatric Intensive Care Unit to the floor on December 12, 1997, but was quickly weaned to room air on the floor with an oxygen saturation stable in the mid 90s. A right pleural effusion was noted on December 8, 1998, on chest x-ray and was drained for 65 cc of clear fluid. The following day, December 9, 1997, a large pneumothorax was noted on the right side on chest x-ray although Allison was asymptomatic. A right-sided chest tube was placed on that date and drained over 200 cc of fluid. A sizable left pleural effusion was noted on echo December 10, 1998, but this was not visible on x-ray. Allison was transferred to the floor with the right-sided chest tube still in place. This was removed after placement to water seal on December 16, 1998, without any reaccumulation of the pneumothorax.

2. Cardiovascular System: Allison's Nipride drip was discontinued on her arrival at the University of Michigan. The dopamine and dobutamine were weaned off by December 7, 1998, with no further episodes of hypotension. Allison developed marked fluid overload in the Cardiothoracic ICU with her

weight reaching a maximal level of 11.4 kg on December 7, with her estimated dry weight of 9.4 kg. She responded to aggressive diuresis initially and was weaned back close to her home dose orally by the time of discharge. She was restarted on captopril and her baby aspirin per her home regimen on December 10, 1998. Her aspirin was later discontinued secondary to gastrointestinal bleeding. Following transfer to the floor, Allison was restarted on her Aldactone per her home regimen. An echocardiogram performed December 10, 1998, showed 4+ tricuspid regurgitation with good ventricular function. She underwent cardiac catheterization on December 19, 1998, which showed no gradient from the Fontan through to the distal pulmonary arteries. She did, however, have tricuspid regurgitation with a dilated LA. A preoperative evaluation was undertaken prior to discharge for tricuspid valve repair or replacement on December 29, 1998.

3. Fluid, Electrolytes and Nutrition System: After stabilization, Allison was placed on total parenteral nutrition and intralipids for nutrition. She initially had difficulty with hypokalemia which resolved with decreasing need for diuresis. She also had a chronic mild hypochloremic metabolic alkalosis secondary to diuresis. Her oral diet was advanced following extubation in the Cardiothoracic ICU and continued to be advanced after transfer to the floor on December 12. However secondary to the development of gastrointestinal hemorrhage, she was placed on gut rest with nothing by mouth on December 15, 1997. She was started again on a clear liquid diet on December 18, 1998, and her diet advanced very slowly thereafter. She was weaned off of total parenteral nutrition and IV fluids by the time of discharge and was drinking well although her p.o. solid intake was still not back to baseline.

4. Gastrointestinal System: Allison had markedly elevated liver function tests following transfer from Akron Children's consistent with her known hypoxic episode. These very slowly improved toward normal by the time of discharge. Allison had bloody drainage from her NG tube at the time of admission which cleared in the Cardiothoracic ICU. She received Zantac and her total parenteral nutrition at all times. After transfer to the floor, Allison developed diarrhea December 14, and then black tarry stools on December 15, with a significant drop in her hemoglobin. She was placed on gut rest at that time, and her gastrointestinal hemorrhage treated with omeprazole and Carafate. An NG tube was placed to monitor gastric bleeding. The Gastroenterology Service was consulted, and endoscopy performed on December 17, which showed no evidence of active bleeding with findings consistent with a resolving gastritis and no varices visualized. The biopsy samples of the stomach and duodenum were normal. The gastrointestinal hemorrhage was felt to be secondary to her ischemic episode and aspirin use. Her aspirin was discontinued at the onset of the tarry-appearing stool. Allison was discharged on the omeprazole and Carafate with the proviso that Carafate does contain aluminum and should not be continued longer than six weeks. The Pediatric GI Service will be reconsulted during Allison's next admission for her tricuspid valve surgery.

5. Hematologic System: At the time of transfer from Akron Children's Hospital, Allison continued to have lab findings consistent with DIC and received doses of FFP with stabilization of her coagulation time and fibrinogen. She required multiple transfusions in the Cardiothoracic ICU

and again on the floor following her gastrointestinal hemorrhage. Her goal hematocrit was to be maintained above 35.

6. Renal System: Allison's renal function at the time of transfer was moderately abnormal but had returned to normal by the time of transfer to the floor.

7. Infectious Disease System: Allison's blood and urine cultures and viral respiratory screens from Akron Children's Hospital remained negative. She was continued on vancomycin and cefotaxime on arrival and subsequently was changed to cefuroxime on December 9, 1997. She completed a 13 day course of cefuroxime as empiric therapy secondary to intermittent fevers and elevated white blood cell count with a presumed pulmonary pathogen as the nature of her respiratory secretions. Endotracheal aspirate culture performed on December 7, 1997, showed only oral flora. Pleural fluid culture performed on December 8, 1997, remained negative. Blood and urine cultures sent on December 9, secondary to fever, were no growth to date. Blood fungal cultures sent December 6 were negative, but the urine culture was positive for yeast. Allison did have a candidal diaper rash when the Foley was placed. The Foley was replaced on December 9, and the culture repeated again showing bloody yeast and pseudo hyphae. Allison was started on ampho-B bladder washes December 10, 1997, which were continued following transfer to the floor secondary to persistent fungaria. The renal ultrasound performed December 17, showed no evidence of renal fungal bolus. The Foley was discontinued following that study, and ampho-B bladder washes continued q. daily with Foley placement at the time of bladder wash only. A repeat culture on this regimen was negative for yeast and the bladder washes were discontinued on December 19, 1997. Allison was treated with nystatin locally for her candidal diaper rash.

8. Musculoskeletal System: Multiple attempts were made at Akron Children's Hospital for interosseous line placement, and Allison did develop a large necrotic blister at the IO site on her right lower extremity. She was evaluated by the Plastic Surgery, Orthopedic Surgery and General Surgery services. With their recommendations, Allison's leg was kept elevated while lying down and Silvadene was applied to the blister once it broke. Physiotherapy was consulted after transfer to the floor for range of motion exercises of the right lower extremity. Allison also developed a small pressure sore on the back of her head during her cardiothoracic ICU stay which was treated with a doughnut to relieve pressure. Plastic Surgery did recommend reconsultation on readmission December 29, following Allison's tricuspid valve repair for further recommendations.

DISPOSITION: Allison was discharged from the University of Michigan on December 21, 1997, on Lasix, Aldactone and captopril for her chronic congestive heart failure which was well controlled on that regimen. Her aspirin was held secondary to her history of upper GI bleed and was not to be restarted prior to surgery for her tricuspid valve. We did discuss the importance of hydration with Allison's father while she was off aspirin. Allison's saturations were stable on room air. A repeat chest x-ray was unremarkable at the time of discharge.

DISCHARGE INSTRUCTIONS: Allison was to continue with a regular diet at home and to have her electrolytes rechecked in the next one to two days by her primary care physician or home cardiologist in Akron. From a gastrointestinal standpoint, Allison was discharged on omeprazole and Carafate with the GI Service

to be reconsulted on her next admission. Allison's discharge hematocrit was 40.5 after her cardiac catheterization. Allison was continuing to use the nystatin cream to her diaper area for the candidal infection and to apply silver sulfadiazine to her right lower extremity ulceration. Plastics was to be reconsulted at the time of admission for her heart surgery. Allison's father was asked to call should she develop a temperature over 102 degrees Fahrenheit, have difficulty vomiting, be unable to urinate or develop any bleeding complications. She was also asked to call should there be any difficulty breathing or any color changes suggestive of cyanosis. It was also recommended that he call with any change in her leg wound. She was provided with the phone number for the Pediatric Cardiology fellow on service.

RECOMMENDATIONS FOR FOLLOW-UP: Allison will return to the University of Michigan on December 28, for a preoperative evaluation and will have her tricuspid valve repair on December 29, 1997.

DEPARTMENT OF PEDIATRICS AND COMMUNICABLE DISEASES
Section of Pediatric Cardiology

Amnon Rosenthal, M.D.
Attending Physician

Angela Punnett, M.D.
Resident Physician

M-LINE: * 1-800-962-3555 * PHYSICIAN CONSULTATION AND REFERRAL

cc: Mark Jacobstein, M.D.
One Perkins
Akron, OH 44308

Susan Vargo, M.D.
185 W. Cedar St.
Akron, OH 44307

052298/bagazk/052798

002528058WPC
05/27/98 9:42am

ARDIAC CATHETERIZATION REPORT Cath. #

LOCATION	DATE	SERVICE

Reg. No. Class

Cath Date: 12/21/97
Re: Gmerek, Allison M. Name
Reg: 2552-592-9
DOB: 05/20/95 Address

REFERRING PHYSICIAN: Mark Jacobstein, M.D.
281 Locust St.
Akron, OH 44308

INTRODUCTION: Allison M. Gmerek is a 2-1/2 year-old girl born with hypoplastic left heart syndrome associated with a myxomatous tricuspid valve, who has gone through the Fontan sequence of repairs, including two tricuspid valve valvuloplasties and fenestration closure. In addition, in April of this year, she underwent left pulmonary artery balloon angioplasty. On December 4, 1997, she suffered a respiratory arrest and came to Mott Hospital. Her most recent catheterization and echocardiogram demonstrates 4+ tricuspid regurgitation. She was taken to the Catheterization Suite in order to reevaluate the presence of left pulmonary stenosis and possible placement of a stent.

PROCEDURE: Informed consent was gained. The patient was brought to the Catheterization Suite and sedated with 1 mg of morphine and 1 mg of Versed given IV. The right groin was infiltrated with a total of 5 cc of buffered lidocaine. A 4 French sheath was placed in to the right femoral artery using the modified Seldinger technique. A small venous structure was entered in the right groin; however, injection of 3 cc of Omnipaque demonstrated right femoral vein occlusion. Therefore, a 5 French sheath was placed into the left femoral vein utilizing the modified Seldinger technique. A 5 French balloon wedge catheter was advanced through the venous sheath and a 4 French pigtail through the arterial sheath. Heparin 900 units was administered. The left pulmonary artery was entered utilizing the balloon wedge catheter on numerous occasions, and numerous pull back pressure determinations were performed. The balloon wedge catheter was removed and exchanged for a 5 French pigtail catheter which was advanced to the level of the take offs of the right and left pulmonary arteries. A power injection utilizing 18 cc of Omnipaque contrast agent was performed in the LAO and caudal lateral views. The pigtail was removed and replaced by the 5 French balloon catheter which was maneuvered into the proximal left pulmonary artery, where an angiogram was performed utilizing 5 cc of Omnipaque agent by hand injection. After some degree of difficulty, the balloon catheter was positioned into the right pulmonary artery where a final injection was performed utilizing 5 cc of contrast in the RAO and lateral views. The catheters were removed, the sheaths were aspirated and removed, and hemostasis was obtained. The patient tolerated the procedure well without complication.

Radiation Time:

AP	18.1 minutes.
Lateral	1.4 minutes.
Estimated Blood Loss:	5 cc.
Contrast:	31 ml of Omnipaque.
Transfusions:	None.
Complications:	None.

Procedures:

1. Right and left heart catheterization.
2. Angiography; pulmonary artery confluence, left pulmonary artery, right pulmonary artery.

ARDIAC CATHETERIZATION REPORT Cath. #

LOCATION	DATE	SERVICE
Reg. No.		Class
Cath Date: 12/21/97 Re: Gmerek, Allison M. Reg: 2552-592-9 DOB: 05/20/95		Name Address

OXIMETRY AND HEMODYNAMICS: Please see the accompanying table. In summary, Allison was partially desaturated with a descending aortic value of 94% on room air. The mixed venous saturation was 54%. With one exception, there was no gradient from the distal left pulmonary artery to the proximal pulmonary artery to the Fontan confluence as demonstrated by numerous pull backs. The one exception may have represented a stenosis into a small branch of the left pulmonary artery or a partially wedged catheter. No gradient was demonstrated from the right ventricle into the descending aorta. Calculations based on these values, an estimated VO2 of 170 ml/minute/m2 and a hemoglobin of 14.2, predicted a Qp of 1.9 l/minute/m2, Qs of 2.2 l/minute/m2, and Qp:Qs ratio of 0.86.

CINEANGIOGRAMS:

1. Right femoral venogram (AP); this injection demonstrates occlusion of the right femoral venous system and collateral flow into a normal-sized left femoral vein.
2. Central Fontan angiogram (LAO, caudal lateral); the pigtail catheter is seen coursing up the right-sided inferior vena cava into the central thorax. The cardiac silhouette is enlarged. Injection demonstrates reflux of contrast agent into the superior vena cava, as well as the inferior vena cava, without evidence of focal stenosis. The confluence of the right and left pulmonary arteries is bulbous in nature. The right and left pulmonary arteries will be discussed separately below. Levophase demonstrates normal, although perhaps somewhat enlarged, pulmonary veins and dilated atrial structures. There is notable delayed clearance of contrast agent from the atrial structures. The right ventricle is enlarged (RVEDP equals 100 ml/m2) but maintains adequate contractility (RVEF equals 66%). There is no coarctation of the aorta.
3. Left pulmonary arteriogram (RAO, caudal LAO); the balloon wedge catheter is positioned into the left pulmonary artery and the balloon is inflated. Following injection of dye, the balloon is released further delineating the proximal left pulmonary artery structures. There is no proximal stenosis. The proximal left pulmonary artery prior to its first branch measures 7.2 mm. There is poor flow of contrast agent into the left upper lobe and a hint of stenosis at the branches to the left upper lobe.
4. Right pulmonary arteriogram (RAO, lateral); This injection was performed in the same manner as that described for the left pulmonary arteriogram. The proximal right pulmonary artery also measures 7.2 mm in diameter proximal to its first branch. There is good flow of contrast agent into all lobes of the right lung. There are no focal areas of stenosis.

DIAGNOSES:

1. Hypoplastic left heart syndrome (aortic atresia, mitral atresia, myxomatous tricuspid valve).
2. Status post Norwood procedure (May 25, 1995), status post hemi-Fontan procedure with tricuspid valvuloplasty (September 6, 1995), status post fenestrated Fontan with tricuspid valvuloplasty (March 18, 1997), status post fenestration closure and left pulmonary artery balloon angioplasty (April 16, 1997).
3. Status post respiratory arrest on December 4, 1997.
4. Pulmonary arteries generally non-distorted without focal areas of stenosis except for the small left upper lobe branches. Right pulmonary artery and left pulmonary artery diameters are 7.2 mm. McGoon = 1.4, Nakata = 180. Adequate pressures in the Fontan circuit (14 mmHg).
5. Severe tricuspid regurgitation as evidenced by very dilated atrium with delayed dye clearance.
6. Moderately dilated right ventricle with good systolic function (ejection fraction equals 66%).
7. Moderate decreased cardiac index (equals 2.2 l/minute/m2).
8. Small baffle leak.
9. Right femoral vein occlusion.
10. Aortic arch, neoaortic valve, atrial septum, and collaterals not assessed.

RDIAC CATHETERIZATION REPORT Cath. #

LOCATION	DATE	SERVICE
Reg. No.		Class
Cath Date: 12/21/97 Re: Gmerek, Allison M. Reg: 2552-592-9 DOB: 05/20/95		Name Address

SUMMARY: Allison M. Gmerek is a 2-1/2 year-old girl with hypoplastic left heart syndrome associated with a myxomatous tricuspid valve who has undergone her full Fontan series of operations including fenestration closure. Catheterization demonstrates no areas of pulmonary artery stenosis amenable to stent placement. Her proximal pulmonary artery sizes and central Fontan pressures are acceptable. Her poor cardiac output is related to her severe tricuspid regurgitation. She has been scheduled for tricuspid valve replacement in 1-1/2 weeks' time.

John Charpie, M.D.
Attending Physician

Michael Liske, M.D.
Fellow in Cardiology

AEL
002292722WP

ARDIAC CATHETERIZATION REPORT Cath. #

LOCATION	DATE	SERVICE
Reg. No.		Class

Cath Date: 12/21/97
Re: Gmerek, Allison M.
Reg: 2552-592-9
DOB: 05/20/95

Name

Address

HEMODYNAMIC DATA

SITE	OXYGEN SATURATION	PRESSURE (mmHg)	pH	pO_2	pCO_2
SVC		14			
distal LPA		14			
prox LPA	54	14			
central fontan		14			
RV		96/11			
nAA_o		96/50, 65			
DA_o	94	96/50, 65	7.49	62	37

Note: On one occasion, a distal small branch of the LPA was calculated and found to have a mean pressure of 12mmHg.

BSA: 0.46 M^2 Hb: 14.2
VO_2: 170 cc/min/M^2 __X__ assumed
O_2 Capacity: 193

	FICK		THERMODILUTION	
	L/min	L/min/M^2	L/min	L/min/M^2
HR: 128				
Qp		1.9		
Qs		2.2		
QpQs		0.86		
Qp Eff		1.9		
L->R Shunt		0		
R->L Shunt		0.3		
Rp				
Rs		24		
RpRs				

RV Ejection Fraction: 66 % (RV EDV = 100 cc/M^2, RV ESV = 33 cc/M^2)
RPA = LPA = 7.2mm McGoon = 1.4 Nakata = 180

EMERGENCY RECORD

CHART COPY

Children's Hospital Medical Center of Akron

DATE 12/04/97 TIME 0211 ROOM NO. 2 TRIAGE CODE V EMPLOYEE NO. 4223 UNIT NO. 537-529

NAME OMEREK, ALLISON MARIE AGE 3OM BIRTH DATE 05/20/95 SEX F PHONE 273-252 RACE W

ADDRESS 1302 BURKHARDT AVE AKRON OH 44301 ARRIVED VIA FATHER/CAR

FATHER OMEREK, STEVEN C MOTHER OMEREK, LYNN M THS 911412

NAME

ADDRESS

PRC:

PRIMARY CARE PHYSICIAN: VARGO, SUSAN M. | SPECIALTY CARE PHYSICIAN | REFERRED TO: | TIME | PER: ☐ FAMILY ☐ SERVICE ☐ P.C.P. ☐ DOC. REF.

NURSING TRIAGE HISTORY

WHERE ACCIDENT OCCURRED: DATE: TIME:

CHIEF COMPLAINT: Onset of cough since last PM
Vg + cough no ↑T @ home

CHRONIC ILLNESS: Hypospadias @ urethra

HOME MEDICATIONS: (1) Tessa ?? L.D. (2) L.D.
(3) Cephacil ?? L.D. (4) L.D.

SEEN IN E.R./CLINIC IN LAST 2 WEEKS ☐ YES ☒ NO DATE:

DATE LAST TETANUS DOSE

IMMUNIZATIONS CURRENT: ☐ YES ☐ NO ☐ UNSURE

ALLERGIES (MEDICATIONS, FOODS, INHALANTS)

PHYSICAL APPEARANCE: Alert 2yo ♀ - color pl.
dusky nasoshine pale @ times
+ globally resp congested cough.

VITAL SIGNS

TIME / INITIALS	0130 VE.
TEMP.	37.1
WEIGHT	9.9kg.
BLOOD PRESSURE	62 palp
PULSE	120
RESP. RATE	~~30~~ 80
PUPILS	
HEIGHT	
V.A. O.D.	O.S. O.U.

☐ PT. WEARS GLASSES/CONTACTS

TECHNICIAN:

TRIAGE NURSE: Diane W

PHYSICIAN'S ORDERS (CHECK APPROPRIATE BOXES)

	TIME CALLED		TIME CALLED		TIME CALLED
☐ CHECK AND CALL PCP		☐ BLOOD GASES, ARTERIAL		CULTURES:	
☐ CBC		☐ VENOUS		☐ RAPID STREP	
☐ NA, K, Cl, BUN, GLU, CO2 (CREATININE OPTIONAL)		☐ CAPILLARY		☐ THROAT, STREP	
☐ DIP URINALYSIS		☐ TRAUMA PANEL		☐ BLOOD	
☐ URINALYSIS				☐ URINE ☐ CSF	

☐ CERVICAL SPINE ☐ ABDOMEN ☑ CHEST
☐ CT ☐ WRIST ☐ ANKLE ☐ ULTRASOUND
☐ HAND ☐ FOOT
OTHER X-RAY EXAM DESIRED: X-RAY DONE
☐ LEFT ☐ RIGHT

TIME	PHYSICIAN ORDERS / TREATMENT ORDERS	PHYSICIAN SIGNATURE	TIME	NURSE SIGNATURE
10 AM	Decadron for RSV -	R-Jon MD		
10:30	D/C Home after Decadron Tx + Tylenol PRN pain/fever	R JON		
0112	Pt. resting in RM c SPO2 92% on RA RR 28 HR 128 BP 78/48 No distress			Stillwell RN

NURSING NOTES / ADMISSION REPORT / DISCHARGE NOTE

TIME	
0430	SPO2 - 92% on Room air
1012	RSV specimen obtained and sent. #8 French. Pt. tolerated well. Father at bedside.
1045	HR 114 RR 32 Resting quietly on bed. Skin pink and warm to touch.
1130	Discharge instructions given. Dad verbalized to go to Cardiology Clinic. Pt. discharged home with dad.

PATIENT PLACEMENT INFORMATION:

DIAGNOSIS:

ATTENDING M.D./D.O.:

TYPE OF STAY: ☐ ADMIT ☐ 23 HR. OBS

TRANSMITTING TIME: ROOM #:

REPORT GIVEN BY:

TO:

LEAVING LIFE

TIME OF DEPARTURE

EXHIBIT Deft's B

130 (2/97)

EMERGENCY RECORD

Children's Hospital Medical Center of Akron

CHART COPY

DATE 12/04/02 TIME 09:34 ROOM NO. TRIAGE CODE EMPLOYER NO. 4227 UNIT NO.

NAME [redacted] AGE 2MO BIRTH DATE 04/30/02 SEX F PHONE [redacted] RACE W

TIME SEEN: 10:30

SUBJECTIVE

30 wks old Q ? CCHD (Hypoplastic Left Heart) S/P cardiac surgery x3. Parents c 1 day of cough & congestion, fussiness, fever 99 started today & decr PO intake. ? ↑ respirations & pale. TETANUS STATUS

Last cardiac surgery on May, 2002 (Norwood procedure)

Usual Sat 92 on RA, no ↑ in cyanosis today.

Meds - (Lasix, Aldactone, Captopril, ? Digoxin)

Recently found a corner of Digoxin for Coffee

OBJECTIVE

O/E — 30 wks Q, tired & sleepy on father's arm, irritable on exam.

Temp [redacted]; R - 60/mn for 91 y. RA.

Flushed cheeks, mottled peripherals, central & peripheral cyanosis

Mild perioral around eyes.

HEENT - Red nares ext. Canal wt. W. dull TMs.

No audible wheeze, dry cough.

Chest - Scars of sternotomy, tracheotomy, B/L CTA. air entry B=L

CVS - cyanosed, CR 2 sec, hyperdynamic precordium,

S1, S2 - II/VI continuous murmur

Abd - soft, liver not felt well. [redacted] ? 2cm BI

Skin & ser. perineal dryness, desquamation & redness.

REPEAT EXAM (NOTE TIME)

Irritable on exam.

ADDITIONAL EXAM/NOTES

Dr. Jacobstein + Resident - CXR & compare to old films. Dr. Radiologist.

Dr. Jacobstein will evaluate.

LAB/X-RAY RESULTS

CXR - (Dr. reads) - No change on heart size

(Rt) effusion smaller, hyperinflated lungs.

ASSESSMENT

1. CCHD (Hypo Left Heart) CHF
2. ? VIRAL illness
3. Diaper rash

CONDITION ON DISPOSITION

- [x] SATISFACTORY
- [ ] FAIR
- [ ] SERIOUS

FINAL DISPOSITION

- [x] TREATMENT AND RELEASED
- [ ] 24 - HOUR OBS
- [ ] ADMIT
- [ ] TRANSFER
  - [ ] TRANSFER SHEET COMPLETE
- [ ] AMA

ANY FACTORS WHICH MAY AFFECT LEARNING/CARE DELIVERY:

- [x] NONE
- [ ] PHYSICAL
- [ ] CULTURAL
- [ ] COGNITIVE
- [ ] COMMENTS:
- [ ] RELIGIOUS
- [ ] LANGUAGE
- [ ] EMOTIONAL
- [ ] FINANCIAL

PMD NOTIFIED

- [ ] YES
- [ ] NO

COMMENTS

RESIDENT L - JMN

ATTENDING

VALUABLES: [ ] TO SAFE [ ] TO PARENTS [ ] NONE [ ] OTHER:

PHYSICIAN NAME

TIME [ ] CALLED TIME [ ] REACHED TIME

PHYSICIAN NAME

TIME [ ] CALLED TIME [ ] REACHED TIME

[ ] POLICE [ ] CARE CENTER [ ] PARENT FAMILY [ ] SOCIAL SERVICE [ ] CORONER [ ] OTHER

[ ] ON THE WAY [ ] NOT REACHED

STAFF INITIALS TIME

TIME OF DEPARTURE

EXHIBIT
Depo C
Dr. ZAHKA

Children's Hospital Medical Center of Akron

NAME: GMEREK, ALLISON M.
UNIT#: 537-579
ADMITTED: 12/04/1997
DISCHARGED: 12/05/1997
PHYSICIAN: Dr. Laura Ibsen

DISCHARGE SUMMARY

PRINCIPAL DIAGNOSIS:

1. Cardiac failure.
2. Hypoplastic left heart syndrome.
3. Respiratory tract infection.

HISTORY OF PRESENT ILLNESS: The patient is a 30-month-old white female with a past medical history significant for hypoplastic left heart syndrome, status post Fontan's, status post Norwood's procedure who was in her usual state of health until the day prior to admission when she developed upper respiratory infection. ~~She had been brought to the emergency room on the morning of admission with that.~~ She was seen in the emergency room for increased respiratory rate, rule out RSV. A chest x-ray was performed which was within normal limits. Pulse oximetry was 90%. The patient later was returned to the emergency room, in the afternoon, when the parents found the patient cyanotic with shallow respirations. The patient was brought to Children's Hospital by rescue squad and was bagged until arrival in the emergency room where the patient was intubated. The patient was never in cardiac arrest.

HOSPITAL COURSE: In the emergency room, due to difficulty, a venous access interosseous line was placed before an intravenous line could be started. The patient was intubated with a 4.5 endotracheal tube by the respiratory technician. Due to high positioning this was repositioned following chest films. The patient was given a 20 cc/kg bolus due to a systolic blood pressure of 40. A Dopamine drip was started at 10 mcg/kg/min which was advanced to 20 mcg/kg/min and systolic blood pressure subsequently elevated to 70. Initial blood sugar was 9 and the patient was given 40 cc of D25 which elevated it to 43. After a second bolus of 40 cc D25 it was elevated to 416. The patient was given 1 gram of ceftriaxone. The patient's coloration improved after intubation. She had bilaterally breath sounds and saturation was at 90%. The patient was transferred to the intensive care unit. In the intensive care unit the patient was started on PRVC vent with a respiratory rate of 30, tidal volume inspiratory time of 0.8. She was given 100 cc of 5% albumin, 20 mg of calcium chloride and Dopamine drip was continued at 3 mcg/kg/min and a Nipride drip was started at 0.2 mcg/kg/min.

The patient's initial renal panel had a sodium of 120, potassium 6.3, chloride 86, bicarb 14, BUN 37, glucose 195, and creatinine 0.4. Her initial albumin was 3.3. Liver function tests were ordered in the intensive care unit and were slightly elevated. Total bilirubin was 3, conjugated bilirubin was 1.9, GGT 149, and ALT 73. Initial gas showed a pH of 7.38, pCO2 of 25, pO2 of 69, bicarb 14.4, and oxygen saturation 91.4. Initial CBC - white count 29,800, hemoglobin 13.9, hematocrit 40.8, platelets 297,000 with 15% bands, 51% segs, 15% lymphocytes, 12% monocytes, and 4 atypical lymphocytes. Initial coagulation studies - PT 29.2 and PTT 63.

The patient was closely monitored in the intensive care unit. Dr. Jacobstein saw the patient in the emergency room and felt that the patient could be having right heart failure with decreased cardiac output and elevated CVP but no pulmonary edema. Dr. Jacobstein felt that the patient's right ventricular difficulties were due to severe tricuspid regurgitation and increased right

Children's Hospital Medical Center of Akron

NAME: GMEREK, ALLISON M.
UNIT#: 537-579
ADMITTED: 12/04/1997
DISCHARGED: 12/05/1997
PHYSICIAN: Dr. Laura Ibsen

DISCHARGE SUMMARY

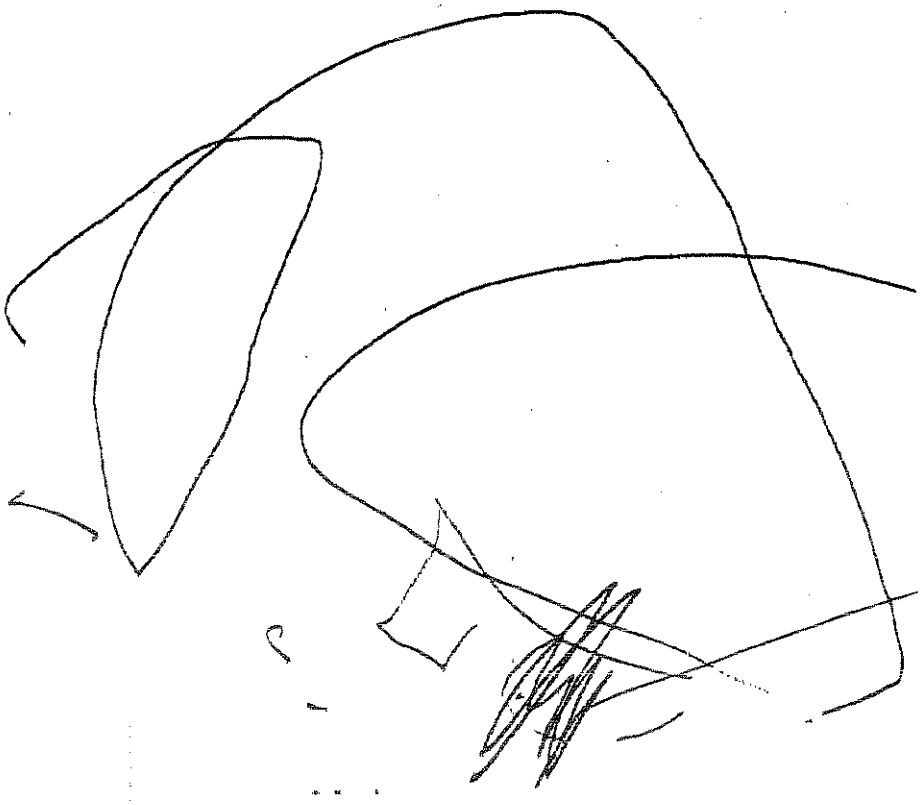
ventricular diastolic sickness. He recommended gradual diuresis. The patient, from a cardiac standpoint, was also started on Dobutamine at 15 mcg/kg/min. The patient did receive four doses of sodium bicarb and 700 mg of calcium chloride during the admission. The patient also received 2 units of cryoprecipitate due to the fibrin level of 93 the day following admission. She received vitamin K upon admission also and throughout her hospital stay. The patient's paralyzation was discontinued and she was maintained on Fentanyl at 5 mcg/kg/min. The Versed was decreased due to a drop in the blood pressure when it was given.

PLAN: Due to the difficulty maintaining the patient's cardiovascular status her doctors in Ann Arbor, Michigan were notified and they recommended transferring the patient to their care. The parents agreed to the transport for further evaluation by the physicians in Ann Arbor. The patient was transported later in the afternoon on the day following admission. Her discharge labs showed a sodium of 144, potassium 3.2, chloride 106, bicarb 20.3, BUN 44, creatinine 0.6, and glucose 119. Her most recent gas showed a pH of 7.496, pCO2 28.8, pO2 68, bicarb 22.1, and saturation of 93.9%. Discharge CBC showed a white count of 29,900, hemoglobin 13.7, hematocrit 40.5, and platelets 283,000 with 21% bands, 60% segs, 7% lymphs, and 6% monocytes. Discharge PT was 17.1 and PTT was 36.7. Blood cultures and urine cultures later grew out negative for growth.

Jennifer Grow, M.D.
INTERN/RESIDENT

Laura Ibsen, M.D.
ATTENDING PHYSICIAN

Dr. Jennifer Grow
DD: 01/11/1998
DT: 01/13/1998
MP46



2/3665

Children's
Hospital Medical Center of Akron

DEC 2 0 1997

EXHIBIT
Defts D

December 16, 1997

Susan Vargo, M.D.
185 W. Cedar Street
Akron, Ohio 44307

Dear Sue,

I saw Allison Gmerek, age 2 ½ years, in my office on November 26, 1997.

For the most part Allison has been well since I last saw her two months ago. She is taking feedings well and has been growing without any increasing shortness of breath. Allison continues on Lasix 17 mg. bid, Captopril 6.25 mg. tid and Spironalactone 10 mg. bid. She is also on 1 baby aspirin a day.

On examination, Allison is crying as is often the case but otherwise appears well. Her weight is 10 kg. which is below the 5th percentile. The heart rate is 120 and the respiratory rate 30. Allison's cardiac examination is still consistent with significant tricuspid insufficiency. There is a grade 3/6 holosystolic murmur at the lower left sternal border along with a grade 1-2/4 diastolic rumble. The second heart sound is single. The precordium is somewhat hyperdynamic and I believe today the liver is down 4 cm.

A 2-dimensional echocardiogram again demonstrates severe tricuspid insufficiency. The essentially common atrium is enlarged with adequate looking right ventricular function. The Fontan pathway is visualized and there are no residual leaks or shunts. There is still a right pleural effusion noted.

Allison has had a Norwood procedure and subsequent staged Fontan procedure for hypoplastic left heart syndrome. She also has a dysplastic tricuspid valve and despite two attempts at a valvuloplasty I believe Allison continues to have severe tricuspid insufficiency. Although Allison is doing reasonably well she does have pleural effusions and a big liver and I have significant concerns about her long-term ventricular function. In fact, I wonder if Allison would not be better off having the tricuspid valve replaced with a prosthetic valve. Obviously this a significant surgical undertaking and would be done only because we expect a better long-term outlook. I will be sending a copy of the echocardiogram to Dr. Bove so he can review the data with his group. If nothing is done then I would want to see Allison for another visit in January.

SV 12/22

As always, it was a pleasure to see Allison and her mother.

Sincerely,

Mark Jacobstein, M.D.
Director, Pediatric Cardiology

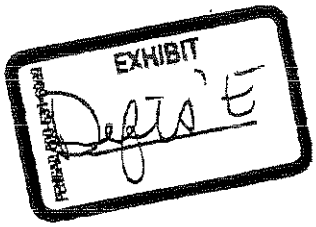
MJ/sw

cc: Edward Bove, M.D.
Amnon Rosenthal, M.D.

PS: AS YOU KNOW, ALLISON TOOK A SUDDEN TURN FOR THE WORSE IN EARLY DECEMBER, POSSIBLY SECONDARY TO A VIRAL INFECTION. SHE IS CURRENTLY IN AN ARBOR FOR POSSIBLE EMERGENT TRICUSPID VALVE REPLACEMENT.

413665

Children's
Hospital Medical Center of Akron



January 5, 1997

Susan Vargo, M.D.
185 W. Cedar Street
Akron, Ohio 44307

Dear Sue,

I saw Allison Gmerek, age 2 ½ years, in my office on December 23, 1997.

Allison came in looking great after her recent hospitalization here at Akron Children's Hospital and subsequently at the University of Michigan Medical Center. Allison got extremely sick fairly suddenly, probably due to an intercurrent viral infection. She ended up requiring intubation and treatment in the intensive care unit with inotropic agents. She developed a low grade DIC, renal failure and hepatic failure all of which subsequently resolved. Allison was then sent home from the University of Michigan Medical Center with plans to return for replacement of her tricuspid valve on December 29. Allison currently seems to be in about her usual condition similar to the way she was when I saw her back in November. She is taking oral feedings well. Allison has only minimal puffiness around the face. She continues on Lasix, Captopril and Aldactone. She has also been placed on an antacid and a gastric acid blocking agent because she had developed GI bleed during her hospitalization.

On examination, Allison is somewhat irritable as usual but appears well. Her weight is 10 kg. which is the same as it was back in November. The heart rate is 120 and the respiratory rate 30. There is only minimal cyanosis present though her pulse oximetry saturation is essentially normal at 95%. The liver is palpable 4 cm. below the right costal margin. The pulses are normal. The second heart sound is single and there is a grade 3/6 holosystolic murmur at the lower left sternal border and apex due to the tricuspid insufficiency.

A renal panel was obtained and the results are essentially normal. Her potassium was slightly low at 3.1 %.

Allison has had a staged Fontan procedure for hypoplastic left heart syndrome status post Norwood procedure. She also has a dysplastic tricuspid valve with severe tricuspid insufficiency. I believe the latter problem is the reason she has been having so much difficulty with poor cardiac output and systemic venous congestion. Hopefully Allison will do well with her surgery and her hemodynamics will improve with elimination of the tricuspid insufficiency.

SV 1/7

SV 13

Meanwhile I have not made any changes in her medications and I would plan on seeing Allison back sometime after the surgery.

As always, it was a pleasure to see Allison and her mother.

Sincerely,

Mark Jacobstein, M.D.
Pediatric Cardiology

MJ/sw

cc: Edward Bove, M.D.
Amnon Rosenthal, M.D.