DEPOSITION OF JOHN CONOMY, M.D.

Lashon Armstrong, etc. vs. Meridia Health System, etc.

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CONDENSED TRANSCRIPT AND CONCORDANCE
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THE STATE OF OHIO,)
) SS:
COUNTY OF CUYAHOGA.)

- - -

IN THE COURT OF COMMON PLEAS
LASHON ARMSTRONG, Admx.,)
etc., et al.,)
Plaintiffs,)
-vs-) Case No.
MERIDIA HEALTH SYSTEM,) 318416
etc., et al.,)
Defendants.)

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Deposition of JOHN CONOMY, M.D., a witness herein, being called by the Plaintiffs as if upon cross-examination under the statute, and taken before Angelika P. Shane, a Notary Public within and for the State of Ohio, pursuant to agreement of counsel, on Thursday, the 30th day of September, 1999, at 9:53 a.m., at the offices of Dr. Conomy, 2709 Franklin Blvd., City of Cleveland, County of Cuyahoga and State of Ohio.

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APPEARANCES:

On behalf of the Plaintiff:

Chattman, Gaines & Stern, by
Mr. Neal Shapero and
Ms. Leslie Moore Jenny
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Cleveland, Ohio 44115
(216) 781-1700

On behalf of the Defendants
Harold Mars, M.D. and Meridia Health System:

Reminger & Reminger, by
Mr. Marc W. Groedel and
Ms. Susan M. Seacrist
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P-R-O-C-E-E-D-I-N-G-S

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JOHN CONOMY, M.D., of lawful age, a witness herein, having been first duly sworn, as hereinafter certified, deposes and says as follows:

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CROSS-EXAMINATION OF JOHN CONOMY, M
BY MR. SHAPERO:

Q Could you please state your name for the court reporter?
A My name is John Conomy.
Q And your business address?
A My business address is 2709 Franklin Boulevard, Cleveland, 44113.
Q And your occupation?
A I'm a neurologist.
Q Dr. Conomy, we've been introduced. Once again, my name is Neal Shapero and sitting to my left is Leslie Jenny. We both represent the Armstrong estate pertaining to this action against Dr. Mars.

I'm here today to take your discovery deposition to basically ask you a series of questions to figure out what your opinions

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are, to also ask you some general questions about other aspects of this case.

If at any time I ask you any questions that are confusing or I'm not using correct terms or you're just not certain what I'm getting at, will you please ask me to rephrase the question?

A Yes.
Q The other thing is I don't -- I'm hoping that this deposition isn't going to last until noon, but if for some reason at some point you need to take a break or something like that, please let me know and that's not a problem, okay?
A I will.
Q And am I pronouncing your last name correctly, Conomy?
A You are.
Q Thank you. Doctor, I'm first going to hand you what we've marked as Plaintiffs Exhibit 1, which is a copy of your CV dated June, 1999 and I would just ask you, is that your most current version of your CV?
A Yes.
Q Doctor, I had an opportunity to review

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the CV that was sent to me by counsel, which I think is dated 1998. It might be about a year, might have been made approximately a year earlier than Exhibit 1, and I did have a chance to look at your articles and I'm just curious, are there any articles contained in your CV that you've either authored or a co-author that deal with the diagnosis, care and treatment of a stroke similar to the one Mr. Armstrong sustained in this case?

A There probably are. I would point you, Mr. Shapero, to those articles that have to do with stroke and cerebrovascular disease, while they don't point to each and every issue herein, they certainly touch upon it.

Articles that deal with the examination of a person in a coma and under aspects of brain herniation, decerebrate states and the like would also touch upon what is wrong with this fellow.

Q More specifically, and I may get the same answer, do any of your articles deal with the diagnosis, care, treatment as well as prognosis of somebody who has a stroke that then evolves into malignant cerebral

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edema?

A The articles that deal with the evaluation of people in a coma, again, include what it is you're talking about. There's no article, for instance, entitled Treatment of Malignant Cerebral Edema in Young Persons With Stroke, although case reports and discussions of that subject are in several of them.

There are other vascular lesions, subdural hemorrhage, there are several papers on that that deal with brain herniation and while the process is somewhat different, the effects are unfortunately are the same as what happened to Mr. Armstrong.

Q Again, you may have answered this question, but what I'm seeking to find out is are there any articles that you could point to today that deal specifically with this issue or this process called malignant cerebral edema?

A May I just take a look at some of these? I don't think there's an article with that in the title.

Q It doesn't have to be in the title, but

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an article that pertains or deals with that issue or that process.

A Let me point to one that does, okay, and it's on page 35 of the current CV, the 1999, it's an article with Linden, Chou, Furlan, and the title is Cerebral Arterial Dissection.

Now, while the cerebral edema does not appear in the title, it is what killed the young woman about whom this paper was written.

Q I'd like to find out a little bit about your practice.

Talking specifically or dealing specifically with 1999, can you tell me what percentage of your practice includes the actual care and treatment of patients with neurologic problems versus what percent of your practice deals with the -- deals with consultation for medical-legal issues whether it be malpractice cases or personal injury matters?

A Sure. I have patients that I see that are scheduled three days a week that are my patients for whom I am clinically

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responsible. Depending on the week and depending on the distribution of return patients and new patients, and so forth, that number is between 30 and 70 people.

Now, additionally I see patients in the hospital or emergency room, consultative basis or patients that are hospitalized on my own. Those are hospitalized primarily at University Hospitals. That effort encompasses about four days a week, sometimes more and sometimes less. The remainder of the time, my time extends through the evening and on the weekends, and so forth, so I'm not necessarily telling you about a 40 hour week.

It does involve the analysis of persons who have been injured in one way or another. They're seen for a variety of requestors, frequently people like you, Mr. Shapero, who represent a person, injury or some other aspect of health. That time also involves writing, preparation of lectures, a variety of other pursuits.

In the course of a week, about 80 percent of my time is taken up with the care

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of people and the other twenty percent for a variety of other things.
Q And if you looked at calendar year 1999, January 1 up until today, would those same percentages hold true, 80 percent of your time is the active practice of neurology and twenty percent is your medical-legal consultation?
A Well, I don't want to say it's all medical-legal consultation because that gets mixed in a variety of other things.
Today, for instance, I have to construct a series of slides for a lecture in Tucson, Arizona. So, it's simply not that, but I would confidently think that it does.
Some weeks are different than others, of course, but on the whole, that's what it is. Three plus, four plus days a week spent with patients.
Q Regarding your practice of neurology or your work with patients, can you tell me what your practice encompasses or includes?
A I've always and continue now to see a wide variety of persons in terms of both age

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and disease, manifestations. It's simply because I enjoy it. I don't tailor my practice to one or another sort of thing.
So, I tend to see those things that are common, more common than other things. Dernentias, stroke, epilepsy, Parkinson's disease, I see quite a bit of multiple sclerosis and have over the years. I see quite a bit of cerebrovascular disease.
Now, those things grow out of kind of an interest in those subjects, but about ten percent of the people I see are children between the ages of two and the end of adolescence. The remainder are adults. I would say that I see a wide and varied patient population.
Q Pertaining to your patient poputation, can you give me some estimate of what percent would deal with the actual diagnosis, care and/or treatment of patients with strokes?
A It's probably one in six.
Q Okay. And it's my understanding that you're associated or affiliated with Dr. Collis?
A Yeah. I'm a member of a group that

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deals with neurology and neurosurgery. It's called the Collis Group. It's had a variety of other names, but I'm one of several physicians and surgeons with that group.
Q What percentage of your patient population deals with the diagnosis, care and treatment of spine problems?
A Oh, certainly not as much as my colleagues because they focus and tailor their practice exclusively to spinal)problems.
The number of people I see with trouble with their neck or back is probably what a neurologist would see and it's probably as frequent as I see people with stroke or related problems.
Q I'm going to define a term and the reason I'm going to do that is because it might not be the same way that you define it, so I want to make certain that we're on the same page.
Medical-legal consultation, I'm going to use that to include your review of cases that deal with medical negligence or medical malpractice, and I'm also going to use

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medical-legal consultation to include independent medical exams and your work on negligence or personal injury cases.
A Certainly.
Q Of your medical-legal consultation, which I think you earlier told us is about approximately twenty percent of your overall work, can you take that twenty percent and tell me what percent of it is a review of medical negligence cases versus independent medical exams?
A Sure. First of all, I don't want you to think that twenty percent is devoted to medical-legal as you defined it because it includes a whole lot of other things.
So far since January of this year, I've seen approximately 50 persons, because of some personal injury not associated with malpractice, a whole variety of things.
I suppose vehicular accidents are the most common, but there's an extraordinary breadth of cause. Of persons who are seen or cases I'm asked to review for issues of medical malpractice, that's far less. That's probably five so far this year and I

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expect, you know, being three quarters of the way through or so, probably see a few more. It will be perhaps ten.

Now, some of those persons I will have examined and some of them I will not have examined. In terms of the distribution of those persons, injury or some allegation of medical malpractice, the personal injury, about 70 percent are seen for some aspect of defense, including assessment by risk management organizations, insurers, employers and the like.

Of those persons, I'm asked or whose records I'm asked to see, as in this case, about half are for the plaintiff and half for the defense. They're quite equally divided and whether they're one or the other is not a relevant issue to me, provided the medical issues is something I feel I can address and have merit to them.

Q Regarding your work on either malpractice cases or for the defense in negligence cases, do you advertise your services?

A No.

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Q Are you listed in any type of journal or publication where you in any manner or form are letting a certain community know that you do this type of work?

A Well, certainly not by me. I'm told, Mr. Shapero, by people in your profession that my name somehow finds its way to Internet sites or something. It's certainly not because I put them there. I have no advertising at all whatever,

Q Have you ever been employed or had a relationship with any type of service or agency that provides expert witnesses in cases?

A I'm called by them from time to time and I think I've seen cases for one or another outfit, but I have no, you know, employment relationship or contractual relationship with any of them.

Q For how many years have you been -- for how many years have you been consulting on medical malpractice cases?

A Oh, gosh. Since approximately 1972 -- or that's the first case that I was involved with and as in many instances, it was a

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patient of mine.

Q And since 1972 that you've been utilized as a consultant on medical negligence cases, are you able to tell me what percentage is for the plaintiff and what percentage is for the defendant?

A I've actually counted it. It's about half. It's quite evenly divided.

Q Okay. Have you either been asked to review -- strike that.

Have you reviewed any other cases for either the defense or for the plaintiff that contain issues that are similar to the ones involved in this case?

A I certainly have. I'm not able to tell you just who they were.

Assuming that in the course of what is becoming an increasingly long career, in 25 years I've probably reviewed 250 cases that involved some aspect of the assertion of malpractice.

I would say that probably a quarter, and I'm guessing, but I don't think the number is far off, approximately a quarter of those would have involved issues of

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vascular disease, some of them in people who died of the effects of stroke or stroke-like illnesses.

So, have I seen issues like this before in this context, the answer is yes, I have.

Q Well, specifically, have you ever testified or given a report or review in any case where you believe that if there had been some different intervention or form of treatment, there may have been a better outcome for a stroke?

A Yes.

Q Okay. And in any of those cases, did they deal or pertain to strokes that were similar in nature to the one Mr. Armstrong had?

A Well, similar in nature. I mean, I don't want to taunt you in any way. Similar means how similar? I can think of two that did and that were seen at the behest of the plaintiff and I thought could have been managed better.

We may not agree on exactly what similar means. By similarity, I mean that if something had been done better, a person

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would have had a better outcome, better function in the end and certainly not be dead.
I can think of two of those off the top of my head if you want them.
Q Yeah, I'd like to know about those two cases.
A I can tell you the attorney's name on the first was Martin Rosenberg and he practices in --
Q North Carolina?
A North Carolina, right. And the other, it's a recent case and I suppose recency is something that stimulates my recollection for Mr. John Lancione.
They had been similar in a sense to this, not in every detail, but similar enough.
Q In the case with Mr. Lancione here in Cleveland, is that a case where Mr. Lancione has retained you as an expert?
A Yes.
Q Is that a case where you have already rendered a written report or given a deposition?

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A Yes.
Q In that case, what type of stroke did the patient sustain or suffer?
A A left hemispheric infarct.
Q And in this case, did the patient die?
A No. He almost died and is now badly damaged.
Q In that case, is it your opinion that had there been some other form of intervention or treatment, there could have been a better result?
A Yes.
Q And what was --what is your criticism of the doctor or doctors in that case?
A It had to do with a recognition of the presence of hemispheric lesion. Actually, it was failure to diagnose upon which failure to react becomes a necessary contention.
Q In that case, had been there an initial or original diagnosis of a stroke and then there was a problem with the follow-up, or was there no initial diagnosis of a stroke?
A The latter.
Q The latter. Okay. In that case, did your opinions or conclusions include

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information pertaining to what, if any, permanent problems the person would have been left with if there had been more appropriate treatment?
A I don't recall all of the report or the deposition testimony entirely. I think the focus however was on causation, not damage.
Q And is that case still pending?
A I believe it is. I really don't know. I have no knowledge after my participation sometime ago.
Q If you recall, and we'll find this out, but if you recall, the defendant in that case is who?
A I don't recall.
Q Do you recall the defense lawyer or which firm?
A There were an array of lawyers, very pleasant people, all of them.
Q Dr. Conomy, I'm going to jump ahead just for a second to be able to ask my question.
I think one of your opinions in this case or what you're going to say is that there was nothing that could have really

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been done to salvage or save Mr. Armstrong; is that accurate?
A Not quite, but it's pretty close. It gets to be much more complex than that and the critical factor here is not so much the actions of the people as it is the nature of his devastation.
Q You've piqued my interest when you say not quite, but pretty close. What do you mean by that?
A I am not going to tell you that things couldn't have been done in a different way. I can't tell you that even if they had been done in a different way, that the outcome here would have been different than it was.
Q Are there things that could have been done differently here?
A Certainly there are things that could have been done differently.
Q Can you tell me what those things are?
MR. GROEDEL: Objection.
You can answer.
A Thank you. Let me start at the end and not at the beginning, okay, and I want to tell you and tell you with precision of

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hindsight.
Looking at this man prospectively as should be done as a very much different problem, and we can get into that if you want, ideally, Mr. Armstrong, pathetic young man who died of a stroke, could have had available to him the following things: Steroids, which he received, Mannitol, Urea, barbiturate coma, intracranial pressure monitoring, perhaps hypothermia and assisted circulation, controlled ventilation would have required intubation and the like.
Now, all of those things can be obtained in the setting of a neurological and surgical intensive care unit, of which there are three in this city. He was not in one of them, at least as these problems developed.
Now, having said those things, and knowing the nature of his difficulty, it is in my opinion highly improbable that even with the availability of those things, that he would have survived or had he survived, survived in a most degrading and pathetic state.

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Q Had he been in a neurologic intensive care unit and had he been offered the things that you've told us about, could he have survived?
MR. GROEDEL: Objection.
Asked and answered.
A You've asked me a possibility and certainly it's possible. I don't think it's probable at all.
Q Is there a chance he could have survived?
A If there's a possibility, there's a chance. I don't think it's probable, again.
Q And if we're looking at a hundred percent, what percentage chance would he have had to survive if all the things would have been done that you discussed a moment ago?
A In my opinion, less than ten, one in ten, and had he survived, his survival would have afforded him a horrible life.
Q Now, we're going to come -- I'm going to come back to all of this in a moment. I just want to -- well, I apologize. I'm going to be a little bit out of order as to

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how I wanted to go through this, so bear with me, and if I'm confusing, tell me,
A Mr. Shapero, if I bear with you, you will bear with me. It's an even train.
Q Do you believe that Mr. Armstrong should have been in a neurologic ICU?
A Could have been, yes. Should have been, that becomes situational. It's more random than should have. Were we to live in Thomas Moore's Utopia's world of medicine, yes, he should have been, but we don't.
He was taken to what I considered to be the nearest hospital. I know he got there early, he tapped his automobile against the brick wall on the way to the hospital, and within a couple minutes after, EMS got him.
So, he must have been very near the nearest hospital. Now, the nearest hospital was not one of these places, so the kinds of things I intimated could have been done should not have been done there because they couldn't do it.
Q So, based upon what you're telling me, does that indicate or mean that there should have been a decision made early on to

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transfer him to one of the facilities that would have had a neurologic ICU?
MR. GROEDEL: You mean
required by the standard of care?
Q I'm just asking what do you think?
MR. GROEDEL: I'll object to
that then. Go ahead.
A Again, it's a contextual question. Had I had the opportunity to be there in the sky and direct things and do whatever I want, you know, he could have been somewhere else and were I in charge of the world, he should have been somewhere else.
In real life, the answer is no. He was where he was.
Q What are the reasons why he should have been somewhere else, and please feel free to look at the chart.
MR. GROEDEL: Objection.
You can answer.
A I can do it without looking at the chart. It's the availability of a unit designed particularly to address what evolved to be wrong with him.
Q When you say what evolved to be wrong

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with him, you mean the malignant cerebral edema?
A Yes.
Q Dr. Conomy, when Mr. Armstrong first got to Meridia Hospital, after he was seen or assessed by Dr. Mars, there was a diagnosis --well, what is your understanding of what Dr. Mars' working diagnosis was after he saw him?
A Okay. I've read the notes and I've read, compliments of Mr. Groedel who found his way to my home last night with some depositions, I was able to read what Dr. Mars said.
Clearly Dr. Mars thought this man had a stroke and there's some discussion about cephalgia and possible subarachnoid hemorrhage, and so forth, but as I look at the totality of what went on, those things were riot the leading issue. Hemispheric stroke was, so that's what he thought was wrong with him. Then it's what he treated him for.
Q And would you agree, based upon your review of the records, would you agree that

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based upon Mr. Armstrong's presenting symptoms, signs and symptoms, that the type of stroke you just mentioned was an appropriate diagnosis?
A Yes.
Q What were some of the signs or symptoms that supported the diagnosis of the type *of* stroke you just mentioned?
A Okay. The most prominent finding was that of left-sided weakness that was found by the emergency room squad -- or the emergency squad. Pardon me. The emergency room doctor and everyone else who examined him.
He also had another prominent sign and that is forced gazed deviation. Not only is it prominent, it is a sign and in a conscious person, that carries a very bad prognosis.
Q Initially, a CAT scan was ordered and obtained; you're aware of that?
A Yes, I've seen it.
Q And the CAT scan was read as normal and negative?
A Negative and normal CAT scan does not

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mean as a negative and normal person. It comes as a huge surprise to some that a CAT scan can be normal and one can die of a horrendous brain disease. This man did.
There are many other illnesses that can act the same way. One can not be consoled by a normal CAT scan. It's only normal in the context of what a CAT scan was defined to do, what it was done for was to exclude the presence of a hemorrhage.
There are other things that need to be looked for in that context as well. That was its major use.
Q So, it's not unusual that -- strike that.
Would it be inappropriate for me to say that what was going on here, medically appropriate, is that we had a patient that had a stroke and it was evolving?
A Certainly it was evolving, yes.
Q And is it unusual or from time to time, can you have a stroke that's an evolution that does not -- where on an initial CAT scan, you may not have any findings that are helpful to the doctor?

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A I caution you and anyone, Mr. Shapero, to make a shrine of CAT scans and worship them.
One needs to be much more attentive to the people than CAT scans. What a CAT scan shows is a computed tomographic reconstruction in a cartoon like fashion that reflects the ability or inability of an X-ray to penetrate tissue. It does not tell you whether tissue is dead or alive, normal or abnormal, perfused or unperfused or benign or malignant. It tells you none of the above.
So, one can have very damaged and in fact dead tissue whose density in terms of its resistance to an X-ray beam is the same as normal tissue.
CAT scans may be abnormal at the outset of a stroke, but frequently are not, and in some instances, the abnormality may not be apparent for 24 or 48 and occasionally longer hours in spite of very, very bad situations underlying the apparent normalcy of the test.
The test is only normal or abnormal in

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terms of the test, not the person who undergoes it.
Q I understand what you're saying, bul can a CAT scan also help a doctor or can a CAT scan indicate that there may be malignant cerebral edema going on in a patient or there might be swelling?
A It is correlative and it reflects what you're seeing at the bedside.
It can demonstrate swelling and clearly if it had been repeated at any point here after 30 hours or so, given evidence of that, but the CAT scan only is a mirror of what it is that is already going on clinically.
Q So, what you're telling me is that in addition or forgetting the CAT scan for a minute, the physician or doctor has to truly look at what's going on clinically with the patient?
A Absolutely, yes.
Q In attempting to help figure out or diagnose the patient?
I may not have said that very articulately and I apologize.

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A No, that's all right because it gives me the opportunity to rephrase what you've asked me.
If you've asked me whether the doctor needs the CAT scan to tell him what's going on with the patient at the bedside in the context of evolving brain edema, the answer is no.
It can add a refinement in the level of knowledge perhaps under certain circumstances, but it really is not essential to answer the question whether or not a person has evolving brain edema.
Mr. Armstrong was having evolving brain edema from the time he got weak on the basketball court. It did not start as an end result of something later on.
Q But the CAT scan can help the physician reach that conclusion?
A It can corroborate, fortify and help in that regard, yes.
Q Would you agree with me that after admission to the hospital, Mr. Armstrong had a downhill course or a neurologic downhill course while he was at Meridia?

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A Yes.
Q And you've told us earlier that had you been in charge or in control of this situation, this patient would have been transferred to a neurologic intensive care unit; is that correct?
A Yes, but I used the word Utopian. I want to emphasize it again.
Q That's fine. And one of the reasons why he would have been transferred is because --
A Here is a young man with a stroke who is going sour and the reasons people go sour is that they propagate dead brain which occasionally, unfortunately, swells and kills them and that's what happened here.
Q What are some of the signs, symptoms or findings that lead you to the fact that he was going sour and that he had this downhill course?
A The sour business begins immediately. He had tonic gazed deviation while he was awake. People with quite massive brain injury, whether or not you see it on CAT scan, display that and it is a bad

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prognostic sign.
He had a number of other features in his clinical course, which are part of his downhill clinical course. I think that's inarguable that that's what happened to him. They include such things as bradycardia, hyperventilation, some pupillary inequality.
Those things along with diminishing level of responsiveness, lethargy, and so forth, are all part of the downhill course. In fact, they constitute it as downhill course.
Q You would agree with me that he did have increased neurologic problems while he was at Meridia?
A Yes. He had increasing neurologic problems that I've already stated.
Q Okay. And that based upon what you're telling me, Doctor, and again, I'm just trying to make certain I understand where you're coming from -- or what you're telling me. I shouldn't have said coming from.
Would you agree with me that while Mr. Armstrong was at Meridia South Pointe

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Hospital, that Dr. Mars should have included in his differential diagnosis malignant cerebral edema?

A May I ask you this way? I find it easier to follow Dr. Mars' actions than I do his repartee or his notes, which are not copious, but they're sufficient.

When he came in, this man was given ten milligrams of Decadron IV and then I think an additional 30 or 40 more milligrams. That is a massive amount of steroid. It is not routine to give this to somebody with a stroke unless you think they're propagating some kind of trouble because of the evolution of stroke or associated cerebral edema.

I find myself looking at that and saying why would a seasoned and experienced neurologist as Dr. Mars is, and I know him to be, would do that and it's the only reason I can come up with.

It gets lost in a jumble of things in his deposition, I think, and it's not clearly written out in the notes. Clearly he got that, and the primary reason for

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somebody with acute hemispheric lesion to receive that medication is the evolution of the lesion.

It was either extend the stroke, which happened, or be associated with edema, which also happened.

Q Again, if we're dealing with a situation where there's a concern that Mr. Armstrong's stroke could be extending or that swelling could be developed, we're then back to the conclusion that he should have been at an institution that had a neurologic ICU, correct?

MR. GROEDEL. Objection.

A Were I Thomas Moore and were this Utopia, yes. As I emphasized, in retrospect as well, there are individuals such as this man who have a lull in things and dip in their clinical course who don't go on to this state. That's a prospective view of things.

Q Well, let's go back for a moment. I think you've said this, but I want to make certain that I'm clear.

You don't find in the records, do you,

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that Dr. Mars ever included in his differential diagnosis stroke in evolution or rnalignant cerebral edema?

A No. I think that's very unfair to Dr. Mars. If you ask me if I find those things written out in words, no, but clearly his actions, his use of medications, his actions in therapy, his actions, as far as I understand them, and my understanding is incomplete because I don't have the record, but trying to get this man transported to where he could be better cared for all portend that and not some ephemeral thought about some odd disease, some off the wall sort of thing going on.

Q Sure. Let's assume for a moment and again, hypothetically, that he was considering these things that you believe he may have been considering, and let's forget about Utopia for a minute and let's talk about the real world, what should Dr. Mars have done, what does the standard say Dr. Mars should have done if he was truly considering that there's a stroke evolving and --

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A That's a real world type of question. t-le should have done the following things: Given him steroids, which he had available and which he could do, and get him to where he could be more adequately cared for, which he also did.

What went on in terms of trying institutional transfers, I don't know what happened between about 1:30 in the afternoon and somewhere near five o'clock the same afternoon. Bright, sunny day, I take it, in May. Why does it take four hours to accomplish an ambulance ride that barring an avalanche in May should take twenty minutes? I don't know.

You know, what went on in terms of the actual mechanics of getting this man transferred, cared for, treated, I don't know. The record before me has no documentation on those things.

Q Well, based upon your review of the records, how soon should, and again, feel free to look at the records, how soon should Dr. Mars have appreciated that we may be dealing with a situation where there's a

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stroke evolving and a development of cerebral -- malignant cerebral edema, how soon should he have appreciated that?
A Well, I think the notion that he's dealing with an individual who might go sour was evident at the beginning, was evident to him, too. Let me finish, if I may.
In terms of an urgent need to transport him, certainly the early morning hours of the 18th, when he recognized the man is increasingly lethargic, and I think in his words, "worse" was an appropriate time.
What went on from eight in the morning until five in the afternoon, I don't know.
Q But again, Dr. Conomy, and I want to be fair, I don't want to misstate something or misunderstand something you're telling me.
It's your testimony that Dr. Mars should have appreciated from the beginning?
A No. It's not my point that he should have. It's my point that he did.
Q It's your belief that he did appreciate from the very beginning that this is a patient that may develop malignant cerebral edema?

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A He knew this was a man with a bad stroke, a hypertensive young man who was getting worse.
He had given him steroids and he anticoagulated him. He recognized him as having progressive neurologic impairment, very likely to be due to progressive brain infarction, that's correct.
I'm not sure that the element of degree of brain edema, at least at that point, was appreciated for what it became, but I'm not sure it could have been prospectively either.
Q Again, so what you're telling me is that the earliest or it wasn't until the 18th in the a.m. that Dr. Mars should have appreciated that it was time to transfer this patient to a neurologic intensive care unit?
A I'm not sure what time Dr. Mars thought he should have transferred him. I think that notion -- I don't wish to speak for Dr. Mars and I can't tell you from the record, the notion that this man was a troublesome fellow should have been evident from the

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outset and it's my belief that it was.
Q Now, I can't find in the record and maybe you can help me where Dr. Mars ever contemplated or considered transferring this patient. Can you find that for me?
A I can't find it in the record because I don't have the records. Now, apparently the expert you hired from Juniata Valley Neurological Services of Pennsylvania has records not available to me about talking to people at Kaiser Foundation about transferring him and transcripts of the case manager, and so forth. I don't know when those things started to go on.
Q Then let's back up for a minute because the records that he has are records that were provided to me by defense counsel in this case. They weren't records --
MR. GROEDEL: I think he's referring to depositions.
Q And so what I need to ask you is other than the documents that are in front of you today, what other documents have you reviewed or been told about?
A Well, let me tell you what I've

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reviewed. I've reviewed what's listed on my letter of the 19th of September of 1998. Do you have a copy?
Q Yes, and just for the record, we've marked that as Plaintiffs Exhibit 2.
A Fine. I also reviewed last night the deposition of Dr. Mars and the deposition of Dr. Pearson.
Now, records I've been told about are told about in Dr. Pearson's letter. It's not addressed to anybody in particular, but it's done at the request of Attorney Michael Rogan and it's five pages long.
Let me point you to page three. Do you have a copy of this?
Q Yes, I think I do.
A Page three, the second full paragraph beginning with the word "During."
"During this patient's hospitalization, there were conversations and arrangements happening," quote "behind the scenes," unquote, "that played into some of the decisions regarding his transfer. The patient's health care insurance required that he be treated in a facility contracted

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by the Kaiser system. Mrs. Armstrong contacted the managed care coordinator to start arrangements for this transfer. She was told by the coordinator that a prerequisite for that transfer would be that his current treating physician declare him stable to be moved," so on and on.

There's another portion of the report that I want to call to your attention and mine, and that's in the first paragraph, page one.

"I reviewed," says Dr. Pearson in the second sentence of the first paragraph, "the hospital record for Meridia South Pointe Hospital, a deposition from Dr. Mars, the attending physician, a deposition of Janet Nolan, RN, the rnanaged care coordinator at Mt. Sinai Hospital, a deposition from Dr. Deborah Ewing-Wilson, Neurologist at the Cleveland Clinic, and the telephone)transcripts from conversations surrounding a planned transfer of the patient from Meridia South Pointe Hospital to Cleveland Clinic."

I have not seen those things.

Q Just so the record is clear, either

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the initial, the first attorney that retained you on behalf of Kaiser or Mr. Groedel or anyone from his office has never provided you with a copy of the deposition of Janet Nolan: is that correct?

A No, I have not received any deposition from Janet Nolan.

Q Have you ever reviewed the deposition of Dr. Ewing-Wilson?

A I have not.

Q Have you ever been provided the telephone transcripts that were made or prepared by Kaiser pertaining to the transfer?

A No.

Q Would you like to see those things?

A I'd like to see anything that's available with relevance to this matter. I can't imagine that those sorts of things began at 10:30 in the morning the day he was transferred. I suspect they were going on the previous day.

Q But you don't know one way or the other as we sit here today, correct?

A No, but if you give me those materials,

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I bet I can tell you and figure it out.

Q Doctor, if I knew you didn't have them, I would have brought them for you.

Are you aware of the fact that his transfer was for purely insurance reasons and had nothing to do with his medical condition?

A I can't believe that and I can't imagine that you'd think that his transfer had to do with insurance. His transfer had to do with his care.

He went to an institution that had all of the things that would be needed to more adequately care for him. Insurance be dammed.

Q Doctor, I want you to assume for a minute, and I appreciate this is a hypothetical, I want you to assume that his transfer was for purely insurance purposes and that there's nothing in any record that deals with the transfer being for medical reasons.

A You just asked me to ignore the reality of our planet. I can't.

I know the Cleveland Clinic very well

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and I know Meridia South Pointe, too.

Q Then I'll ask you the question in a different way.

Can you show me anywhere in any record that you've been provided where Dr. Mars has mentioned, noted or recommended that this man be transferred more medical reasons?

A Not in any record that I've been provided, but I'll bet it's present in records I haven't been provided.

Q Well, I want you to assume, I'll ask you to assume that it's not, and if that's the case, what does that mean to you?

A It means that we're dealing here with unreality.

Q And when you say unreality, a situation that if it's as I related to you should have never happened?

A He should have been transferred as soon as he could have been, which I suspect didn't happen here.

Q Jumping around again, Doctor, but have you ever worked for Mr. Groedel before in any other cases?

A Not that I recall, but, again, I'm of

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an age where recollection is not entirely efficient.
Q As you know --
A I may have.
Q As you know, Mr. Groedel is with the Reminger & Reminger firm. I'm aware -- are you currently working for a Mr. Walters in a case that's pending in Erie County?
A I may be. Do you know the name?
Q It's a stroke case out of Port Clinton.
A I really don't know. You'd have to tell me. I may have. I've seen a number of cases for members of the Reminger firm.
Q That's what I was going to ask you. Other than Mr. Groedel, what other members of the Reminger firm have you worked for, if you recall?
A I'm not sure who is employed by whom Lawyers are an extremely mobile bunch. They're like Gypsies and they not only jump firms, they jump the side of the fence, but I can tell you confidently that I've seen a couple of cases for Mr. Malone, for Mr. Walters and for other members of that firm, not all whose names I recall.

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Q Have you also done independent medical examinations for members of that firm, if you know?
A I'm sure I have.
Q Okay. Have you reviewed any medical literature or done any medical research as it relates to the issues that pertain to this case?
A Not particularly for this case, no, I haven't.
Q What are your fees for review of a medical malpractice case?
A My fees for everything is four hundred dollars an hour. It's the same amount of money I would bill out for one hour in my office,
Q When you say for everything, that's review, writing the report, testifying?
A Everything.
Q Do you know Dr. Mars personally?
A Yes, I do.
Q How long have you known Dr. Mars?
A Well, he and I are about the same age I think he's slightly older than I am, and I've known him, you know. I've never been

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in practice with him. I've known him, you know, as a co-professional in this city for probably three decades. I've attended meetings that he's attended, I know he has a particular interest in Parkinson's disease and quite adept at dealing with it. I've heard him lecture about it.
We certainly have had staff appointments at the same institution, University Hospitals. So, I'm familiar with him to that extent as I am with many other neurologists in this community.
Q You answered my next question which was going to be have you ever been in practice with him, which the answer is no, correct?
A No.
Q Are you a social friend or acquaintance of his?
A No. You know, I don't want to tell you I would shun Dr. Mars, nor he me, but we are not close social pals.
Q There's an article listed on your CV, in fact, let me find the other CV I brought with me, I'll be able to find the article

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faster.
I was just curious what this article is about. It's called "The Neurologist In Court," colon, "Expert Witnesses" in something called The Neurologist, Volume Two, Number 4, pages 250 to 252, July 1996. What is that article about?
A Haven't you read it?
Q No. I actually tried to find it and I wasn't able to find it.
A These questions are generally tautology. You're the first person that doesn't have it in his back pocket and is willing to quote it.
The thing you're talking about, The Neurologist, is a peer review medical journal, and I write an article from time to time that deals with neurologists in what you've defined already as medical-legal matters, and it's to tell my colleagues what the law expects of them as an expert.
It's a very much different notion among not only neurologists, but other physicians as to what constitutes an expert and it's very much different from what an expert is

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in law, although the word is the same.
To be asked to see and analyze the problem such as the one before us today is and should be a great honor.
I have not been necessarily asked to do this because somebody thinks, however misled they may be, that I'm the greatest doctor on earth, even though I may feel like it and now knighted by another profession to review a very complex and in this case lethal matter, so it was really to tell my colleagues what the law has to say about what an expert is and to say something, too, about deportment and honesty and candor and to tell them a little bit about the function of expert witnesses in other jurisidictions; England, France, for instance.
Q Other than this article, have you written other articles pertaining to the neurologist as an expert witness or the doctor as an expert witness?
A There are some that include that. I've given lectures on the subject of both law and medical loops. There are other articles in The Neurologist that contain some

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reference to expert medical testimony. I think that's the only one with that name.
Q The lectures that you've given, can you tell me who those were to and when?
A Oh, gee. To the local bar association, to some of the ABA health law, litigation sections. There's a seminar each year at Hunters Run, actually the plaintiffs bar, some very outstanding people give each year.
I've lectured to it the last three years and will again in November.
Q What do your lectures mainly pertain to?
A This year's will pertain to the ethical and legal issues in the United States and elsewhere as to the purchase and sale of human organs on a commercial basis. Far away from this topic. I mean, not pointed to trial tactics or medical malpractice or behavior in depositions.
Q Have any of your lectures dealt with how to testify or how to --
A No, they've not been how-to lectures. I don't think my role is to give how-to

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lectures.
These are generally exercises in cleverness, and so forth. If I ever had any advice to anybody about it, it's be prepared and know the facts and to be honest. I don't have ways of sword play with lawyers. Other people do. I've never done that and have no intention of doing it.
Q I note from your CV that you're also an attorney?
A Well, I have a law degree. I'm not a practicing attorney. I don't have a bar ticket. I don't intend to purchase one and I don't want to take another lengthy test about anything ever again in my life.
Q Have you ever practiced?
A No.
Q Okay.
A I'd like to, but I'd have to give up the practice of medicine to do it.
Q And in your own practice as a neurologist, have you ever treated patients who had a similar type of stroke that Mr. Armstrong sustained or suffered in this case?

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A Yes, and I've already given you one published reference to a highly similar situation.
Q Have you had any patients who had similar -- a stroke that was similar to Mr. Armstrong's who, with appropriate medical intervention, survived?
A Not with this degree of brain swelling, I never have. You can find others who have and I'm sure you can find reports of people who have survived catastrophies like this.
Q When you say this amount of brain swelling, are there appropriate medical interventions that can take place if the diagnosis is made early enough to avoid the massive amount of brain swelling that Mr. Armstrong had?
A Would that supposition be true, I would be the first to tell you yes.
One is not at the mercy here of the notion that had we only acted sooner with more, things would have been just fine. I don't believe that at all.
One is rather at the mercy of a process that once set in motion can hardly be

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controlled by anything and most frequently is not
Now, if brain swelling becomes limited, as it frequently does, not because of anything doctors do or don't do, one can end up with a live patient I've certainly had patients with some degree of brain swelling survive and survive quite nicely, but I've never had anyone of my own with this degree of brain swelling, which is a self-propagated cytotoxic brain edema, survive
Q What I'm curious about and it's from your answer that causes me to ask this question, is there anything that can be done medically to either stop or limit the amount of brain swelling?
A In this situation, and in situations like this, not effectively, no
Q So what your testimony is, in a situation like Mr Armstrong's, even if the correct diagnosis is made immediately, there's nothing one can do medically to limit or stop the swelling?
A There is nothing one can do medically

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that will give you a probability of survival, much less survival in a reasonable state. That has to do with the nature of the problem, not the nature of the activity to address it.
Q And I understand what you mean by that, but I'm going to still ask you a few follow-up questions. You had a chance to review Dr. Pearson's deposition?
A No --yes, I have. I'm sorry. I did see it last night.
Q The physician in Pennsylvania?
A Yes.
Q What are your thoughts about Dr. Pearson's opinion that had certain things happened timely, this man would have survived?
MR. GROEDEL: Objection.
Asked and answered. Go ahead.
A I don't agree with it.
Q What don't you agree with?
A The conclusion that if more had been done sooner, he would have survived. I don't think so.
Q Have you ever either had patients or

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are you aware of patients that had the type of treatment that Dr. Pearson believes should have occurred here who have survived?
A I've seen some who have survived and survived at a horrendous level of impairment and then not for very long.
Q Are you aware of any individuals who have survived and not had horrendous impairments which --
A Not with this degree of cytotoxic brain edema, which is a function of the volume of anoxic brain mass, not doctor's activity.
Q Regardless of the conclusion that even if the patient would have survived, the patient would have had horrendous problems or wouldn't have survived for that long, should the measures that Dr. Pearson described in his deposition be taken in this case?
MR. GROEDEL: Objection.
Asked and answered.
A I think I've already answered that they should have been done under ideal circumstances. I have no disagreement with

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that.
Q Now, when you were originally contacted, I understand you were contacted by the attorney for Kaiser; is that accurate?
A Well, I'm not sure who the attorney was for. I believe it was Mr. Meadows. I believe he was representing Kaiser.
Q When you were originally contacted, were you provided with any instructions or letters?
A I received two very brief transmittal letters from Mr. Meadows. I'm sure you can obtain them. They said things like, "Here are the records, would you review them?" There was no description of events. I then received from Mr. Groedel another letter saying "Here's the report of Dr. Pearson" and that's it.
Q What about conversations, have you had conversations with any of the attorneys at the Reminger law firm regarding what your assignment was to be and what they were looking for?
A No. I've had conversation with Mr.

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Groedel and I told you he dropped off depositions last night and he was furnished with refreshment for his trouble and then this morning, we met for about an hour to go over the imaging studies which I have with me.

Certainly Mr. Groedel did not give me instruction or tell me what to say or -- he asked me what I thought. He didn't tell me what to think.

Q And I don't mean to imply that he did.

A No, that's clear. I want to go on record to say that.

Q I don't mean to say it's a problem if Mr. Groedel said, "I need you to look at this to see what the situation is." I'm just curious what happened.

A Well, that's what happened. I went over the films with him and showed him what was being dealt with, and I went over the information you have on that paper.

Q I'm going to get to that in a moment. Your report which we've marked as Plaintiff's Exhibit 2, is this your only report pertaining to this case?

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A It is.

Q Were there any drafts?

A No, there are no drafts.

Q Have you been asked to make any other or additional reports?

A Not yet. This was typed by me at home on a computer.

Q Your work as a -- strike that. Your work in the medical-legal area, is that through your business relationship with Dr. Collis or is that a separate enterprise?

A That's a separate entity and it's separate for a number of reasons, one of which is to keep some order in my own life and although it's not pertinent to this case, it's to safeguard persons who are being seen for purposes of litigation from having their health carriers billed for services which, unfortunately, happens from time to time. I think it's very wrong.

Q Now, I'm going to hand you what we've marked as Plaintiffs Exhibit 3. Can you tell us what that is?

A That's some notes that I made starting at five o'clock this morning to try to sort

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out my own notions about the time relationships and clinical issues in the case.

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(Interruption in room.)

- - -

Q Doctor, would you have any objection to me standing over your shoulder as we go over this?

A Not at all.

Q Thanks. Again, referring to Plaintiffs Exhibit 3, which you've already identified, can you just work through this and tell me what it says and what --

A These are things picked up from his records as I have them. The date of injury here is the 16th of May. That's when he experienced the neurologic illness that we're dealing with. He's 28. And there's some things that I don't think are relevant to the issues here, but they are in his chart and I noted them.

He may have been gay at one point. The reason for noting it is not to infer bad things about him, but he had a lymphoma.

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People who might be gay who have lymphomas have a virus to cause their lymphoma.

He had bad hypertension. He has very elevated blood pressures everywhere in his medical record during the illness from which he died and before. He was treated for Hodgkin's disease. It says at the age *of* 16, but I think it was more like the age of 19 or 20 with chemotherapy and local radiation.

I don't think that's figurative of what went on with him subsequently in terms of stroke. The fact that he was hypertensive, he wasn't -- again, it's not to say bad things about Ricardo Armstrong. He just may not have taken his medication regularly, I know he was on Procardia, he was on Vasotec. He may have been on other drugs from time to time. The next line --

Q First of all, what is PI?

A PI means present illness. I was about to tell you that. And then there's an X, Y plot that covers three days initially and then extends to the time of his death, it begins at 5-16.

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Q Are what are these little Xs?
A They refer to the Xs below. They're notations, okay? They're events. 5-16 he was playing basketball. This was around eight o'clock at night. He very likely developed left-sided weakness and was headed for help somewhere, maybe at home or the hospital, and he was involved in running his car off the road, I take it at a low decorative brick wall.
He was not obviously injured doing this and when EMS appeared at the scene, it was clear that he had left-sided weakness. His blood pressure was elevated. I noted these things and now I'm reading them in kind of along the Y axis.
His left side was weak. He was taken to the hospital, admitted after being seen in the emergency room. EMS got to him around nine o'clock and he was at the hospital within just a very short period of time. So, he must have been very near the hospital he had trouble with his automobile.
He was dealt with in the emergency

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room. A number of things were done there; blood studies, urine studies, EKG, and so forth.
He had tonic eye deviation in the emergency room. He was given steroids, Decadron there and then continued thereafter.
As I've mentioned, he had bradycardia which means his heart rate was slow. His pupils may have been unequal by one millimeter. I don't know who's looking and who -- you know, it's simply recorded in the chart and he did have a headache.
He was admitted to the intensive care unit at Meridia around 1:52 a.m. and there are some notes at two o'clock in the afternoon for the other features that are mentioned here. That one refers to headache,
The next day is 5-18, clearly there are other events that have gone on here, but I'm simply reading for you what is on this note.
At 10:30 Dr. Mars okayed a transfer. There's a note that says he was worse

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today.
At 11:30 or thereabouts, there's a note that Kaiser, I think these are in the nurse's note, Kaiser okays transfer.
At the third point, 12:30, no change in status and at 1:30, ambulance to CCF and at 5:50, so this is the gap I referred to before, and I think it's a critical gap, between 1:30 and 5:50, I'm not sure where he was or what went on.
He was found to have on physical examination, neurologic examination consistent with brain herniation, imaging studies were done that simply confirmed it and then he underwent this so-called heroic brain surgery in an effort to control his edema which, unfortunately and clearly couldn't be controlled.
There are other events here from 5-16 that are listed under the triple Xs in the Y column. He had a lumbar puncture because of the possibility that he may have had a subarachnoid hemorrhage to account for his lethargy and headache, that simply couldn't be seen on a CT scan. I think it's a wise

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thing to do.
He had a urine test which showed he had been exposed to Cannabis, aspirin and Darvon. He may have gotten some of those things in the emergency room.
In preparation for anticoagulation, a PPT was drawn and then he was administered Heparin. I mentioned the slight inequality of pupils here.
On the next line, his course through the hospitalization of Meridia was characterized by bradycardia, that is a slow heart rate.
Now, that may have reflected some aspect of his treatment with Procardia that causes bradycardia. It may have reflected what was wrong with his heart to begin with because he did have EKG effects of hypertension on his heart, but there's a possibility as well that it increased intracranial pressure as well.
His course there that you have suggested and I have agreed was marked by worsening particularly by lethargy and obtundation.

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The next series of lines are events at the Cleveland Clinic and a very brief notation. He underwent a craniotomy the day that he was there because of persistent unilateral hydrocephalus. He developed disseminated intravascular coagulation. One of his manifestations was an intraventricular hemorrhage.

He went on to die after discussion by Dr. Frank and other doctors there about the futility of future treatment, and I think his mother brought up the notion, that she asked the question of whether he could donate sperm in premortem for postmortem use. I take it it wasn't done.

The next sort of thing, the last thing on this paper contains a cartoon, if you will, a diagram that has to do with the nature of vasogenic cerebral edema and this is what was wrong with him in relation to his stroke and it is what killed him.

Q Do you know what caused his stroke?

A In terms of risk factor, yeah, he's a hypertensive man. It's very likely, not demonstrated, that he occluded the carotid

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artery in his right cerebral hemisphere.

Q Earlier you talked about that gap in time which you characterized or stated was a critical gap. In what way was it a critical gap?

A He was in the process of herniating and I can't give you the events along that line. I don't have them.

Q Now, Doctor, I apologize, you may have answered already, but your answer now makes me think of this again.

I think earlier you told us that there's no way really to stop the swelling once it starts. I think you said that; is that accurate?

A Fundamentally, it's accurate.

Q And the swelling then leads to the herniation, correct?

A Yes.

Q So, is it your testimony that with this patient or any patient who has appropriate intervention immediately, you're not going to be able to prevent the herniation?

A No, it's not quite that. I did not say that appropriate intervention is not helpful

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in saving for some persons. It is.

Those whose volume of infarcted brain is smaller and whose propensity for whatever reason to swell can and are helped by appropriate intervention.

What I'm saying is that he wasn't one of them.

Q Who are the people, who are those patients or individuals who could have been helped? I mean, how do you characterize those?

A Can I refer, if I could, Mr. Shapero, to the letter I wrote to Mr. Groedel, because it contains four factors that I thought were germane and important to Mr. Armstrong?

The paragraph that begins, "Brain edema of this degree and of this fatal outcome is fortunately not common." It is not common.

Q Can I stop for a mornent and ask you a question about what you just said? But brain edema, and this is obviously where I'm a lay person, so I apologize for my ignorance, but brain edema of this magnitude, it doesn't start at this

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magnitude, does it? Doesn't it grow?

A Don't apologize. You're not a lay person, you're going to wind up knowing more about cytotoxic brain edema than most doctors in Cleveland at the end of this case, so please don't apologize.

It does grow and it is self-propagating and that's the issue here. The other -- if I may return to these factors, maybe some of these things will be clear. The reason that it's rare in cerebral infarctions is that cerebral infarctions don't generally happen to 26 year old, 28 year old people. They happen to old people.

One of the nice things about old age, if there is anything nice about old age, is that there's more room inside of your head to swell. Young people such as you have no room at all.

So, the same injury to your head, the same stroke inside of your head relative to mine will not have the same effect and in fact, it may not have the same lethal effect.

I've just got more room in my head from

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the waste that goes on with the turn of the calendar.

This problem, when it's seen, is seen under the following circumstances. It generally follows the onset of stroke in terms of its severe manifestations by 24 to 72 hours.

Now, that is an unfortunate clear fit to what happened here. It tends to be severe and severity becomes a function in terms of mortality in young people rather than old people.

When it happens in that setting with large lesions, I'll get around to what constitutes large lesions in a moment, the larger the lesion, the younger the person, the more likely it is to be uncontrollable by any means.

So, this fellow has bad things going for him right away. He has signs of a very large lesion of his cerebral hemisphere in spite of the lack of severity of his paralysis at the outset.

Q What are those signs?

A Tonic deviation of his eyes while he's

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awake.

Q Anything else?

A That is the prominent sign. I would include quite probably the bradycardia as well.

Once that situation is set in motion, one of the unfortunate therapies for it is to keep removing the amounts of swollen brain, which keep on occurring, as it did here.

He had a large amount of brain removed, he had dead brain removed so that live brain now came to occupy the space formerly occupied by dead brain becoming dead itself.

Not to be turned off by anything that was done, that cascade of events is set in motion at the outset. It doesn't become something that happens. It simply becomes manifest and clearly severe on day three.

Back to this diagram, with the self-propagating nature of cytotoxic edema and large cerebral infarctions in young people, the case report that I've offered you, while in a woman with a different

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arterial lesion than this man had, is exactly the same and in patients like her that I've taken care of and then in that instance, everything was done in a place that has everything to do.

Q Now, if I'm understanding, you believe that this man's stroke was a large infarct; is that correct?

A That's right.

Q And you've told us why you believe that, correct?

A Not exactly, but I do believe that.

Q Okay. And what I want to know, make certain I understand, is assuming once you have this large infarct, does the swelling start immediately or when does the swelling start?

A It would help me to use a piece of your yellow paper that you can then make an exhibit of to explain this. I am neither artistic nor mechanical, but I think it will save us some time.

It's basically what is drawn here, but I'm going to draw it larger. This is the right cerebral hemisphere of Mr. LaShon

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Armstrong. It's the lateral surface of it.

This is his carotid artery giving rise to the middle cerebral artery. At this point, I will ask you to assume that this artery is occluded. It doesn't matter whether it's the internal carotid or the middle cerebral, they are all Route 20.

The middle cerebral is a straight line continuation to the carotid artery.

Now, what happened, I will now reflect in terms of time, the zone of brain that has become ischemic, damaged, but functional, is very large.

This artery supplying about two thirds of blood supply to a pyramidal shaped area of brain whose wide portion, the base, occupies the lateral surface of the hemisphere.

So, I ask now to think in three dimensions. On the surface, the vascular bed looks like this. What I've drawn is a zone in the cerebral hemisphere that is the tributary distribution of the middle cerebral artery. It's kind of like the Amazon Basin. It is a huge portion of the

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center of the brain.
This is on the lateral surface. As we look down on the inner surface, that base comes to a point. At the outset, the most vulnerable point in here, the part of brain that is going to die first, not just be damaged, but die, become dysfunctional first, is down at the middle.
In spite of damage and in fact irreparable damage to this large base, the only thing that you will see clinically is the evidence of severe impairment or death of local brain tissue at this point,)perhaps sufficient enough to cause some weakness of Mr. Armstrong's left side and in his ability to control his automobile.
What happens as a consequence is tissue death. Dead tissue becomes intensively acidotic, it changes its ph, it drives it down.
What happens as a result of this is in this, let's call it a vulnerable zone, the damaged parts of this base, in an effort to correct this situation in an autoregulatory way, something that doctors have nothing to

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do with and can hardly influence, there's an attempt to supply this area with blood. That's an effect of local tissue acidosis.
I have not -- I've not bored you to death or lost you so far, have I? Okay.
In supplying this zone, one does not supply normal tissue with blood; in fact, one supplies damaged tissue with blood. Among the type of tissue damage that occurs is damage to small vessels at the arterial and capillary level.
I've drawn a blown-up here representing individual cells, say, in a capillary. This tight junction between cells prevents the extravasation of both blood cells and fluid, fluid being a smaller size and getting out first.
As a consequence, there's loss of fluid that belongs in the intravascular space, blood plasma, which is mainly water, contains some salt and protein and other things, but it's mainly water. It leaks into the surrounding tissue and kills it, creating an acidotic zone, it's bigger than it was before.

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Clinical manifestations, a person is weaker or the side that wasn't weak before is now slightly weak in addition to the arm which was already weak. And so it goes, this area becomes progressively larger.
Now, one of the things that make it progressively larger is the relative good health of young people whose ability to supply this damaged zone with blood through a process of collateralization, that is the presence of blood vessels that can create a tributary stream de novo, on their own, becomes activated. The condition is called misery perfusion because in an autoregulatory attempt to save the brain tissue, brain tissue becomes damaged and then dead.
A byproduct of that is brain swelling, because it includes eventually this whole vascular bed which has nowhere to go and, hence, the shifts of compartments.
What can be done to control this? Am I allowed to ask that question?
Q Certainly. You can be as rhetorical as you like.

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A The kind of things you can do to control this is, first of all, to supply somebody with a drug called Decadron, which is a hugely powerful steroid drug. It acts to preserve the integrity of this tight junction and to reduce inflammation when it exists. There's not much inflammation here. It can have the effect of dehydrating.
The problem is that it cannot do it in this damaged zone. It deals with healthy surrounding brain which is *of* progressively diminishing quality.
Q Can it stabilize what's going on?
A It doesn't stabilize what's going on. If you imagine the brain vascular volume is only about two percent of the brain weight, there's no big margin for this to act.
Q But if you use that medication in conjunction with other therapies, can you then stabilize?
A I'm glad you asked because now we're going to turn to the other therapy, okay. Decadron deals with this mechanism. If you use drugs that control blood flow so you

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simply don't have as much going through these vessels, the notion is that you're going to have less extravasation of fluid. Most potent stimulus to diminishing I believe brain blood flow is to control the carbon dioxide flow in the brain. That's done through controlled ventilation.

Oxygen actually diminishes brain flow. He was given oxygen and he was also given Decadron. The problem with both of those things is that they again act in brain in which blood flow and blood vessel integrity is normal; that is, normal brain. They cannot effectively overcome the effect of local tissue acidosis and they don't.

They control the volume of blood in the head at the expense of normal brain. They don't do anything for ischemic brain because the flow is unavailable for ischemic brain.

Q Doctor, what I think you're saying is you can't take away or fix what's already destroyed?

A That's right, but what's already destroyed is not apparent to you at moment one.

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Q So we agree you can't fix what's been destroyed, right?

A No, but you're talking about attempts to salvage.

Q But you can stabilize or slow down this process of destruction?

A God willing that you could. You can stabilize it or slow it down with increasing efficiency as a function of the volume of brain that's infarcted. This stuff works, when I say stuff, I mean things we've talked about already and some things we haven't talked about, probably won't, work best the smaller the volume of infarcted brain becomes.

With huge volumes of brain; that is, infarction of two thirds of the hemisphere, they work very badly or not at all and that, unfortunately, is what happened here.

Q I appreciate last night you were made aware of Dr. Pearson's testimony regarding the use of Decadron and Mannitol and --

A Urea.

Q And then the transfer to a neurosurgeon. Are there patients that could

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be saved and have all right outcomes or somewhat all right outcomes with that type of intervention?

MR. GROEDEL. Objection.

A Yes, there are, but as I've inferred, these are persons generally older and far less volume of infarcted brain to deal with.

Q So, with a patient like Mr. Armstrong or with any patient who has this process going on, obviously the earlier you start the Decadron and the controlled ventilation, the better, correct?

A No, that's not the case.

Q Why not?

A Because the probability of a good outcome has to do with age and volume of brain infarction and not whether you've started things at X, Y or Z. It would be nice if that were the case, but it's not the case.

Did you want this?

Q It's my pad and I'll take it back. I'm not going to mark it.

A I will sign it.

Q Thank you. So, for example, I think

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what you're saying is if Mr. Armstrong or the hypothetical case then would have had a smaller infarct, the types of modalities or intervention that Dr. Pearson is talking about could have saved that individual?

A Yes.

Q And how much smaller would the infarct have to have been for it to have made a difference?

A When you talk about infarct size, we're going to have to relate it to the distribution of a bed of arteries. Had this been, let's say, the superior parietal branch of the middle cerebral artery, a volume of brain that's probably twenty percent of this total bed, then those things might have been relatively efficient.

They may have made no difference at all because there are people with swelling that survive in spite of some swelling. Had this been one of the other cerebral vessels whose Amazon Basin, if you will, the posterior cerebral artery, for instance, critical in terms of what it supplies, vision, some function of language, then those means may

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have contributed to a beneficial effect, but one is at the mercy of the ultimate infarct size.
Q Other than what you've told us earlier, what other documents or tests or records help us to know or substantiate your belief that this was a large infarct?
A His clinical course, the size of this infarct is evident on imaging studies that were done over the course of time. It's huge.
Q The imaging studies that were done at the Cleveland Clinic?
A Yes. That's where he was when they were timely enough to show what was wrong with him.
Q Do you believe that if any further imaging studies would have been performed prior to arriving at the Cleveland Clinic, either CAT scans or MRIs, that those studies would have indicated some --
A I don't think the problem here at all is doing or not doing studies.
Q But my question is do you believe they would have indicated anything?

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A They would have indicated that he had a large infarct with brain swelling, but do you need those to tell you that that's what's wrong with this man? You do not.
Q Okay. Based upon your review and your knowledge as a neurologist, if we're now dealing with a situation where you believe that this patient had a large infarct, is now developing the edema, the swelling, would you have increased the Heparin?
MR. GROEDEL: Objection.
You may answer.
A Let me answer the question prospectively. He had a situation of evolving density of paresis with likely arterial occlusion. I think it was an appropriate thing to do.
Q Do you have any criticism whatsoever of the fact that the Heparin was continued and in fact increased with this patient?
A No, because it had no deleterious effect on him.
Q If it's noted that a patient or that this patient is more lethargic now than he was before, would that be considered a

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deterioration or --
A Certainly it is.
Q And the fact that the patient has now, in addition to being more lethargic, has now vomited, would that be significant --
A Oh, it certainly is significant.
Q -- of a downhill course?
A Not necessarily of a downhill course because there are patients with brain infarctions without edema who become lethargic and vomit. Everything that happened to this man is significant.
Q What does the term completed stroke mean to you, if anything?
A It's a retrospective determination. It's like telling you the outcome of last year's election.
It's when things stop getting bad are fixed in terms of deficit and fixed in terms of the evolution over time.
MR. SHAPERO: I'm done.
Thank you.
MR. GROEDEL: Thank you.
Do you want that diagram that the Doctor drew?

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MR. SHAPERO: As an Exhibit?
MR. GROEDEL: I don't know.
MR. SHAPERO: Why don't we mark it?
MR. GROEDEL: It's up to you.
MR. SHAPERO: We'll mark it as Plaintiff3 Exhibit 4.
- - -
(At this time, Plaintiffs Exhibit 4 was marked for identification.)
- - -
(Signature waived off the record.)
- - -

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CERTIFICATE

THE STATE OF OHIO,)
) SS:
COUNTY OF CUYAHOGA.)

I, Angelika P. Shane, a Notary Public within and for the state of Ohio, duly commissioned and qualified, do hereby certify that the within-named witness, JOHN CONOMY, 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.

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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 11th day of October, A.D., 1999.

_____
Angelika P. Shane, Notary Public
Within and for the State of Ohio
My commission expires 6/21/00

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Concordance Report

Unique Words- 1,710
Total Occurrences: **4,707**
Noise Words: **384**
Total Words In File: **13,703**

Single File Concordance
Case Sensitive
Noise Word List(s):
NOISE.NOI
Cover Pages = **0**
Includes **ALL** Text Occurrences
Dates ON
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Possesive Forms ON

- - Q - -

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