Doc. 452

STATE OF OHIO)
) SS.
COUNTY OF CUYAHOGA)

COURT OF COMMON PLEAS

FELICIA ZOBERMAN,)
)
Plaintiff,)
)
vs.) Case No. 120940
) Hon. James McMonagle
THE MT. SINAI MEDICAL)
CENTER, et al.,)
)
Defendants.)

- - -

Deposition of RALPH C. WHALEN, M.D., a Witness herein, called by the Plaintiff as if upon Cross Examination under the Ohio Rules of Civil Procedure, taken before me, the undersigned, Kenneth P. Gallaher, a Notary Public in and for the State of Ohio, taken pursuant to Notice and stipulations of Counsel as hereinafter set forth, at the offices of Jacobson, Maynard, Tuschman & Kalur Co., L.P.A., Four SeaGate, Toledo, Ohio, on Tuesday, January 26, 1988, at 5:15 o'clock p.m.

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I N D E X

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APPEARANCES:

On behalf of the Plaintiff:

CHARLES KAMPINSKI CO., L.P.A.:
Christopher M. Mellino

On behalf of Defendant Terry A. King, M.D.:

JACOBSON, MAYNARD, TUSCHMAN & KALUR CO., L.P.A.:
John V. Jackson, II
Mitzi G. Cole

On behalf of Defendant The Mt. Sinai Medical Center:

REMINGER & REMINGER CO., L.P.A.:
Gary H. Goldwasser

- - -

RALPH C. WHALEN, M.D.,

a Witness herein, after first being duly sworn as hereinafter certified, was deposed and said as follows:

CROSS EXAMINATION

BY MR. MELLINO:

Q. Would you state your full name, please?

A. Ralph Charles Whalen.

Q. And what is *your* business *address?*

A. 2121 Hughes Drive.

Q. That's Toledo?

A. Yes.

Q. What's your home address?
A. 2525 Olde Brookside Road.
Q. That is in Toledo also?
a. Yes.
Q. Do you have a copy of your CV here?
MR. MELLINO: John, do you?
MR. JACKSON: I don't have one.
A. I didn't bring one. Do I need one?
MR. MELLINO: Can *you* provide us with a copy?
MR. JACKSON: Sure, I'll get a copy for you. We'll get one to you.
Q. Why don't you just briefly run me through your educational background, starting with what college you attended.
A. I attended Bowling Green State University, gat a Bachelor's degree there, Attended the Medical College of Ohio, Toledo, got my M.D. degree there. Did s rotating internship at Akron City Hospital, followed by four years of general surgery training, also there; followed by one year of vascular fellowship, Cleveland Clinic,
I'm Boarded in general surgery, American

Board of Surgery. Date of that was 1978. And I was Boarded in general vascular surgery by the American Board of Surgery, 1983.

MR. JACKSON: Forgive me, I do have a copy. I apologize. I'll make a copy of that before we leave.

MR. MELLINO: Okay, that would be fine.

Q. Have you testified before, Doctor?

A. For anything?

Q. Well, let's limit it now to as an expert.

A. No.

Q. I take it by your previous answer, you have testified in other cases?

A. I've given a deposition.

Q. Where you were a party to the case?

A. Yes.

Q Were you a Defendant or --

A. Yes.

Q. How many times?

A Once.

Q. What was the nature of that case?

A It was related to a carotid endarterectomy.

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Q. That you performed?
A. Yes.
Q. Can you tell me what the circumstances were?
A. Sure. It related to the patient who had a carotid. endarterectomy, and five days following discharge developed symptoms of neurologic dysfunction., and subsequently was taken to another hospital where she was felt to hawe problems with the artery that had been operated upon; underwent a second operation and she was suing *me* because she felt that I had not done an adequate job.
Q. Who represented you in that case?
A. Jacobson, Maynard, Tuschman and Kalur.
Q. What attorney?
A, Mr. White,
Q. And do you know what the outcome of that case was?
A. Yeah, the patient had a seizure and really. didn't need the second operation, and it was dropped.
Q. Okay, the suit was dropped?
A. Yes.

Q. Who were you retained by in this case?

MR. JACKSON: By me.

Q. What were you retained tu do?

A. Review some records and give my opinion.

Q. Wbat records did you review?

A These here. There are some depositions and hospital records and reports here. That's all these. This is everything I had.

Q. Okay. You reviewed the deposition of Mary Lagenza, right?

A. Yes, I've reviewed these.

Q Dr. Marshall? These are the Mt. Sinai Medical Center records.

A. Yes, I glanced through this.

Q. Okay, You looked through this whole packet; It contains the Lena Slater depo, Dr. King's deposition and --

A. Yes:.

Q. What Is this, Dr. Marshall's report?

A, Yes. It's been a while since I've reviewed all of that. I mean I haven't reviewed it all in the last couple days or anything.

Q. You reviewed this for purposes of forming

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an opinion in this case?
A. Yes.
Q. Dr. King's office records and the Mt. Sinai records?
A Yes.
Q. And this is the total of everything you reviewed. in this case?
A No, there was some X-rays.
MR. JACKSON: Yes, Mt. Sinal X-rays.
A. That are here.
Q. Okay. I take it then you didn't review the depositions of Nurses Tisdale and Rayburn?
A. (Witness indicated negatively.)
Q. You have to answer out loud.
A. No.
Q. And as a result of your review of these records, what opinion did you come to?
MR. JACKSON: With regard to what?
Q. To the case. I mean you said you were asked to form an opinion as to the case.
A. The question that I was asked was to review It to see If I felt that the surgeon had done anything that in my opinion was wrong in the

handling of the case,

Q. Okay.

A. I mean, that was the bottom line.

Q. And by wrong, just *so* we know what we're talking about, does that **mean** that he, his practice didn't meet the standard of **care** far a surgeon?

A. Yeah, right.

Q. And do you have an opinion?

A. *Yes.* I don't feel that he did anything that I would characterize as deviating from what would be considered appropriate.

Q. Why not?

MR. JACKSON: Can anybody answer that, Chris? How can you answer that question? I mean really. How can you answer that question? He says he didn't do; you're saying why didn't he do whxt he didn't do. That doesn't make sense.

MR. MELLINO: Well, I'll rephrase the question.

Q. I take it in your practice *you.* perform,

well, you perform carotid endarterectomies?
A (Witness indicated affirmatively.).
Q. Do you use shunts?
A. Yes.
Q. When? Do you always use a shunt or just sometimes you use a shunt?
A. I would say I do about 100 carotid endarterectomies a year, and in the last ten years I've not used a shunt maybe twice.
Q. What are your criteria for using a shunt?
A. Let's say what the criteria would be for not using a shunt. I would use it in every instance except if the artery is just absolutely too small to get a shunt in.
Q. Do you measure stump pressure before you --
A. I do not. I did for a year or two, but I do not anymore.
Q. Now you just go and open up and put the shunt In?
A. Put the shunt in.
Q. You know in this case that Dr. King didn't use a shunt for this procedure?
A. Yes.

Q. Since you use a shunt in every instance, why is it that that doesn't deviate from the standard of care?

A. Well, I have done carotid endarterectomies, probably near a hundred, without a shunt during my training. And I don't know that a significant number of people had the complication of stroke more than those that where shunted, in that small series.

Q. Well, you must think it's important to use a shunt if you do it in 98 percent of your cases?

A. Sure.

Q. Why Is it important to use a shunt?

A. I think it affords the maximum cerebral protection during a carotid endarterectomy.

Q. But you don't believe that the standard of care requires the use of a shunt?

A. No, I don't.

Q. Well, why not? I mean why wouldn't you want to afford the maximum cerebral protection to the patient?

A. I think that a substantial number of patients can be done without a shunt and be done

without complication. I think it affords the best, but I think that, I mean what you hope you achieve In a successful operation is to remove the build-up of plaque and have the patient be neurologically intact, And there are many things that can cause problems with that. And If you're in any type of a teaching situation where your clamp time may be longer or something like that especially, you're afforded extra time, I think, by having a shunt in.

I think It can be done without a shunt, but I think the shunt is a better way to do it. That's why I do it every time.

Q. Are you aware of the criteria that Dr. King used for shunting?

A. Yes.

Q. Do you know why he didn't use a shunt in this case?

A. My understanding was that he made an attempt at using a shunt and needed a smaller one and it was not available.

Q. Do you know the reason it wasn't available?

A. My understanding was that apparently they

did not have one in the hospital, or in the department, or in stock. There was a long discussion about how they go through purchase orders and what have *you*, that I **didn't** delve into very deeply.

Q. Do you have an opinion as to whose responsibility it **is** to have the shunt in the operating room?

A. Yeah, I think there's absolutely no question that the responsibility lies with the hospital.

Q. Bo you have an opinion as to whether or not Dr. King's criteria for using a shunt and not using a shunt are valid?

A. Oh, I think there's data that would easily Indicate that that's valid.

Q. If the shunt were available, would. that change your opinion regarding Dr. King, as far as not using the shunt?

MR. JACKSON: Let me understand you; you phrased that whole question, if the shunt were mot available *in* what?

MR. MELLINO: No, if the shunt were

available.

MR. JACKSON: Okay. And he elected not to?

MR. MELLINO And he elected not to use it after measuring the stump pressure.

MR. JACKSON: We're talking about in the circumstances of this case?

MR. MELLINO: That's right. And I'm asking him to assume that the shunts were there and Dr. King didn't use it,

A. But if the shunts were there, be would have used it, because that's why he asked for it.

Q. I'm asking you to assume it was there and he didn't use it,

MR. JACKSON: I'll object. Let me make sure I understand what you're asking. You're asking him to assume that the shunt was available and Dr. King knew it was there, and in spite of knowing it was there and it was available to him, he did not use the shunt under these circumstances. Is

that what you're asking him?

MR. MELLINO: Well, *you.* threw in the word "know," that he knew it was there.

MR. JACKSON Well, he just said the Doctor asked for it and was told it wasn't --

A. I mean. if he asked for it -- let's make it real clear -- If he asked for it and is told it's not there, that he can't have it. Now whether he can't have it because there's one there and they can't find it, or if he can't have it because there is one there but It's on the floor and contaminated, or If he can't have it because there isn't one in the hospital, or if he can't have It because it's the only one there is is in California, makes absolutely no difference. If he can't have it, then it's as good as not ever being anywhere around.

Q. Okay. Let's go back to the hypothetical. Assume that it is there, that he knows It is there, that he can use it, but he doesn't use it. Make those assumptions.

A. All. right,

Q. Then --

MR. JACKSON: In this case?

MR. MELLINO: Yes, in this case,

Q. Then --

A. So you're saying in a hypothetical case that has a stump pressure in the range of 20 --

Q. Right.

A -- and the shunt is available, should he use a shunt? I think he should, if it's available to him.

Q. And would the failure to use that shunt: be negligence?

MR. JACKSON: Objection.

A. That's -- not necessarily.

Q. Why not?

A. Because we know that people can be operated on successfully without it. I think it would afford better cerebral protection.

Q. Are there any figures on patients that have had a carotid endarterectomy without a shunt where their stump pressure was measured. beforehand?

A. Oh, I'm sure there are.

Q. And do *you.* know what the incidence of

stroke Is in a case where the stump pressure was less **than** 50?

MR. JACKSON: **And** what?

A. Well, let me tell you, there are many schools, okay, of thought. Some people say there have been those, of those people who use stump pressures, there are those who say a stump pressure of 50 is a critical level. There are others who say a stump pressure af 20 or 25 is a critical level. There are others who say in their series of reviewing stump pressures, it really made no difference with respect to the incidence of stroke,

All that that stump pressure does is give you some assessment of the collateral circulatian of the brain. It gives you some assessment as to the brain's need for perfusion during the course of the carotid endarterectomy. That doesn't necessarily relate in a direct proportion to the incidence of stroke associated with a carotid endarterectomy.

If indeed that were the case, then all people who had. strokes, you would assume, would be

on the basis of hypoperfusion because the carotid was clamped. I mean even when you use a shunt, you clamp the carotid for a period of time. It's a shorter period of time, but I don't know that most people feel that people who have intraoperative strokes are based mostly on hypoperfusion.

Q. You don't believe that the incidence of stroke is any higher with the stump pressure of 20 than, say, 80?

A. It could be, But it's determined not merely by the stump pressure. It's also determined by how long it takes to do the operation.

Q. Well, did it take an inordinate amount of time to do the operation?

A. I don't think so. E think most pesple feel that it takes between 20 and 25 minutes to clamp the carotid, open it, do an endarterectomy, and restore flow to the internal carotid artery.

It probably can be done faster, but by doing It faster I think that the areas of technical shortcomings in the completion of the

endarterectomy, it just takes a certain amount of time to adequately remove that buildup of material.

Q. Well, how much longer does it take to use a shunt than not to use a shunt?

A In the performance of the entire operation?

Q. Yes.

A I would guess maybe a minute 31 two. Depends on how much longer it takes to plat the shunt In.

With the shunt in place, I've had the shunt in place for well over an hour without any untoward effects, and I felt very comfortable with that. By the same token, I would feel very uncomfortable if I had to clamp the carotid artery for over an hour without a shunt in place.

Q. Bo you have any opinion regarding whether or not the hospital personnel, whether they comported with the standard of care required of them?

MR. GOLDWASSER: Objection.

MR. JACKSON: Objection. Chris, I think he told you that what he was

asked to do and the opinion he's going to render in this case had to do with the standard of care as it related to Dr. King, and that's what he's expressed for you, And that's what he's going to testify to in this case. That's what he was asked to do.

MR. MELLINO: Well, then, he can just answer no to the question. if that's the question.

MR. JACKSON: Me wasn't asked to render those opinions.

MR. MELLINO: I can certainly inquire into whether or not he has an opinion.

MR. JACKSON: He's not going to render any opinion in that regard at the trial of this case; I can tell you that.

MR. MELLINO: Well, can't he tell me that? He's under oath.

MR. JACKSON: I understand that, but what I'm saying to you is you're entitled to inquire into the opinions

this man is going to state at the trial of this case on Direct Examination, and the basis for those opinions. As it relates to the hospital personnel, he told you what he was asked to render, what the opinion is, and I'm representing to you right now that the opinions that he will render on Direct Examination relate to the care of Dr. King.

Go ahead. Go ahead; I objected, I stated my basis. If you have an opinion in that regard, Doctor, and you want to share it with Mr. Mellino, do so.

Go ahead and ask your question.

MR. MELLINO: All right. Let me rephrase the question then so we can all be happy.

Q. Are you going to offer an opinion at trial in this case on the conduct of the nurses?

A. On the conduct of the nurses?

Q. Yes, or any of the hospital personnel?
A. Well, you've asked me what my feeling is about whose responsibility it is to have the shunt available. I mean that's what you're asking; is that right?
Q Well, no. I guess I'm asking $6: you're going to testify at trial that you think any of the hospital personnel were negligent?
A. If E was asked do E think. it's the responsibility of the hospital to have that shunt there, I would say yes. To single out who would be, would be impossible.
Q. Okay, all right. And we already covered that, so I guess other than that, do you have any other opinions regarding the hospital personnel?
A No.
Q. Do you have an opinion, or are you. going to offer an opinion at trial, as to what the proximate cause of Felicia Zoberman's injuries are?
a. No.
Q. Do you have any, or are you going to offer any other opinions besides the ones you've already

told me regarding Dr. King's care, and possibly the responsibility for the shunt; do you have any opinions besides those that you're going to offer at trial of this matter?

A. I mean, not that I know of. I guess I don't understand what you may be getting at. Maybe I'm missing the point here.

Q. Well, the point is khat I'm here to find out what you're going to say at trial whenever you. testify next week sometime. And, you know, so I just want to be told what opinions you hold and what opinions you're going to give at the trial.

A Okay.

MR. JACKSON: I think he's stated those for you.

Q. That's fine. That's all I want; I want to be sure those are your only opinions as far as Dr. King is concerned.

Your opinion, if I may attempt to summarize It, is that this procedure can be dane with a shunt or without a shunt within the standard of care, regardless of the stump pressure measurement?

A. I think it can, yes,

MR. MELLINO: Let me take a couple minutes to look over your CV, but I think I'm done,

Q. Okay, let me just cover this one area with you again, because I don't think I'm clear on it. Is it your opinion regarding the nonuse of the shunt, is that based on the shunt not being there, or the fact that it's not necessary. to use a shunt?

A. I don't think it's necessary to use a shunt 100 percent of the time. I think that in this particular situation, it may very well have been preferable to use a shunt, but at the, you know, you say can it be done. I think you can realistically anticipate doing this operation and still anticipate a successful outcome without a shunt. E don't think that's preferable, and obviously Dr. King didn't think it was preferable, because he would have preferred to use a shunt.

Q. Okay. And E know I asked this question before, but I'm not sure that you answered it, If the shunt was there, should he have used It?

A. I think if the shunt was there and available, that it would be best to be used, yes.

Q. Well, would it violate the standard of care not to use it?

MR. JACKSON: Under the circumstances that it was there and was available and he didn't use it?

MR. MELLINO: Right.

MR. JACKSON: I'm going to object to that, Chris, because there aren't any facts in this case that I'm aware af that are going, that have been presented or will be presented, that that's the case. So you're asking him to, you know --

MR. MELLINO: To assume those facts.

MR. JACKSON: But you're asking him to assume facts that don't exist. It's like saying assume that gravity is nonexistent and what happens.

MR. MELLINO: Well, I want his answer in any case.

MR. JACKSON: I abject, because

percentage?

A. I think it gives you just a little edge. Now it may only drop it from 2-and-a-half to 1-and-a-half, but if it's 1 percent out of a hundred and that person is your relative, you want it for them.

The other thing I tell my patients, going back to your question, is that they have ta understand that the risk of stroke may be only 1 or 2 out of 100, but if you're that one, it's 100 percent for you. You don't get 1 percent of a stroke, it's a full-blown stroke.

Q. Do you think that the unavailability of equipment in the operating room increases the risk of stroke?

A" Oh, I think it can.

MR. MELLINO: I have no other questions.

MR. GOLDWASSER: No questions.

MR. JACKSON: Thank you.

MR. GOLDWASSER: Can we waive signature?

MR. JACKSON: Do you have any problem

nothing but the truth in the cause aforesaid; that the testimony then given by him was by me reduced to stenotype in the presence of said witness, afterwards transcribed upon a word processor, and that the foregoing is a true and accurate transcription of the testimony so given by him as aforesaid.

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 of any 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 Toledo, Ohio, on this 28th day of January, 1988.

Kenneth P. Gallaher

KENNETN P. GALLAHER
Notary Public
in and for the State of Ohio

My Commission expires January 10, 1992.

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CURRICULUM VITAE

NAME: Ralph C. Whalen, M.D.

RESIDENCE ADDRESS: 2525 Olde Brookside Drive
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I.D. NUMBER: 34-1251394

PHONE: Home: (419) 536-1202
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DATE OF BIRTH: June 20, 1947
Toledo, Ohio

MARITAL STATUS: Married - Wife: Peggy L.

CHILDREN: 2

EDUCATION:

Undergraduate
Bowling Green State University
Bowling Green, Ohio
1965-1969
B.S. Degree, Biology

Medical School
Medical College of Ohio at Toledo
Toledo, Ohio
1969-1972
M.D.

Internship
Akron City Hospital
Akron, Ohio
1972-1973
Rotating Internship

Residency, Surgical
Akron City Hospital
Akron, Ohio
1973-1977
Chief of Surgery: C.W. Loughry, M.D.

FELLOWSHIP: Fellowship in Peripheral Vascular Surgery
Cleveland Clinic Foundation
Cleveland, Ohio
1977-1978
Chief of Vascular Surgery: Edwin G. Beven, M.D

BOARD:	Specialty - Surgery 1978 Certificate Number: 23964
	Specialty - General Vascular Surgery December 18, 1983 Certificate Number: 383
DEGREES AND HONORS:	B.S., Bowling Green State University
	M.D., Medical College of Ohio at Toledo
	Diplomate, National Board of Medical Examiners (135394)
	Chief Resident - Surgery 1976-1977
	Diplomate, American Board of Surgery, 1978, (23964)
LICENSURE:	Ohio - 35931 (1973)
	Michigan - 49504 (1985)
POSITIONS HELD:	Assistant Director: Peripheral Vascular Laboratory, The Toledo Hospital, Toledo, Ohio
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	Assistant Director: TVI Laboratories Toledo, Ohio
	Assistant Professor: Medical College of Ohio at Toledo Toledo, Ohio
MEMBERSHIPS:	Academy of Medicine, Toledo & Lucas County
	Ohio State Medical Association
	Peripheral Vascular Surgical Society
	American College of Surgeons (1981) Fellowship
	Society of Clinical Vascular Surgery Toledo Surgical Society

MEMBERSHIPS:	(Cont.)	International Society for Cardiovascular Surgery
		Midwestern **Vascular** Society
HOSPITAL STAFF APPOINTMENTS:		The Toledo Hospital, Toledo, Ohio
		St. Luke's Hospital, Maumee, Ohio
		Medical College of Ohio at Toledo, Toledo, Ohio (Courtesy Staff)
		Flower Hospital, Sylvania, Ohio (Courtesy Staff)

BIBLIOGRAPHY

PAPERS PRESENTED

Whalen, R. C., Sharp, W.V., Richenbacher, &.E.: Comparison of Thrombosis Inhibition of Aspirin, Dipyridamole and Dextran: Cleveland Surgical Society, January, 1976: Cleveland Vascular Society, April 1976.

Dosick. S.M.. Whalen, R.C. .: Preangiographic Diagnosis of Profunda Femoris Disease with Doppler Ultrasound: Non-Invasive Diagnosis: International Vascular Congress II, February, 1979, Scottsdale, Arizona.

Dosick, S.M., Whalen, R.C.: Atheroembolism: The Role of Axillo-Femoral Bypass: Peripheral Vacular Surgery Club (American College of Surgeons), October 20, 1979, Chicago, Illinois.

Dosick, S.M., Whalen, R.C. : Comparison of Oculo-Plethysmography (Kartchner) and the Ultrasonic Arteriograph: Peripheral Vascular Surgery Club (American College of Surgeons), October 20, 1979, Chicago, I11inoie.

Dosick, S.M., Whalen, R.C.: Prevention of Deep Vein Thrombosis in Total Hip Arthroplasty: External Pneumatic Compression for the First 24 Hours: Ohio Chapter American College of Surgeons, May 10, 1980.

Dosick, S.M., Whalen, R.C., Boynton, L., Cooke, R., Sutherland, e.: Prevention of Deep Vein Thrombosis and Total Hip Arthroplasty: External Pneumatic Compression for the First 24 Hours; The Cleveland Vascular Society, May 28, 1980.

Dosick, S.M., Whalen, R.C., Brown, O.W., Blakemore, W.S.: Distal Bypass Grafts for Limb Salvage: Cleveland Vascular Society, May 28, 1980.

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PUBLICATIONS:

Dosick, S.M., Whalen, R.C.: Preangiographic Diagnosis of Profunda Femoris Stenosis with Doppler Ultrasound, 2nd Edition, Non-Invasive Cardiovascular Diagnosis. Editor: E.B. Dietrich, P5G Publishing Company, Inc., 1980.

Dosick, S.M., Whalen, R.C.: Doppler Segmental Examination: Differentiation of Hemodynamically Significant Aortoiliac, Profunda Femoris and Superficial Femoral Artery Lesions, "Non-Invasive Assessment of the Cardiovascular System", Editor: E.B. Dietrich, PSG Publishing Co., Littleton, MA, 1982, Pg. 381.

SCIENTIFIC EXHIBITS:

Dosick, S.M., Whalen, R.C.: Non-Invasive Carotid Screening - A Comparison: Ohio State Medical Association, May 6-10, 1978, Dayton, Ohio.

Dosick, S.M., Whalen, R.C.: Non-Invasive Carotid Screening - A Comparison: American College of Surgeons, October 16-20, 1978, San Francisco, California.

Dosick, S.M., Whalen, R.C.: Non-Invasive Carotid Screening - A Comparison: American Heart Association, November 12-16, 1978, Dallas, Texas.

Whalen, R.C., Dosick, S.M., Boynton, L., Cooke, R., Sutherland, G.: Prevention of Deep Vein Thrombosis in Total Hip Arthroplasty: External Pneumatic Compression for the First 24 Hours; Ohio State Medical Association, May 1979.

Whalen, R.C., Dosick, S.M., Boynton, L., Cooke, R., Sutherland, G.: Prevention of Deep Vein Thrombosis in Total Hip Arthroplasty: External Pneumatic Compression for the First 24 Hours; American Academy of Orthopedic Surgeons, February 7-12, 1980, Atlanta, Georgia.

Whalen, R.C., Dosick, S.M., Boynton, L., Cooke, R., Sutherland, G.: Prevention of Deep Vein Thrombosis in Total Hip Arthroplasty: External Pneumatic Compression for the First 24 Hours; American College of Surgeons, May 10, 1980, Chicago, Illinois.

Dosick, S.M., Whalen, R.C.: External Pneumatic Compression: Routine Use on the Orthopedic Ward: American College of Surgeons, October 1981.

MEDICAL SYMPOSIA:

Dosick, S.M., Program Co-Director, Whalen, R.C.: Participant: Cardiology and Peripheral Vascular Disease for the Family Physician, The Toledo Hospital. May 20, 1978.

Dosick, S.M., Program Director, Whalen, R.C.: Participant: Peripheral Vascular Workshop for Nurses, The Toledo Hospital, April 27, 1979.

Dosick, S.M., Program Co-Director, Whalen, R.C., Participant: Cardiology and Peripheral Vascular Disease for the Family Physician, The Toledo Hospital, May 12, 1979.

Dosick, S.M., Program Director, Whalen, R.C., Participant: Peripheral Vascular Workshop for Nurses, The Toledo Hospital, March 6, 1980.

Dosick, S.M., Program Co-Director, Whalen, R.C., Participant: Cardiology and Peripheral Vascular Disease for the Family Physician, The Toledo Hospital, May 3, 1980.

Dosick, S.M., Program Director, Whalen, R.C., Participant: Peripheral Vascular Workshop for Nurses, Hotel Sofitel, Toledo, Ohio, April 23 and 24, 1986.