Discussion

DR. WALLACE P. RITCHIE, JR. (Philadelphia, Pennsylvania) Dr. Haller, Dr. Copeland, Members, and Guests. I appreciate the opportunity to discuss this paper. It is always pleasant to hear data from which there appears to be support, almost but not quite to a statistical certainty, of a very strongly held prejudice on my part and yours, too. It is particularly strong in my case because that prejudice is the basis of how I make my living—namely, certification.

I suspect all of us in the room share that prejudice about the meaning and value of certification in surgery and believe that it does connote, in some ill-defined way and to an uncertain but real degree, the notion of competence. That is my prejudice; I think it is yours too, that is, that this relationship is true and correct. Unfortunately—and this is one reason that the paper is of significance—there have been very few studies, published or otherwise, which have attempted to test this hypothesis directly.

Now in the good old days, the fee-for-service days of 2 or 3 years ago, it really did not matter very much—except, of course, to the patient—whether this hypothesis was correct or not, because in most instances, hospital privileging and credentialing were divorced from the process of certification. You did not have to have a certificate to make a living. And that position, for antitrust reasons, was endorsed by the member boards of the American Board of Medical Specialties and by the American Board of Surgery, if not exactly encouraged about it.

Now all of this has changed in the new days, the not-so-good new days. Managed care has placed a meaning on certification which has never been officially intended for it, and it is being marketed. Certification is being marketed as a measure, and sometimes the only measure, of the quality and competence of physicians within a plan. In other words, certification sells the product. The end result is that more and more of you do have to have a certificate if you are going to make a living.

So how does the noncertified physician or surgeon—and there are not a lot of those, still too many—respond to this palpable threat to their economic viability. Well, I think a reasonable approach would be to try to become certified. At least in surgery, and not so much in some of the other disciplines, the vast majority of the noncertified surgeons have already been down that road and have been unsuccessful at it and are not too willing to try it again.

So the strategy that is emerging nationwide is that the disenfranchised, if you will, are challenging the fundamental validity of the certificate, of certification and the meaning of certification, whatever the discipline. And they are challenging at every turn by looking at the qualifications required of individuals to obtain it and challenging those qualifications.

The American Board of Surgery has been touched by this. It has not been hurt too badly. The American Board of Internal Medicine is gearing up for a big onslaught, and the American Board of Emergency Medicine has been hammered by it in a well-financed class action suit, the successful conclusion of which would call all standard setting into question and would essentially render every certificate, at best, compromised and, at worst, meaningless.

So I think it is very important for the board movement as a whole that the virtue of certification be demonstrated, and demonstrated in the terms that we saw here, that is, in terms of outcome. It has been difficult to do in the past.

There has been one study published in the *Annals of Internal Medicine* that showed that certified internists have better outcomes with complex disease than noncertified ones. There is an unpublished investigation by the California State Board of Medicine which showed that certified physicians have fewer disciplinary actions than noncertified ones. And there is an unpublished study from the Leonard Davis Institute which shows that certified anesthesiologists can rescue patients who are in trouble better than noncertified ones.

And now this tantalizing piece of information from Dr. Rutledge and his colleagues, I think, is very, very timely and very, very useful.

Now, it is not perfect. We are not told whose certificate these board-certified surgeons hold. I hope it is not the American Board of Abdominal Surgery. And we hope that only ABMS member boards are in this category. And we are not told whether or not more of the noncertified surgeons practice in the smaller hospital than the certified ones, and I am quite sure that is the case. We are not told whether the noncertified surgeons have comparable previous experience with ruptured abdominal aortic aneurysm than certified ones—and I am sure they do not either. And so on. So the data are flawed—and perhaps Dr. Johnson would like to comment on that. But, flawed as the data are, at least they are flawed in the right direction!

Now there is just one other message here that I would like to touch on briefly; it deserves comment.

In 1995, there were 835 surgeons certified by the American Board of Surgery residing in North Carolina. And if you extrapolate from data developed by the Board and the college, it is likely that approximately 500 of them actually perform a broad range of general surgery. In contrast, in 1995, there were only 28 surgeons in North Carolina who hold the certificate of special or added qualifications of general vascular surgery.

Now with a caveat that we do not know the contribution of thoracic surgeons to abdominal aortic aneurysm surgery in North Carolina, what this tells me, at any rate, is that the lion's share of aneurysm surgery done in the state of North Carolina is done by those who do not possess a vascular certificate. They are general surgeons.

And maybe regionalization is the answer to this, maybe not. But until that nirvana arrives, I think the message is that today, as much as ever, we need to insure that general surgery residents are trained well in a wide spectrum of vascular surgery, particularly if they are going to practice in a rural area.

And surgery programs are doing well in this regard. The average finishing chief resident of surgery has ten aneurysms under his belt when he graduates and 88 major vascular reconstructive procedures at the conclusion of his training. This is much improved over the past, and I hope it will continue.

George, I enjoyed this paper very much indeed.

DR. JAMES M. SEEGER (Gainesville, Florida): Thank you, Dr. Haller, Dr. Copeland, Members, and Guests.

This is an important paper, I think. Its importance is that the study is population based and looks at the relationship between

the mortality of ruptured abdominal aortic aneurysms and risk factors. But, more importantly, it looks at statewide care rather than just a single institution, which is what much of our data have been based on.

As Dr. Ritchie said, the findings are not particularly surprising, but do support most people's feeling of improved mortality with increased hospital resources and training and experience of surgeons.

I just have three questions for Dr. Johnson.

The incidence of abdominal aortic aneurysm and ruptured abdominal aortic aneurysm was increasing over the time period of the study. How was this influenced by the change in the average age of the population? Is the population in North Carolina aging like it is in Florida?

Second, how do you explain the difference in death rate between females and males with ruptured abdominal aortic aneurysms? Was there a change in the incidence of ruptured abdominal aortic aneurysm for females? Were females more likely to have complications? I think that is an intriguing observation.

And, finally, to echo what Dr. Ritchie has said, what do we learn from this about practice patterns? Was there really a relationship between board certification and experience with ruptured abdominal aortic aneurysm? Could you determine that most of the aneurysms and ruptured abdominal aortic aneurysms were being done by the board-certified surgeons and, therefore, were these two linked?

I enjoyed this paper very much and appreciate the opportunity to discuss it.

DR. EUGENE H. SHIVELY (Campbellsville, Kentucky): Dr. Haller, Dr. Copeland, Members, and Guests.

Dick Field and I may be the only members of the Southern Surgical who work in hospitals with less than 100 beds. And this is a particular problem, at least for me in a small hospital, and we have three other board-certified surgeons.

There is no question that vascular surgery requires special skills, but some of us in small hospitals do not have the opportunity to get those regularly and yet we are still confronted with patients with ruptured aneurysms in an aging population. In the United States, approximately one third of the population still lives in rural areas. And since 1990, small towns with populations of 5000 to 15,000 have actually started increasing in population as people are moving away from urban areas, trying to get away from violence.

I see approximately two or three patients a year who have ruptured abdominal aneurysms. We do fairly well with the patients who have controlled aneurysms that are ruptured in the retroperitoneal space and are stable. We usually transport these patients by helicopter to a tertiary care center; however, we do very badly with patients who have free perforation. And even with two board-certified surgeons helping each other, most of these patients, in my experience, have died.

I have two questions. What percent of your patients from small hospitals were unstable on initial presentation and had free peritoneal rupture? And the second question is, how can small town surgeons and small hospitals better prepare themselves to handle these life-threatening emergencies?

I enjoyed this paper very much and would like to congratulate the authors on this great work. Thank you.

DR. ROBERT B. SMITH III (Atlanta, Georgia): Thank you, Dr. Haller, Dr. Copeland, Members, and Guests.

Dr. Johnson and his co-authors have provided important new information in our understanding of abdominal aortic aneurysms. Given that the population is aging, the incidence of aneurysms is truly increasing, the cost of care of patients with ruptured aneurysms is progressively rising, and, finally, that we have failed to improve the salvage rate of that operation over the years, it seems to me that the authors have made a good argument to consider routine screening of the population at risk to select candidates for elective aneurysm repair instead of simply waiting for undetected aneurysms to rupture with all that approach entails in terms of additional hospital cost and loss of late life.

Do the authors have any idea of the annual cost of ultrasound screening the population of the state of North Carolina at, say, 60 years of age? Would the cost not be largely offset by the additional expense currently required for providing complex care to elderly patients with ruptured aneurysms? Certainly, many years of useful older life could be saved by a more systematic diagnostic approach.

I thank you.

DR. JOHN A. MANNICK (Boston, Massachusetts): Thank you, Mr. Vice President. Ladies and Gentlemen, I, too, believe that Dr. Johnson and his co-authors have asked a very important question; namely, do training and experience matter in terms of outcome? And thank God for most of us here, the answer was yes.

I have only two questions of Dr. Johnson.

Number one, George, I suspect that better trained surgeons may have been at the larger hospitals, and I would like to ask you if those two variables coalesce. Are you really measuring the same thing by those two statistically significant findings?

And, finally, as Dr. Ritchie touched on, the question of added certification of vascular surgery arises, obviously, there are very few such surgeons in the state. Did you look to see what these surgeons were doing? Were they indeed operating on ruptured aneurysms more than the average general surgeon? And, if so, how were they doing?

Again, I enjoyed the paper very much. Thank you.

DR. WARD O. GRIFFIN, JR. (Lexington, Kentucky): Dr. Haller, Dr. Copeland. I am sure that the authors were concerned about the fact that the incidence of ruptured aneurysm has not decreased over the 5 years that they looked at this. I am very concerned about that, and I suspect it is going to get worse.

Unlike what Dr. Smith just said, what does it cost for screening ultrasound on a bunch of patients, I think that the trend today with managed care is not to do any tests and that we are going to have an increase in ruptured aneurysms because they are going to be missed by the gatekeepers. I wonder if Dr. Johnson would speculate on that.

Thank you very much.

DR. GEORGE J. JOHNSON (Closing Discussion): I want to express my appreciation for each one of the discussants. I am delighted that this supports the occupation of Dr. Ritchie. I would hate to have seen any data that I presented hurt his future.

I think that it is important to look at these data that Dr. Ritchie has talked about, before the public or, even worse so, the press does. And I am sure that all of you are familiar in each state with the press getting hold of this type of database and presenting it in the newspaper before we have had time to analyze it. So I certainly agree that we should look at this.

To answer one of his questions about the board certification, the North Carolina Board of Medical Examiners only accepts for certification the American Board of Medical Specialties-approved certification process.

In answer to several other questions, Dr. Rutledge did not refine the data down to those with vascular certification. This is only the first certification process.

I would prefer not to use the word "flawed data," as Dr. Ritchie said. I would like to use the words "data raises many other questions." I think the data are somewhat flawed because the diagnosis may be incorrect. But Dr. Rutledge proposed that he thought that the diagnosis was correct in 95% of the cases. When it got down to the cost or to the shock or whether a patient was from a small hospital, he preferred not to look at the statistics as far as that was concerned.

As far as the males having a better survival rate than females, I asked this question. Apparently there is a paper showing that for some reason males with myocardial infarction get better attention than do females, and he wondered if this might not be the case in the patients with ruptured abdominal aortic aneurysm.

As I said, we could not break it down into any further analysis between vascular certification and the results. Dr. Shively, Dick Field did want to discuss this paper and left me with the comment that in the rural towns of Mississippi, they put the clamp on and call for help, and help comes by helicopter. I wish he had been here to discuss it; I would like to have heard about that.

But I do not know, we did not analyze the data down to the stability of the patient at the time, so I really cannot answer the question that you asked. I would hope that the question about the small rural hospitals—as we train more people in depth in general surgery and more board certification, these hospitals will be as adept as the large hospitals in taking care of these patients.

Dr. Mannick asked several questions about the vascular certificate which I cannot answer. There were several questions about screening. I have done another database study which shows the same data: that the incidence of ruptured abdominal aortic aneurysms and elective abdominal aortic aneurysms are both going up, to my disappointment. It is probably, as Dr. Rutledge and I both feel, due to the aging population, which is true in North Carolina. North Carolinians are becoming aged as well as the rest of the population. I think screening is a great idea, and I think it will be much cheaper to screen these people and operate on them electively than in the high-risk patient. In fact, I would liken it to mammography. I would think it might be cheaper to do this than to take care of the ruptured abdominal aortic aneurysm.

In closing, I think that Dr. Rutledge would like for me to emphasize that these are associations, and other things could be influencing survival of the patients, as several of the questions indicated. This should not detract from the importance of these associations, however. Furthermore, I am impressed with the integration of multiple databases that he used to refine the data for one data base.

Thank you again for allowing me to present this data.