CHAPTER

1

Presidential Address: "Quality and Neurosurgery"

DONALD H. STEWART, JR., M.D.

In speaking to you this morning, I would like to address the general topic of quality in neurosurgery. I would like to examine this question from three vantage points: first, from the position of the Congress of Neurological Surgeons; second, from the perspective of postgraduate education; and third, from the perspective of the practice of neurological surgery as it affects the neurosurgeon and the public.

The Congress of Neurological Surgeons has from its inception 32 years ago been dedicated to quality neurosurgery. The succinct constitution and by-laws promulgated by the founders of this organization are well worth your rereading. In reviewing the achievements of the Congress over the past 32 years, it is evident that its purposes have been served well by its leaders and members. Our goals have been accomplished reasonably well in the absence of a rigid organizational structure.

The goal of advancing neurological surgery by the dissemination of scientific knowledge has been achieved by the publication of *Clinical Neurosurgery*, which includes the major papers given at each annual meeting. I am certain this is a reference for you and others interested in neurological surgery in the world. Our monthly publication, *Neurosurgery*, is a great success, and is so because of the spirit and dedication of those of you who have participated in its formation and development. Both are prestigious quality publications and stand as examples of this organization's dedication to the dissemination of knowledge.

The efforts of the Congress to bring younger neurosurgeons into this organization have been remarkable. The development of the Residents Committee, the Residents Membership Committee, and this year the inclusion of residents on all the committees of the Annual Meeting Committee have enhanced the operation of this organization. The development of Special Courses on Monday has been a great success, and the more recent development of the Audiotape Program and the very well-received Videotape Library are activities which serve the interests of our

members in the finest way. All are examples of our continuing commitment to quality service and professional growth.

The Congress of Neurological Surgeons was happy to be the first organization of neurosurgeons in the United States to formally donate a sum of $25,000 to the Research Foundation begun by the American Association of Neurological Surgeons. Your Executive Committee feels that the acquisition of knowledge and understanding of the nervous system are of paramount importance. To this end, we felt that our support of this Research Foundation and its goals was of high priority.

We are proud of the newly formed Certification Committee under the leadership of Dr. David Kelly. This effort, directed at those neurosurgeons who seek assistance in preparation for Board examination, is a reaffirmation of our dedication to excellence.

To improve the quality of neurosurgery, both from an internal organizational perspective and to represent neurosurgeons more effectively in dealing with organizations other than our own, the Congress over the last 10 years has been a participant in joint activities with the American Association of Neurological Surgeons. We are pleased with the achievements of the Joint Education Committee, the Joint Committee on Devices and Drugs, and the Joint Socio-Economics Committee. The idea of a Spine Section was initiated by your past president, Dr. Al Rhoton. The Washington Committee, with the effective guidance of our Washington representative, Mr. Charles Plante, and the able chairmanship of Dr. Louis Finney is maturing and is of significant value to organized neurosurgery.

We petitioned for and were awarded one delegate to the AMA House of Delegates, which allows us a true participatory role along with the AANS delegate in that national body.

It has been inferred in the past that there is great difficulty attendant in the creation of joint activities because of the lack of control from the top in such situations and because of the communication difficulties which arise (1).

Perhaps we should here acknowledge that years ago the Congress of Neurological Surgeons decided that the purposes of this society and its members might be better served by delegating the governance of the Congress to a well-balanced Executive Committee, responsive and accountable to its membership but not subject to the cumbersome, slow, and internecine activities of a House of Delegates. Witness the often hesitant and contradictory actions of the American Medical Association, the American Bar Association, and numerous other organizations representing large groups.

The business of representing neurosurgeons is complex, and it is

tedious to deal with more than a few people. If it is time-consuming for the leadership—so be it. A participatory organization has never been the most efficient, but it is the most effective in the long run.

As we increase our own membership, it might be somewhat more difficult for any umbrella organization to claim that it is the sole representative of the neurosurgeons of the United States unless there is built into that organization a truly representative form of internal government.

Neurosurgeons have, in increasing numbers, become involved as participants in public policy development in matters relating to health care. Some of you are aware of our joint efforts, carried out through the Washington Committee, to create coalitions whose purpose would be to effect changes in the liability tort laws which would result in a more efficient liability system, a reduced cost to society, and a more just method of compensating injured persons. Such a coalition for tort reform has been formed in the State of New York. It would be premature to discuss any acheivements. We have, however, the support of the Business Council of the State of New York, representing all of the large and small businesses of the state. In addition, we have the support of the Blue Cross-Blue Shield organizations, the State Medical Society, the New York State Hospital Association, and the representatives of all the insurance companies which sell liability and casualty insurance in the state. We have begun to put together a legislative package which we hope will ameliorate the liability crisis which we face. Our work has just begun, and no victories can be claimed as yet.

Our coalition contains significant power brokers from business and industry, and we feel organizationally competent to challenge the unholy grip of the powerful trial lawyers association on the legislature and courts of that state.

The cost of the present tort system which compensates parties injured as a result of auto accidents, faulty products, or professional negligence, whether it be medical, architectural, engineering, or legal, is enormous. The public has yet to see that the cost of the system has reached the point of reducing their discretionary income. The return of 20 to 30¢ of the premium dollar to the injured party and the payment of over 50¢ of the premium dollar to the law profession for their self-professed and self-serving role as the protectors of the welfare of our citizens constitutes not only a gross social injustice but is, in fact, a social outrage.

We have not been blessed by a Supreme Court such as that here in Canada, which has decided that in the public interest there shall be by judicial decision a maximum payment of $100,000 for "pain and suffering (3)."

You have read recently that the Manville Corp. has applied for bank-

ruptcy as a result of lawsuits brought against it. It is likely that other such defaults will occur. These destructive effects on industry and subsequently on our own economy have arisen as a result of a litiginous society led by its profiteering advocates, hoping to cash in on their insurance lottery tickets and get more than the system can produce.

I hope each of you will seize the opportunity to develop or participate in a coalition for tort reform in your own state as we strive for the development of quality and soundness in public policy.

It is apparent to me that we have reason to be proud of our efforts directed towards quality education, quality research, and quality public policy. I do not think we can become complacent; rather, we should build on this foundation. In the following few minutes I will propose a number of changes which I hope will receive your careful consideration.

My second point is related to the quality of postgraduate neurosurgical training. I would like to begin by noting that we have provided about 100 training programs in the United States, giving the opportunity to bright young men and women to begin to become familiar with the surgical management of diseases of the nervous system (9). We can be well satisfied with our organizational accomplishments which have provided adequate numbers of well-trained individuals who may serve the public's clinical needs.

A question of importance concerns the pre-entry evaluation of these postgraduate students. In the United States there is a popular sentiment for college aptitude tests, law school aptitude tests, medical school aptitude tests, and graduate record exams. These were designed to allow a more rational and objective selection process for the progression of individuals from one higher level of education to another. I believe that the postgraduate training programs for neurosurgery should be considered of no less importance in view of the fact that they consume more of one's life than any single preceding segment of education. The pre-entry evaluation of individuals wishing to enter neurosurgical training and the subsequent selection process might well be improved by an analogous standardized testing process. Such a screening examination might well help determine the necessary temperament, motivation, and interests, as well as the broad educational achievements so necessary to a group contemplating a narrowing of the educational focus.

Next, I would like to propose that the training of neurosurgeons be done in a more flexible fashion. At present, many graduates of neurosurgical training programs go on to do fellowships in one special area or another prior to their certification or prior to their entrance into practice. They do so because they have felt a need for further experience before launching into a professional career or for the purpose of complimenting

the educational experience already received. The present requirements regarding specific durations of time spent in one program are wise, but that requirement should not act as an impediment to a rotation of a resident from one geographical area to another while still in his formal training. With the observed fact that some training programs are heavily weighted with expertise in one specific area and offer minimal exposure in other areas, it would not seem unreasonable to ascertain by a system of rotation that the trainee has had exposure in depth to the areas for which he will be held responsible by the public.

The Special Requirements used by the Residence Review Committee specify certain times to be spent studying areas such as the basic sciences, neurology, neuroradiology, and clinical neurosurgery. It seems unwise to consider these minimum time periods as maximums. It would seem more reasonable to adopt a system which is more flexible and matched to the educational needs of the trainees. Some individuals mature rather rapidly in terms of their acquisition of knowledge and technical skills; some mature more slowly.

In the interest of making training programs run smoothly, not only in neurosurgery but in other subspecialty areas, there is frequently the commitment on the part of a Program Director to an individual prior to the time he or she has even finished medical school. Such a commitment has implications for the Program Director and raises expectations on the part of the trainee. People change; energies and goals become altered; personalities become known and understood. I propose at the minimum a mandatory yearly review of the accomplishments of the trainee and a commitment to proceed further with the educational effort only after a positive evaluation has been accomplished. At present, many Program Directors perform in this mode.

Approximately 30% of the training programs in the United States do not require passage of the written Part One of the American Board of Neurological Surgery for completion of the training program. Certification by the American Board of Neurological Surgery is a voluntary process. The successful completion of Part One of this examination, which does not have to be taken for credit, at least gives some objective indication as to the measure of educational advancement of the trainee. I urge consideration in the interest of quality education of making this a mandatory requirement of all training programs. Indeed, I believe we can take a page from our Canadian colleagues and require complete certification of the trainee in neurosurgery prior to entering the practice of neurosurgery.

The responsibility for the determination of quality and competence cannot be left entirely to the credentialing bodies of the various hospital

staffs and hospital Boards of Trustees. The initial responsibility is ours, not theirs.

To achieve these suggested changes in the format of training of the neurosurgeon will require some changes in the Special Requirements of the Residency Review Committee (2). As you know, this is a long, laborious, and politically difficult job but one which I am confident that the Congress is willing to support. To achieve these suggested changes will also require a cooperative, constructive, and unselfish spirit among the Program Directors, as well as an adjustment of the present requirements for certification by the American Board of Neurological Surgery. Certainly, it will require a different set of expectations on the part of the trainee.

The goal of the Congress of Neurological Surgeons, as well as the other neurosurgical organizations, is to serve the interests of the public health and welfare. It is imperative that we act responsibly to ensure that the product of our training institutions is what we wish it to be and what the public expects it to be. Inherent are immediate risks but also inherent may be the greater loss of future public credibility if we fail to assume this responsibility. Through these efforts, I believe that organized neurosurgery can demonstrate its lofty ideals and perhaps more adequately ensure the continuing recognition by society of the quality of the neurosurgical practitioner and ensure to the highest possible degree that we are what we say we are.

My third point relates to the quality of the formal practice of neurosurgery. I would like to address this issue from the perspective of the public we serve and from that of the neurosurgeon. We must develop a coordinated system of manpower production which is responsive not only to the needs of the public but also to the professional needs of the neurosurgeon. Any discussion of manpower, of necessity, must include numbers. Over the last 6 to 8 years there have been increasing cries from various quarters that there are too many neurosurgeons. The issue has been aired in numerous articles in our literature. The President's Graduate Medical Education National Advisory Council, as you know, arrived at figures, with our cooperation, which indicated that 8 years from now there will be an excessive number of neurosurgeons (5).

The practicing neurosurgeons in our country, as well as some of the formal educators who have participated in the deliberations of the Joint Socio-Economics Committee over the last 10 years, have frequently reiterated their concern that there are too many neurosurgeons. This is a particularly frequent complaint in those parts of the United States that are heavily populated urban areas, but the complaint occasionally arises even from the rural community.

Last year at the Congress meeting in Los Angeles, Dr. Frank Padberg presented data retrieved from 339 applications submitted by neurosurgeons for fellowship in the American College of Surgeons between 1977 and 1981 (7). These persons had a median age of 40.9 years and a median time after certification by the American Board of Neurological Surgery of 2.98 years. The median yearly surgical workloads of these individuals constituted 29.1 cranial procedures and 36.2 laminectomies, adding up to 70.62 cranial and spinal operations per year and, with various other procedures, a total of 106 operations per year. These median figures afford some insight into what the public can expect from neurosurgeons who have been certified for almost 3 years and in practice for 5 years, and some insight into the economics of neurosurgery.

The figures presented by Dr. Padberg are of interest because I believe they represent about 2/3 or less of the surgical workload of the neurosurgeon, as determined a few years ago by a survey done by the Congress of Neurological Surgeons.

Those of you present in New Orleans several years ago recall the data presented by Dr. Charles Drake in his Presidential Address to the American Association of Neurological Surgeons (4). In that address, he reviewed figures relating to surgical workloads of neurosurgeons in the United States. That information caused some concern on the part of many neurosurgeons because he pointed out the relatively large number of persons doing a relatively small number of specific neurosurgical procedures. A recent article in the Mayo Clinic Proceedings outlined the number of cerebral aneurysms which are operated on yearly in the United States (10). The figures indicate that, on the average, there are approximately five surgical aneurysm cases per neurosurgeon.

Dr. Robert Petersdorf, in an article in the *Bulletin* of the American College of Surgeons, has perhaps addressed the issue accurately when he states that "Although it has been said that in the health services arena, supply creates its own demand, the demand for the procedure-oriented subspecialist is probably limited." He went on to state that "increased competition has made a sham of the concept of regionalization. The idea of having large urban hospitals, usually associated with medical schools, serve as tertiary care facilities, with smaller hospitals providing secondary and primary care, is sound." However, as he noted, "the idea has not worked out, partly because the tertiary care teaching hospitals that are dependent on referrals have trained their own competition, and the competition is now caring for the difficult patients, who used to be referred to the teaching center, in well-equipped and well-staffed community hospitals in the suburbs and small towns" (8).

One might ask if it is possible to maintain a continuing degree of

expertise as well as economic solvency in a practice resulting in 100 median operations per year. The matter should be of profound importance to the public at large, the members of this organization, and the Program Directors, who are in large part independent of significant controls and who essentially control the number of trainees entering practice.

If, in fact, the per-individual caseload is declining, as suggested by these studies, and if the projected surgical workload for the future will be less than it is now, one can ask "When does the practice of neurological surgery become less than desirable from the economic and professional quality point of view?" None of the factors contributing to the costs of running a practice of neurological surgery has ever declined . . . . staff assistants, supplies, rent, energy, transportation, liability insurance, etc. Using simple arithmetic and maximal reasonable reimbursement rates and the figures given above, and making allowance for the income produced by nonsurgical work, it is not unreasonable to suggest that we may be approaching a phase in neurosurgery which will require very careful analysis if the interests of neurosurgeons and the public are to be preserved.

We are at the moment witnessing an interesting assessment by the public of its former commitment to pay for medical services provided for those covered by Medicare and Medicaid. These plans are continually being reassessed by our elected officials and the voters. Any reduction in the amounts that government can expend for these services is going to impact, not only on physicians, but also on the more expensive hospital services being used. As a result, there will again be increased effort on the part of physicians and institutions to shift charges for services rendered to the private sector. The magnitude of the cost-shifting is already felt as a threat, and it is likely that a reverse squeeze on physicians, as well as institutions, will come from the private insurance sector. This will significantly affect the income of physicians in a negative fashion and, I might add, that might not be unreasonable in certain situations.

What is of concern to me when we look at the number of trainees entering the practice of neurological surgery, the figures I have just presented, the surgical workload trends, and the various economic forces that are operative, is the question of how we, as a group, can maintain the very high degree of skill implicit in the trust bestowed upon us by society. Ideally, it would seem that the only measure of importance is that of performance of practice-acquired skills and the judgments attendant to them.

I think we may no longer endure the disconnected and noncoordinated system of manpower production that we now enjoy. I am aware that the

very mention of any consideration of efforts directed at these questions raises within our ranks a divisiveness so overwhelming as to nullify any effective action on our part.

The internal turf problems appear insurmountable. The fear of action by the Federal Trade Commission stifles any concerted effort at quality maintenance for the public good.

The process and responsibilities associated with the production of neurosurgeons over the last 30 years are no longer totally appropriate. Different forces exist, and as a result different strategies must be adopted if we are to be responsible to the changing scene in which we live and work. I fear that we are too provincial in our views and suffer from an inability to engage in broader planning efforts, free from our own divisiveness and forces which we perceive as inhibiting.

As a beginning, I therefore propose that we go outside of our own neurosurgical organizations and secure the services of a prestigious body which will examine the data and make recommendations regarding a reasonable public policy for manpower production in neurosurgery. The fear of antitrust activity might be overcome by a report of an independent body such as the Rand Corp. or the Academy of Medicine. The Federal Trade Commission does recognize arguments related to a "rule of reason" which allow an opportunity to explain the public benefit of what appears to be an anticompetitive policy (6).

The guiding principle of any effort, whether as a result of outside study or internal action, is that we wish to continue to improve the quality of neurosurgical expertise available to our patients. To adopt this proposal and go forward with it has some risks. I do not think we can lose in the long run, but to achieve this goal will be uncomfortable to many. It will be more uncomfortable in the long run if we do not arise to the occasion now.

To address these areas of concern may seem to many as an impossible task and one fraught with such risk personally, politically, economically, and legally, that they should not be considered. I suggest that this is not the case; we must deal with them now. I say this because to address these problems is to address the quality of the state of the art of neurological surgery and the quality of the existence of those we treat.

Before concluding these remarks, I would like to share with you one final personal conviction. I believe that of even greater importance than the issues I have just discussed is that of securing peace in this world. Perhaps as physicians, we are knowledgeable of the medical consequences of nuclear war. We are certainly not experts in the process related to the politics of the production of nuclear weapons.

We are, however, placed in the peculiar position of being the ones who

would participate in the care of those damaged by the use of these weapons, and we are also, as human beings, as susceptible as anyone to the potential annihilating forces associated with their use.

I believe we have two opportunities: we must become better informed as to the medical consequences of thermonuclear warfare and we must help disseminate this information to our nonmedical colleagues. In addition, we must join actively in the debate surrounding the issue. By doing so, it is my hope that we might help forge an international policy which will result in the termination of the construction of nuclear weapons and the ultimate destruction of nuclear weapons themselves. To engage ourselves in this quest for peace is to act for our own human preservation and that of our children.

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