

The Graying of the Orthopedic Trauma Surgeon
A Presidential Address for the Orthopedic Trauma Association
September 30, 1995

In many ways Orthopedic traumatology in North America is showing signs of both its age and hopefully its maturity. I have had the privilege earlier in this meeting of welcoming all of you to the Eleventh Annual Meeting of the Orthopedic Trauma Association. This organization has grown dramatically during that period to achieve its goals of providing education, promoting research and advocating optimal care of musculoskeletal trauma. The meeting, thanks to the hard work of many of our members, is another highpoint for the association as it serves as the major forum in North America for discussion of advances in the treatment of skeletal injury. This meeting also marks the beginning of a new and successful endeavor into the education of orthopedic residents. Along with these successes however come problems. As I said in February when I accepted the presidency of this Association, that there would be a theme to this year revolving around the recruitment, retention and maturation of the Orthopedic Trauma Surgeon and that we would hopefully address some of the related issues. The association has given me the honor of being the first President to address the organization and therefore the opportunity to discuss with you the first of these issues “The Graying of the Orthopedic Trauma Surgeon.”

The recognition that the polytrauma victim required a different level of care was a realization of the late sixties and early seventies, now roughly twenty five years ago. A small group of Orthopedic surgeons around the country developed an interest in the care of these challenging patients and their

special musculoskeletal problems and began to investigate the area and develop specialized techniques for their care. Since subspecialization in Orthopedic surgery as a whole was in its very infancy and the opportunity for fellowships in any area was extremely limited, the care of musculoskeletal injury still represented a major proportion of the patient load of the practicing Orthopedic Surgeon. However that was soon to change as those caring for this difficult subset of patients began to realize that specialized procedures beyond the plaster cast and traction were necessary. Interested surgeons ventured to Europe to observe and learn first hand the AO techniques for fracture care which might be applicable to the trauma victim. By the late seventies, a significant body of expertise was now available in North America and surgeons began to visit Harborview, Hennepin County, San Francisco General, MIEMSS, and Parkland, just to name a few. From that interest, trauma fellowships were born in North America in the late 1970's. A small group of surgeons trained in both fracture care and Orthopedic traumatology first formed the Orthopedic Trauma Hospital Association later to transform into the Orthopedic Trauma Association. The face of Orthopedic practice in the United States was also changing as demonstrated by the data published by the AAOS in 1995. According to their statistics only 26% of those completing residency by the late seventies did fellowships whereas by the mid to late eighties 42% of those completing residencies went on to fellowship and 56% of those finishing in the late eighties and early nineties.

Thus the trends became very clear; trauma fellowships trained surgeons highly skilled in fracture care and Orthopedic traumatology and the

remainder of the Orthopedic surgeons began to slowly lose interest and perhaps expertise in treating what had been the mainstay of orthopedic surgery.. Again recent statistics from the AAOS have shown that hand surgery, Sports Medicine and spine surgery have been the topics of close to 50% of those completing fellowship training in the last 25 years and that trauma and fracture care comprise only about 4%. In fact for the period of 1989 to 1993, 26% of fellowships were in sports medicine, 15% in spine surgery, 15% hand surgery 14.5% joint replacement, 7 % pediatrics, 5% foot and ankle and only 3.3% in trauma and fractures. In a recent survey where surgeons could list multiple areas of practice concentration or focus and the mean number of areas per surgeon was 3.4 only 18% list trauma. This is significantly down from a similar survey in the mid eighties.

So where has all this maturity and gray hair gotten us?? Are the leaders of the late seventies and early eighties still our senior spokesmen and training our newest generation of trauma surgeons. Indeed some are, but many others have left the field taking with them their expertise and experience. The problem was expressed most succinctly by Sig Hansen in the introduction to his book on trauma protocols and I quote “Skilled traumatologists require at least three years after residency and fellowship to become optimally comfortable and efficient with traumatology, but usually put up with these circumstances for only approximately five years. They then switch to private general orthopedic practice, possibly specializing in postraumatic reconstruction or another related field and are exceedingly competent and financially successful because of the high level of skill they have developed in traumatology. However their departure represents an

enormous loss to the community as all trauma team members are exceedingly valuable regional resources in the areas where they practice.” In a recent manpower survey sponsored by the OTA and reported by Peter Trafton an attrition rate of 15% or 39 traumatologists per year left that specialty practice and only a maximum of 32 were produced. Of the academic programs responding to the survey twenty five percent did not have an academic traumatologist on faculty. By March of 1993, the situation had become so critical that the match for Orthopedic traumatology fellowships was disbanded since for the thirty fellowship programs there were only approximately fifty applicants with only one half of those being from North America.

At this point it is critical to discuss the major distinction between fracture care and Orthopedic Traumatology. The latter is care required by victims of high energy or life threatening musculoskeletal injuries sustained by only 5% of all patients. This distinction was most effectively established in a letter to the editor of JBJS again by Sig Hansen. However both fracture care and care of the polytraumatized patient suffer with the increasing lack of well trained traumatologists in both nonacademic and academic trauma centers. The lack of sufficient manpower to care optimally for severely injured patients is obvious. However more importantly as the majority of academic orthopedic surgeons have specialized and limited their patient care and research efforts to their very narrow areas of fellowship training, who is there to teach the next generation of orthopedic surgeons even about optimal modern fracture care?? Is your fellowship trained joint surgeon, spine surgeon, hip surgeon or hand surgeon really qualified or interested in

teaching residents the optimal techniques of fracture care and able to instill in residents a desire to pursue trauma as a career choice?? In addition as pressure grows both from economics and employers such as HMOs, some Orthopedic surgeons are forced to see a greater variety of problems and accept trauma victims in transfer much earlier. Who is teaching these surgeons about fracture care in the twenty-five percent of programs without an orthopedic traumatologist or in the large number of programs where there is only one Orthopedic trauma surgeon who can barely run fast enough to keep up with the clinical case load?? Who is doing the research to advance the field??

So why aren't we maturing gracefully?? Why does early attrition rob the field of some of its best resources??

The answers are plentiful and come from many sources. A recent survey conducted by Christopher Born, the chairman of the OTA fellowship and Career Choice Committee came up with a number of interesting answers from Trauma Fellowship Directors. The general surgical traumatologists noted similar trends and in 1994 in the Journal of Trauma Steve Shackford and others co-authored the report of the ad hoc committee on Careers in Trauma for the Eastern Association for the Surgery of Trauma. Problems occur in all phases of the process including recruitment of new Orthopedic Trauma Surgeons into fellowships, the retention of those fellowship trained surgeons and finally the career development of both nonacademic but especially academic trauma surgeons. Clearly recruitment is a major problem. According to Dr. Born's survey in 1995 there are 34 fellowship programs in North America, 29 in the United States and 5 in Canada. These

potentially could train a total of 57 fellows per year however there are only a pool of 40 to 45 applicants at this time. In the last two years only two institutions had more than 20 applicants and approximately another five had between 10 and 20. However without the match it is difficult to assess the effect of duplicate applications and the number of bona fide applicants. The outlook for increasing the applicant pool is not bright as overall the general trend recently has been away from fellowship training. A frequently cited problem in recruitment has been the lack of committed senior mentors and established role models for residents and medical students. In addition the lifestyle that they do observe for the young Orthopedic Trauma Surgeon is one that they may not want to emulate.

Once we train these bright dedicated young surgeons, why do they burn out in five years or so?? The demands on the traumatologist are both physical and psychological. The physical demands including the call schedule, the nighttime surgery and the unpredictability of the workload take a significant toll when compared to other areas of specialization. Relief for this phenomenon is not built into the schedule of most academic institutions where administrative, research and teaching responsibilities can not be as easily changed. In some centers the emergency trauma cases take a back seat to the more profitable and predictable elective schedule. A significant penalty is also paid in the disruption of their family life when compared to more elective specialties. The psychological issues similarly rapidly weigh on the young surgeon. They expose themselves frequently to a population of less cooperative and more unpredictable patients. Thus the risk of viral disease transmission is increased; a threat even in the face of optimal

protection. The perceived increased risk of malpractice litigation haunts every surgeon in the care of trauma and fracture victims. The reimbursement issues which involve both the appropriate payment for the quantity of work done, as well as dealing with a poorly insured segment of the population makes the lifestyle and the other sacrifices even more frustrating. It is particularly disheartening in polytrauma cases to do multiple procedures on separate extremities under the same anesthesia all to benefit the patient, only to be penalized by the rules of reimbursement. Finally there is a both a perceived and real lack of respect from insurance companies, state legislatures, the academic hierarchy and yes even sometimes from the chairmen of Orthopedic Surgery departments for the complexities of Orthopedic traumatology. The combined field of fracture care and traumatology is one, which in some peoples minds, the expertise still exists with each and every orthopedic surgeon no matter what his training, as demonstrated in a reasonably recent JBJS editorial.

The final issue and perhaps the most critical is the maturation of the Orthopedic Trauma Surgeon. If the hurdles of recruitment and the early years are overcome what does he or she have to look forward to in career development. Will they be doing the same thing they did at age 35 with the same fervor at age 50 or 60. It is unlikely and therefore what plans have been laid to have the career mature with the individual. Academic institutions are especially weak in developing a continuous and productive pathway for career development for the Orthopedic traumatologist. The young surgeon enters the institution and rapidly commences treating his patients with little protected time for research or career advancement. When he tires of the workload, few opportunities exist in the same career

line nor has any foundation been laid for career maturation.. The career in orthopedic traumatology should be one with a series of gradual phases perhaps progressing in an orderly fashion from the care of acute traumatic problems through a development of a complementary area of reconstructive and research efforts thus preserving the mentor and his vast experience.

And finally where are the solutions?? The solutions lie with us the Orthopedic Trauma Association. Education is the keystone to the solution. There has to be recognition on the part of state legislatures, insurance companies and academic institutions of the special expertise possessed by the Orthopedic Trauma Surgeon--- Some of this education needs to filter through to our Orthopedic colleagues. The realization that in 1995 the teaching of modern fracture care still remains an important portion of Orthopedic residency training and is probably best handled by the trained traumatologist is critical. This is a very different situation than twenty years ago when the required skills to care for fractures and trauma were fewer in number, simpler in execution and possessed by the majority of practicing Orthopedic surgeons. Secondly some formal changes in trauma fellowships might help with both recruitment and career development. Although some programs are implementing it in an informal fashion, the formal integration of a selected area of associated reconstructive surgery along with training in the treatment of acute injury might make a significant difference in both the desirability and the applicability of trauma fellowships. The newly trained trauma surgeon would present dual expertise and thus could become a more financially productive member of a large group and could likewise develop a long-term career pathway that is integrated and

dynamic. This organization must also continue to advocate for appropriate fee schedules and codes to achieve optimal reimbursement. Finally the perception of the role of the Orthopedic Trauma Surgeon must change to fit the realities of 1995 where they not care for the small group of severely injured polytrauma victims in Level I and II trauma centers but also provide the education, and teaching for both residents and practicing surgeons as well as produce the research necessary for growth in the field.