Orthopaedics today and tomorrow

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Several times over the course of the last several decades, I have expressed concerns over a number of challenges confronting the orthopaedic profession. I sense my perceptions proved correct sometimes but other times flawed. This logical human course has not kept me from continuing my inborn criticisms.

What prompted me this time to revive the issue was a conversation with a good friend, Loren L. Latta, PhD, a distinguished bioengineer deeply involved in the study and research of musculoskeletal disorders. I was commenting to him that despite the fact several hundreds of presentations dealing with fractures are listed in the scientific program for the forthcoming 2017 meeting of the American Academy of Orthopaedics (AAOS), not a single one listed was on the nonsurgical care of fractures, such as Colles' fracture or fracture of the humeral shaft or the tibial shaft.

Although I have been aware for a long time of the surgical dominance, I was somewhat shocked by the degree it had reached. I have repeatedly stated that the genesis of the trend is multifactorial, but a few factors can be appropriately identified as the main ones, the first being that surgery is more attractive; after all, performance was a major reason for our involvement in orthopaedics. The second factor is the financial benefits we receive from surgical treatment, which are enormously higher when compared to nonsurgical treatment.[1–4] A third factor, and probably the most powerful one at this time, is the fact that the orthopaedic profession seems to have literally turned over to the implant manufacturing industry the control of education. One needs only to glance at the AAOS scientific program to which I referred earlier and to similar programs of the many orthopaedic societies as well as the large number of orthopaedic publications, and the educational format of the vast majority of orthopaedic residency programs throughout the country.[1–3,5]

In addition, we should not ignore the fact that a number of borderline unprofessional compensation gimmicks are given to many. For example, coverage of expenses incurred for attending meetings is a common practice, as well as consultant positions in the supportive industrial organizations, as well as financial support for research ventures.[1–3,5] These observations would lead many to conclude, as I did, that the orthopaedists of today are not educated to be truly scientist/surgeons but cosmetic surgeons of the skeleton.[6]

To pretend these deeply imbedded factors in our professional and social lives can be easily reversed is a naive illusion. Only a major evolution, dictated by factors beyond the imaginable ones today, could possible alter the current state of thinking and practice.

The conversation I had with doctor Latta provided me with enlightening thoughts in a most profound way. He made me realize that orthopaedics could again become the leading specialty while holding high moral/ethical values as it did at one time. He said, for example, ''The most dominant group of MD's in the Orthopaedic Research Society are not orthopaedists, they are internists, rheumatologists, those folks who are getting closer to making joint replacement a thing of the past.'' He then proceeded to add, ''As new things are discovered in biology and medicine, there will be less and less need for surgical interventions. Surgery can be replaced and orthopaedic care will always be alive. People who only know how to do surgery will become the dinosaurs of medicine.'' The ''fine'' art of surgical ''techniques'' held so dearly by the current surgeons will be replaced by better methods using robots and technical specialists. Because technology is changing so fast, surgical techniques and instruments become obsolete almost as fast as they are developing. So, future doctors need to consider if they want to be surgical technicians or medical doctors?

What an incredible lesson. I should have had those thoughts long ago, but I did not. Inexcusable!

The lesson learned from doctor Latta resurfaced a number of observations I had made in previous years, among them our narcissistic obsession with anatomical correction of all deviations from the normal, no matter how insignificant and inconsequential they are. The risks of surgery are ignored in order to correct a couple degrees of angulation or rotation as well as a few millimeters of shortening. This ''obsession'' further ignores the fact that often the surgically corrected ''deformities'' are accompanied with similar, if not identical, cosmetic and functional results.[7]

It is almost impossible to believe there are those in our country who strongly propose that fractures that cannot be treated surgically should be managed by disciplines outside of orthopaedics, and the orthopaedists should treat only fractures by surgical means. What a foolish and suicidal idea.

Indeed there are millions of instances when surgery is the treatment of choice and its proper performance a ''must.'' However, objectivity in its application should take a high place in our decisions. Subjecting a patient to internal fixation of a fractured clavicle simply because it shows a few degrees of angulation, barely detectable with the naked eye,

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is inexcusable. The surgical scar is more likely to be noticeable. Likewise, treating a simple closed fracture of the tibia or humeral shaft by surgical means because it is wrongly assumed that the inconsequential initial shortening of a half centimeter will increase or the corrected angulation of a few degrees will progress, is equally questionable. When this philosophy is extended to the elderly, our lack of judgment becomes more obvious.

The influence our country has around the world on a multitude of areas also applies to the management of fractures. Since surgery in our country has become the most common treatment applied to virtually all fractures, other countries, particularly the underdeveloped ones, struggle to imitate our methods of care. In the process, they encounter complications in greater numbers, and the costs of care become unaffordable.

In virtually all walks of life, it is not uncommon to witness instances when in a thoughtful and sincere attempt to improve identified issues, unexpected consequences eventually evolve, indicating that rather than helping matters, they are made worse. I suspect one of these instances will be the currently popular Orthopaedic Guidelines.[7–9]

Providing guidelines for every orthopaedic condition to which the orthopaedic community must adhere could be interpreted as a mandate to be obeyed. If solid evidence of unquestionable validity of the guidelines were to exist, adherence to them should not be questioned. However, this is not the case at this time and perhaps will not be for a very long time. Guidelines are prepared by small groups of orthopaedists who, like the rest of us, are possessors of prejudices and biases. To expect from the orthopaedic community strict obedience to the ''mandates'' runs contrary to the long-standing traditions of freedom, which constitutes a basic tenet of the foundations of our civilization. In addition, it ignores the importance that the fear of litigation plays in the entire project.[6]

Rather than expecting orthopaedists to follow specific guidelines for every condition, they should be encouraged to take advantage of the many readily available educational opportunities: medical journals, post-graduate seminars and courses, conferences and other venues abound. Guidelines, despite their well-intentioned premises, may stymie progress and discourage innovation. It could fuel the attractive herd mentality that frees us from having to individually determine what is best for our patients. Others will do it for us.[6,8]

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