

Editorial

More and better orthopedics in the year 2000

Supplement 241 to this issue of *Acta Orthopaedica Scandinavica* attempts to forecast the immediate future of Scandinavian orthopedics. In his preface, Pär Slätis, president of our editorial board, points out that the data presented will hopefully stimulate further research on the changing problems of orthopedic disorders in the community.

Over the last two decades, the scope and volume of orthopedics have increased dramatically; the Scandinavian data reflect worldwide trends. The reasons for this unprecedented expansion are technical, epidemiologic, and sociologic.

The success of the arthroplastic techniques introduced in the early 1970s was immediately grasped by the general public. But society's inability to instantly provide the resources needed for operations of endless queues of elderly patients with painful hips catapulted orthopedics into the media and into domestic politics. However, had it not been for parallel demographic developments, this hectic period would soon have ended.

Thus, although we have had increased orthopedic resources, they have been rapidly consumed by a rising tide of locomotor system problems and needs, which, in turn, are directly related to demographic and sociologic factors. For example, an increasing proportion of the populations in the West is now over 65 years of age, and Scandinavia is leading the wave of octogenarians, which will not peak until well into the next century. Because both joint disease and hip fracture in the elderly increase exponentially from aged 50, the mere rise in numbers of the elderly explains why one fourth of the Swedish population is destined to undergo a major hip operation.

Finally, sociologic trends have increased the demands of the population for more orthopedic expertise. In this supplement, Nachemson has documented how the back pain epidemic has gathered force to now verily threaten the fabric and structure of the welfare system in Canada, in the United States, in the United Kingdom, and, of course, also in Sweden. During the period when physically demanding jobs have dwindled, sick listing and early retirement for back problems have increased by factors of 100 or more. Ironically, with shorter work weeks, longer vacations, and less heavy

manual labor, the number of sports-related injuries has sharply increased. In 20 years, the preoccupation with knee surgery and arthroscopy for ligamentous and meniscal injuries, and painful conditions without rational explanations, has developed into a severe competition with the needs of our elderly patients.

Thus, the sum total of the technical, demographic, and sociologic changes relevant to the handling of locomotor system problems has led to more and more resources being allocated to orthopedics; and, yet, these resources never seem to meet and satisfy the demands.

Problems

The difficulties in meeting demands of modern medicine with the taxpayer's money have led politicians to question the ways in which physicians establish priorities as regards patient care. Orthopedic surgeons will perforce have to devote more time and effort to justify whether or not a hip arthroplasty in an 85-year old woman should receive priority in relation to a 20-year-old professional hockey player with a fresh cruciate-ligament rupture. The public opinion still favors the hockey player; but the lobby of the elderly is gaining momentum, not least after medical economists have pointed out that the blind and the wheelchair-bound are far more expensive for society if left without replacement surgery.

The orthopedic profession seems to be finding it more and more difficult to cope with the queues of patients waiting for surgery. Alho has shown in this issue that the number of orthopedic surgeons in the 23 millions population of Scandinavia will increase from 48 to 61 per million in the period 1988 through 2000. However, this 30 percent gain may well be offset by further decreases in the number of work hours expected of orthopedic surgeons. Thus, over the last couple of decades, the work week in the public sector has dropped from 48 to 40 hours, and annual vacations have increased from 4 weeks or less to 5-6 weeks. Certainly, part of the increased production of orthopedic surgeons in Scandinavia during the past 20 years has been eroded by this trend of fewer working hours and more domestic responsibilities.

Solutions

My comments on orthopedic surgeons working less now than when I was young must not be misconstrued as pessimistic griping. The shorter work hours are matched, or perhaps rather explained, by the enormously increased productivity of an average orthopedic ward. When I was a resident, a female hip-fracture patient spend 4 months in bed and then required 1 month of mobilization before she left the hospital. The standard operation for coxarthrosis was arthrodesis of the hip, which required 6–8 weeks in a plaster cast; and a fracture of the femur was generally treated with traction for 8–12 weeks. Today, the entire ward is turned over in 1–2 weeks, for the average hospital stay is 2 weeks for a hip fracture, 7–10 days for a hip arthroplasty, less than 1 week for a tibial osteotomy; and, further, meniscus operations are now performed on an ambulatory basis. Clearly, the work routines in orthopedics are far more intensive now than they were a generation ago.

In most sectors of orthopedics, the increased productivity is paralleled by higher quality. A hip arthroplasty is preferable to a fusion, and for an elderly woman with a hip fracture, it is better for her in every way to be back in her home in 2 weeks rather than after 5 months. In addition, the advances in technology are potentiated by reduced risks of complications. More than 90 percent of the hip arthroplasties will function for at least 10 years, whereas perhaps one third of the arthrodeses of yesterday failed to unite. Today, a failed cervical hip fracture can be salvaged with an endoprosthesis, whereas in the past, a Girdlestone resection arthroplasty was common.

From the current literature, I could quote a hundred more examples of improved technology for solving orthopedic problems. However, we know far too little about the results of the clinically practicing orthopedic surgeon, and even less about the outcome of the handling of the few cases that do have complications. Accordingly, there is a great need for multicenter studies based on solid demographic data, such as the Gothenburg project, which includes all the Swedish hip arthroplasties; Ahnfelt et al. (1990) have published a report on 4,664 revisions following more than 50,000 arthroplasties. Similarly, Bengtsson and Knutson (1991) made a detailed study of 385 infected knee arthroplasties after a medium follow-up period of 6 years of 12,118 primary arthroplasties. Follow-up projects of this scope are still the exception, and they are perhaps easier to effect in Scandinavia, with its firm tradition of collaborating hospitals and strongly organized public sector; but sooner or later, both the politicians and the public will demand more accountability as to how orthopedics is using its resources. It is unlikely that we will continue to be immune to performance indicators—demands, for example, that the automobile industry and the air car-

riers are now exposed to. The beneficial effect of trends of this type is improved precision in the diagnosis, clearly defined indications, a better basis for the choice of methods, and, finally, higher quality surgery. In toto, this means that organized orthopedics should and must devote more time and effort to assuring quality in its everyday engagement.

However, most orthopedic surgeons are unaware of the full force of the extramedical factors that regulate our handling of individual patients: namely, organization, remuneration, and insurance—all three of which greatly influence the developments and the trends in orthopedics. Clearly, the back pain epidemic is caused by such factors; on the other hand, it is more difficult to explain why fusion of the spine for back pain is six times more common in the United States than in Sweden. Indeed, the environmental bias in the practice of orthopedics may very well severely limit the effectiveness of our speciality (Editorial 1989) and adversely affect our standing in society.

Although differences in opinion form an important element in the advancement of medicine, the great variations in the management of common disorders—such as hip fractures in the elderly (primary nailing or replacement arthroplasty), ankle fractures (internal fixation or not), scoliosis (school screening or not), arthrosis of the knee (osteotomy, unicompartement or total knee arthroplasty), and Colles' fracture (no fixation, a cast, or external fixation)—reflect that there are large areas where our speciality will need to develop a better consensus to confront the next century with a more structured maturity.

Further, the spectacular advances in surgical technology do not allow us to forget that the of orthopedics, as distinct from surgery, were formed when the procedures in the operating theater were subordinate to rehabilitation. This is precisely where we stand today as regards the back pain epidemic and hip fractures in the elderly. As pointed out in the current supplement by Nachemson and Thormgren, both of these sectors demand a social conscience on the part of the orthopedic surgeon: a more active collaboration with psychologists, social workers, primary physicians, and geriatric specialists.

In sum, orthopedic surgeons will have to reach out from their ivory towers—the operating theaters—to define in a broader context exactly where their true office is in an increasingly complex and interacting society.

References

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