EDITORIAL

Spinal Surgery: Systematic Trials Are Needed

Rolf Kalff

Accompanying the articles „Degenerative Cervical Spinal Stenosis“ by Meyer, Börm, and Thomé and „Degenerative Lumbar Spinal Stenosis“ by Thomé, Meyer, and Börm in this issue of *Deutsches Ärzteblatt International*

Spinal surgery – which straddles both neurosurgery and orthopedic surgery – has progressed enormously in recent years. Wide access to modern magnetic resonance imaging facilities and novel implants and surgical procedures are as much part of this advance as are the specialization and specialty themselves. These trends are reflected in a rising number of specialized wards or hospitals for spinal surgery. Simultaneously, health insurance companies have registered a clear increase in the number of disk operations and an increase in spinal fusion procedures in the United States. The industry is expecting an annual increase of 10% to 12% which corresponds to a six-fold increase for the time period 1993 to 2014.

Degenerative spinal stenosis is often referred to as a "forgotten" illness in the popular press, which is intended to suggest that if the stenosis were diagnosed and eliminated in a timely fashion, many patients could be helped. Thomé, Meyer, and Börm show that systematic studies with convincing results, to aid therapeutic decisions, are lacking. This directly affects the quality of existing guidelines. The operator's clinical experience and range of procedures performed often form the only basis for a decision. Further, degenerative spinal stenosis is not the same as cervical myelopathy or neurogenic spinal claudication. However, stenosis is often assigned the status of a disease. These circumstances dictate particular care and restraint in making a therapeutic decision. Before a surgical method is chosen, a definite indication is required. In the case of symptomatic lumbar spinal stenosis, conservative treatment should be employed to its full potential. New onset or progressive cervical myelopathy, however, is not sufficiently treatable with conservative methods. Contrary to what the authors say in their review article, motor evoked potentials are of prognostic value in this setting. But it is not only the right timing that is important; each procedure should be planned in such a way that, in terms of perspective, the optimum result can be achieved. This does not mean that the least invasive procedure is the ideal procedure. The view that spinal surgery only ever modulates the natural progression of degeneration often results in a kind of stepwise therapy with repeated interventions. The tendency to offer intermediate operations as temporary solutions should be counteracted very clearly.

Individual institutions cannot produce systematic prospective studies. The scientific societies will need to be called upon, which have not shown adequate participation in the past. An exemplary organization is the

Swedish Lumbar Spine Study Group, which uses the country's centralized healthcare system to collect data on all spinal procedures and evaluates these. No surgical method thus gains an untested advantage and popularity in clinical practice. In the German speaking areas, Spine Tango, the data collection system of the Spine Society of Europe, could fill this vacancy and form a basis for multicenter studies, should the scientific societies not wish to take this upon themselves. Any scientific activities should be strictly independent from the medicotechnical industry. This is true especially for newly established methods. Inappropriately close links between treating doctors and the medicotechnical industry culminated in a public hearing of the US Senate in February this year.

The individual results of spinal surgery can vary enormously, even if the indication was correct and the surgery conducted to perfection. It is therefore even more important to expand clinical research and quality control. Currently, there is no shortage of suitable surgical procedures to treat spinal stenoses, but their systematic study will have to be advanced. Targeted health services research and strict quality assurance criteria for all surgical institutions can guide the increase in numbers of surgical procedures and indications. The confidence in referring doctors and patients in spinal surgery can only be maintained in the longer term once the limitations of current methods have been clearly circumscribed.

Conflict of interest statement

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