

BOOK REVIEW

Controversies in Spine Surgery—Best Evidence Recommendations

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This book approaches one of the biggest problems in spine surgery: the lack of good clinical evidence. For the major part of daily routine clinical surgical practice, there is no clear evidence on which to decide to operate or not. For example, in the case of lumbar disc herniation, which is by far the most common pathology for spine surgeons, it was not until the randomised control trial of Peul *et al.* in 2007¹ that a certain benefit in early surgery compared with extended conservative treatment was shown to us.

The book is divided in several distinct sections: trauma, degenerative, technology and infection. Every individual chapter discusses one controversy and gives an overview of the available peer reviewed literature as well as the current class of evidence. In every chapter, one or more 'Pearl boxes' summarise the key points.

Chapter 1 gives an introduction on evidence-based medicine and discusses its problems in spine surgery, for example the blinding (surgery versus conservative treatment) and patients' preference for surgery.

Section 2 comprises 10 chapters on spinal trauma from clearing the spine, over the management of different fracture types in the cervical and thoracolumbar area. The strongest evidence can be found in chapter 10, however, for not giving steroids in spinal cord injury. Unexpectedly, the NASCIS trials failed to show any benefit in giving high doses of steroids in spinal cord injury; on the contrary, more serious adverse events were observed in the treatment group.

Section 3 approaches the degenerative spine in 10 chapters. Starting off with cervical myelopathy: prognostic predictions on MRI remain controversial (chapter 14), only level II studies show improvement in

outcome with early/on time surgery (chapter 13) and due to the several surgical techniques anterior and posterior, literature still not provides any evidence to go either anterior or posterior (chapter 12). In adult-onset low-grade spondylolisthesis and refractory to medical conservative treatment (chapter 17), there is evidence that fusion results in significant improvement versus non-operative treatment. There is, however, no consensus regarding the surgical technique.

Section 4 is divided in 6 chapters including several contemporary hot topics, ranging from rigid or dynamic plating, cervical and lumbar disc arthroplasty, the use of expensive BMPs and minimally invasive fusion.

As the incidence of spinal infections is increasing each year, either due to an increasing elderly population, more chronic immunocompromised patients or the year after year increase in instrumented spinal fusions, section 5 on infections certainly earns its place in this book. There is level 1 and level 2 evidence that prophylactic antibiotics lower infection rates, but not on superiority of one type of antibiotics over another. Chapter 29 on treatment options is also very interesting in showing the safe use of titanium instrumentation, although only level IV evidence.

In summary, I would recommend this book to all spine surgeons as it demonstrates how much of what we do in daily practice is not (yet) supported by high-quality literature and it certainly shows a need for further level I and II research.

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¹ Peul WC, van Houwelingen HC, van den Hout WB, Brand R, Eekhof JAH, Tans JTJ *et al.* Surgery versus prolonged conservative treatment for sciatica. *N Engl J Med* 2007; **356**: 2245–2256.