Guiding neurosurgery by evidence, Editor: B.E. Pollock

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Karsten Schöller · Jörg-Christian Tonn

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Evidence-based medicine (EBM) is a growing movement that tries to overcome dogmatic approaches in medical care based on intuition and unsystematic clinical experience. For “Guiding Neurosurgery by Evidence” the editor Bruce Pollock has collaborated with another 21 well-known experts in neurosurgical subspecialties to give an overview of contemporary neurosurgical practise facing its scientific basis as evaluated by evidence-based medicine criteria. The hardcover book, volume 19 of the series “*Progress in Neurological Surgery*” edited by L. Dade Lunsford, is divided into ten chapters.

The first chapter which comprises a quarter of the size of the book is a comprehensive introduction to the field of EBM. The author Mark Linskey covers, amongst other things, the historical background of EBM, its healthcare policy implications, the methodology including the hierarchy of different types of clinical studies and the resources of EBM—not without going into neurosurgical details. The section on problems and limitations of EBM has to be highlighted, because it critically looks into the position that every medical issue can or has to be investigated in a randomized controlled trial (RCT) or meta-analysis. This is particularly important for the often rare neurosurgical disorders that may additionally be slowly progressing (like in benign brain tumours) making a good quality RCT very difficult or impossible. The first chapter also includes various web addresses on Internet EBM resources and 298 literature references that invite the interested reader to more extensively explore the field of EBM.

Further chapters summarize the available clinical data on selected neurosurgical topics, and evaluate as well as discuss the body of evidence utilizing EBM criteria. The topics include brain tumour epidemiology, treatment of benign adult brain tumours, paediatric neurosurgery, cerebrovascular and endovascular surgery, lumbar spine surgery, minimally invasive spine surgery, stereotactic radiosurgery, traumatic brain injury and management of chronic pain with neurostimulation. All but the chapter on brain tumour epidemiology concentrate on the efficacy of surgical, radiosurgical, radiooncology and medical treatment. Hence, the epidemiology chapter is particularly interesting because the scheme to classify levels of evidence in traditional EBM, that was originally designed to examine the efficacy of a treatment, had to be modified for the evaluation of epidemiological studies.

All chapters of the book start with a short abstract and are well-arranged and easily readable. The 23 tables are very helpful, and the references are comprehensive. Only the spine chapters contain illustrative material that, to the most extent, could have been omitted. As with most multi-authored books, there is some degree of heterogeneity between the different chapters but, overall, they are rather well-balanced and there is practically no redundancy. The book can and does not cover all fields of neurosurgery, e.g. there is no chapter on peripheral nerve surgery, but selected topics represent examples for the application, advantages but also limitations of evidence based medicine in neurosurgery.

In summary, the book definitely accomplished the aims of the editor and authors, and we can recommend it to any practising neurosurgeon/neurologist or resident in training who is interested in a critical evaluation of clinical study results and its implementation into the daily practise.

K. Schöller (✉) · J.-C. Tonn
Department of Neurosurgery LMU Grosshadern,
Marchioninstr. 15,
81377 Muenchen, Germany
e-mail: karsten.schoeller@med.uni-muenchen.de