

Knee arthroplasty

Thomas P. Sculco, Ermano A. Martucci (eds). 250 pages. Springer-Verlag Vienna, New York 2002
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The authors' aim completely covers the treatment of knee arthroplasty patients, by dealing with problems of general character as well as more complex and unusual situations. 26 experienced, clinically and scientifically well known orthopaedic surgeons have contributed their knowledge.

Several of the controversial questions are debated, such as retaining the posterior cruciate ligament vs using a posterior-stabilized prosthesis, replacement or not of the patella, and metal-backed vs all-poly tibial component. With some rare exceptions, the authors present their own views as the best, rather than give a more "global" overview of the problem.

The first section handles knee mechanics and prosthetic design with special emphasis on the patellar joint. It is well written, including a very interesting description of patellar function, but it does not explain the reasons for replacing the patella.

The second section discusses surgical technique and some particular problems, such as surgical approaches, soft tissue balancing including the stiff knee, bone grafting and arthroplasty after high tibial osteotomy. It covers most of the situations experienced during knee replacement surgery, and the inexperienced surgeon may use this section as a hands-on manual. However, more schematic illustrations, preferably in color, would improve this section.

An important message in the third section on choice of implants is that several prosthetic designs should be available. Unicompartmental knee prostheses are also discussed here, but minimally invasive surgery is not mentioned. On the contrary, the author recommends an extensive arthrotomy. A distinction between resurfacing and resection unicompartmental replacement is made. In my opinion, however, there is usually no difference large enough in the amount of bone resected for unicompartmental replacement to justify this distinction.

A posterior-stabilized prosthesis is recom-

mended for patients with an angular deformity exceeding 20 degrees, after patellectomy, in rheumatoid arthritis and after high tibial osteotomy.

The fourth section deals with complications such as loosening, fractures and infections. Unfortunately, it lacks a detailed discussion on the causes as well as a correct definition of loosening. One author claims that "all-polyethylene" tibial components lead to increased migration, as compared to "metal-backed" components, although there is no scientific support for this statement. There is no description as to how to detect migration and loosening, and radiostereometric analysis (RSA) is not described. In the chapter on peri-prosthetic fractures, classification of the fractures by schematic illustrations and a factual sheet would have helped the reader to understand and remember the facts.

The last section of the book is about blood, rehabilitation and revisions. I find it remarkable that the use of tranexamic acid to reduce postoperative bleeding is not mentioned. The chapter on revisions is too short and superficial.

References from the last 10 years are seldom given, which suggests that the authors have performed their task directly from memory rather than properly reviewing the literature before writing their chapter. More schematic drawings and radiographs of clinical cases would have provided more pleasant reading. Some repetitions could also have been avoided by referring to previous chapters.

Despite these occasionally harsh words this book gives the experienced and dedicated knee arthroplasty surgeon an excellent view of the world's leading experts' opinions. Beginners, however, will find the text hard to follow and regard it as rather "philosophical". A more stringent text and more illustrations are needed for the inexperienced surgeon. This book can not be recommended as a "reference book" or a surgical manual.

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