Letter to the Editor

Treatment of Early Postoperative Infections After THA: A Decision Analysis

Matthias Wolf MD, Andreas Leithner MD,
Heimo Clar MD

Published online: 17 April 2012
© The Association of Bone and Joint Surgeons® 2012

To the Editor

We read with interest the article by Bedair et al., “Treatment of Early Postoperative Infections after THA: A Decision Analysis”, featuring the authors’ decision tree and analysis model addressing the treatment of patients presenting with postoperative infections during the first 3 weeks after cementless primary THA [1].

This model estimates the rate of infection control and quality-of-life values after a specific treatment in terms of possible outcomes for each treatment. The study compared the results of one-stage and two-stage exchanges, taking into consideration the variety of published data on infection control for individual treatments [1]. Control of prosthetic joint infections (PJI) is the major criterion for a patient-oriented decision model. The studies analyzed for this decision model do not consider the related risk factors. The authors’ work is “based on the best literature currently available,” but the authors overlooked studies that use a staging system such as that of McPherson et al. [3] or of

De Man et al. [2]. These studies allow comparison of data of patients with prosthetic joint infections for individual reinfection risk, taking age, comorbidities, and other factors into consideration.

In addition, the authors state that “specifically, we could identify no references in the peer-reviewed literature to estimate the probability of success with a single-stage exchange for acute postoperative infection” [1]. Success of single-stage procedures obviously is related to the presence of risk factors. Again, De Man et al. [2] and McPherson et al. [3] took risk factors into consideration in their treatment or described risk factor-related outcomes of single-stage versus two-stage procedures. A decision for the surgical procedure in terms of PJI should be based on a standardized analysis model of the patient’s individual reinfection risk, including the patient’s systemic and local factors and the infection type [3]. The quality of life value undoubtedly varies inversely with the extent of surgical trauma. Nevertheless, the ultimate factor will always be control of an existing PJI.

To determine the best treatment algorithm for patients with PJI, multicenter analyses in a prospective setting should use a staging system for PJI to allow comparison of different surgical procedures.

(Re: Bedair H, Ting N, Bozic KJ, Della Valle CJ, Sporer SM. Treatment of early postoperative infections after THA: a decision analysis. *Clin Orthop Relat Res*. 2011;469:3477–3485.)
Each author certifies that he or she, or a member of their immediate family, has no commercial associations (eg, consultancies, stock ownership, equity interest, patent/licensing arrangements, etc) that might pose a conflict of interest in connection with the submitted article.

All ICMJE Conflict of Interest Forms for authors and *Clinical Orthopaedics and Related Research* editors and board members are on file with the publication and can be viewed on request.

M. Wolf, A. Leithner, H. Clar (✉)
Department of Orthopaedics and Orthopaedic Surgery,
Medical University of Graz, Auenbruggerplatz 5,
8036 Graz, Styria, Austria
e-mail: harlecin@yahoo.de

References

1. Bedair H, Ting N, Bozic KJ, Della Valle CJ, Sporer SM. Treatment of early postoperative infections after THA: a decision analysis. *Clin Orthop Relat Res*. 2011;469:3477–3485.
2. De Man FH, Sendi P, Zimmerli W, Maurer TB, Ochsner PE, Ilchmann T. Infectiological, functional, and radiographic outcome after revision for prosthetic hip infection according to a strict algorithm. *Acta Orthop*. 2011;82:27–34.
3. McPherson EJ, Woodson C, Holtom P, Roidis N, Shufelt C, Patzakis M. Periprosthetic total hip infection: outcomes using a staging system. *Clin Orthop Relat Res*. 2002;403:8–15.