Papers Presented at the Annual Meetings of the Knee Society

Editorial Comment

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Published online: 11 November 2011
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The Papers Presented at the Annual Meetings of The Knee Society Symposium includes selected manuscripts originally presented at the 2010 Knee Society Members Meeting held in Rochester, Minnesota in September 2010 and the 2011 Open Scientific Meeting of The Knee Society held in San Diego, California in February 2011. Each paper published in this symposium has undergone a rigorous peer-review process that ensures focused, informative, and scientific meaningful manuscripts. My great thanks are extended to the dedicated staff at CORR for their valuable work in guiding authors through that review process.

The 2011 Insall Award paper was authored by Ormonde M. Mahoney, MD and colleagues and nicely summarized a multicenter, randomized, clinical trial of fixed-bearing and mobile-bearing TKA. In the knee design studied, the authors were not able to detect any early clinical benefit to the mobile-bearing design in this large trial. The data from this study and others collectively suggested no substantial early benefit from mobile-bearing designs. The data from this study was compelling enough that the manufacturer of this particular knee design elected not to bring the mobile-bearing variant to market in the United States. Whether the theoretical benefits of lower polyethylene wear with mobile-bearing designs will be achieved still awaits further clinical followup into the second decade of in vivo use.

The 2011 Ranawat Award paper was authored by Johan Bellemans, MD and colleagues from Belgium and

Fig. 1 Mark W. Pagnano MD, is shown.

delineated the prevalence of constitutional varus in a nonarthritic knee population. In recent years, some surgeons have begun to ask whether the long-held tenet of a neutral mechanical axis alignment goal for every patient after TKA should be revisited. In some knee designs, it appears that a neutral mechanical axis does confer a survivorship advantage, while the latest knowledge from a variety of modern condylar knee designs that share the characteristic of moderate coronal plane conformity may be more tolerant of small deviations from neutral mechanical axis alignment. It will be interesting over the coming years as researchers further delineate whether clear functional advantages or survivorship benefits can be tied to changes in the coronal plane alignment of TKAs.

The 2011 Coventry Award paper was authored by Javad Parvizi, MD and colleagues, who examined the use of C-reactive protein levels within the synovial fluid around knee and hip prostheses as a marker for deep prosthetic infection. In recent years, the orthopaedic community has

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become aware of the value of synovial fluid cell count and white blood cell differential measurement in the diagnosis of periprosthetic infection. While the work in this award-winning research was far from complete or definitive, it did point to one additional promising area for inquiry. Substantial work continues in an effort to define other simple, straightforward tests to aid in the detection of deep prosthetic infection after joint arthroplasty.

The remaining papers in this symposium span a spectrum of topics related to the surgical management of the arthritic knee. Unicompartamental knee arthroplasty use has dipped slightly in the United States, but continues to be used in a substantial subset of patients today. Mobile-bearing

unicompartamental replacement and lateral unicompartamental results are addressed with new information. In primary TKA, there is interesting information on perioperative management, fall prevention, wound closure, surgical technique with custom guides, and an innovative gap-balancing technique applied to cruciate-retaining knee designs. In the revision TKA arena, there are a wide array of papers addressing bone loss, infection, and the role of articulating versus static spacers in the interval between resection and reimplantation during two-stage reimplantation surgery. It is hoped that readers of this symposium will find clinically useful information that either improves surgical practice or piques their intellectual curiosity.