

Foreword

Future of Wrist Arthroplasty

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It is a great honor for me to be the Guest Editor for this special focus section on total wrist arthroplasty (TWA) in the first issue of the *Journal of Wrist Surgery*. The development of TWA for advanced wrist destruction follows that of the other major joints. However, the pace is slow for two main reasons: (1) wrist fusion is a traditional and reliable method to treat wrist destruction irrespective of its etiology and (2) the first generation TWA suffered from a number of medium- and long-term problems. However, one fact was striking: despite all the complications of the first-generation TWA, many patients who underwent arthroplasty on one side and arthrodesis on the other still preferred wrist arthroplasty. Since 2000, new resurfacing TWA designs have been proposed with better early results that led to more indications in selected patients. In these last-generation implants, the amount of bone resection is minimal and the adjacent carpometacarpal and distal radio-

ulnar joint may be kept intact. Should the implant fail, conversion to total wrist fusion may be much easier than with the first-generation TWA. With this in mind, it is interesting to note that the use of TWA progresses as the use of total ankle arthroplasty does. The rationale is similar: patients prefer motion irrespective of the joint destroyed. Given the better early results of the last-generation TWA, there are a number of new trends trying to go even further, to get a reliable prosthetic solution for patients with advanced wrist destruction. I wish to thank all authors of this special focus section which is intended to provide the reader with the latest information about the controversial topic of TWA. The very first article on the recent total distal radioulnar joint resurfacing implant is also included in this TWA special section.

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Although arthrodesis is typically the treatment preferred by most surgeons for their patients with severe wrist arthritis, some degree of functional impairment occurs from the resulting loss of motion, especially when multiple joints in the extremity are affected by arthritis or both wrists are involved. Total wrist arthroplasty has been shown to enhance the performance of daily activities and patients usually prefer it over arthrodesis. Early designs of wrist implants had unacceptable complication rates, particularly relating to wrist imbalance and implant loosening. Newer generation wrist prostheses have demonstrated improved performance and

durability in properly selected patients, including patients with osteoarthritis and posttraumatic arthritis, who had not previously been considered candidates. This symposium reviews the indications, techniques, and outcomes of current wrist arthroplasty techniques, including some innovative concepts for higher physically demanding patients. The future appears positive for greater adoption of total wrist arthroplasty for patients who are willing to accept somewhat greater risks for the benefit of improved function.

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