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CORR Insights®: High Survivorship and Few Complications With Cementless Total Wrist Arthroplasty at a Mean Followup of 9 Years

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Where Are We Now?

Orthopaedic surgeons do not perform total wrist arthroplasty (TWA) very frequently, and there are good reasons for this. Early on, an unacceptably high rate of complications resulted in both patients and surgeons being understandably apprehensive about it. In addition, intolerable end-stage wrist

arthritis is itself uncommon. In fact, debilitating wrist arthritis may be rarer than ever before, now that biologic pharmacotherapy has dramatically reduced the disease burden associated with rheumatoid arthritis, and improved surgical fracture fixation has diminished the frequency and severity of post-traumatic wrist arthritis.

The current study by Gil and colleagues showed a reasonable survivorship of 77.7% at 15 years, which is consistent with other comparable recent studies that show an improved survivorship of the latest generation of implants [1–3, 5–8]. Perhaps if this pattern of finding increased longevity and minimal complications continues to be reported, the data will serve as a counterclaim for the many steadfast skeptics. This, in turn, may

result in patients and surgeons reconsidering this procedure.

Where Do We Need To Go?

Despite improvements in our ability to care for patients with inflammatory arthritis and wrist fractures, some patients with rheumatoid arthritis do not improve with pharmacotherapy, and some injured patients develop severe post-traumatic arthritis. But even in this small population of patients, it can be difficult to determine who might benefit from TWA, particularly given its checkered history. An argument could be made that because many of our patients with end-stage wrist arthritis are either adaptive, resilient, or low-demand, what we see on radiographs often is worse than what many patients actually experience.

How Do We Get There?

Patients often view the wonders of a “bionic” hip and knee as a benchmark for the wrist. That the results of TWA pale in comparison to those achieved

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after THA or TKA can be frustrating and paradoxical to wrist and hand surgeons. As orthopaedic surgeons and anatomists, we fundamentally yearn to restore function and anatomy. And so we persevere and strive harder to do just that for the wrist.

Perhaps it is a matter of time before TWA manifests itself as an effective surgical procedure, one that is durable enough to remain in service for the full lifespan of the patients who receive them. Certainly, total shoulder and total ankle arthroplasty once had limitations similar to those of TWA, but with evolution in design, these operations' results have improved, and now are performed more frequently.

Yet, arthritis affects different joints differently. Despite the fact that these sister advances have proven themselves over time, the liberty of developing approaches to the wrist through trial and error is far gone, given that we now are in the era of the Affordable Care Act. Moving forward, we may need to ask ourselves not "how do we get there?" but "should we get there?" Cost analysis studies

provide useful and critical data to support the cost effectiveness of uncommon procedures, and one such study found TWA to be "extremely cost-effective" [4]. But debilitating wrist pain fizzles out in many rheumatoid patients. Preferences among treatment options are not always static and may change as disease states change. A much longer survivorship combined with a much greater demand may be what is needed to make TWA the preferred surgical option for end-stage wrist arthritis.

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