***CORR* Insights®: Total Hip Arthroplasty Performed in Patients with Residual Poliomyelitis: Does it Work?**

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Where Are We Now?

Few orthopaedic surgeons have a large experience in treating the sequelae of paralytic poliomyelitis. In 1988, there were an estimated 350,000 cases of polio worldwide. The WHO recorded only 223 cases in 2012, all confined to Afghanistan, Pakistan, and Nigeria. Fortunately, only 0.5% of patients with paralytic complications have permanent paralysis develop [1]. Survivors of this disease may present with deformities of the foot and ankle, upper extremity, and degenerative arthritis of the weightbearing joints of either the paralyzed or nonparalyzed extremity. Thus, this report by Yoon et al. is an extremely valuable perspective on the results of total hip replacement in this patient group, and to my knowledge, represents the largest such series to date.

This CORR Insights® is a commentary on the article “Total Hip Arthroplasty Performed in Patients with Residual Poliomyelitis: Does it Work?” by Yoon and colleagues available at: DOI [10.1007/s11999-013-3338-3](https://doi.org/10.1007/s11999-013-3338-3).

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The authors presented mid-term followup of 10 cases, four of which involve the paralytic extremity and the remainder the nonparalyzed limb. Despite conventional wisdom that dislocation is a serious risk in this population, only one dislocation occurred (in a nonparalyzed extremity). Importantly, patients did very well in terms of pain relief. To date, prosthetic survivorship appears excellent at a median of 7 years followup.

Where Do We Need To Go?

At first examination, the results of total hip replacement in this population appear less successful than those obtained from neurologically healthy patients with osteoarthritis. It is important to understand that increased muscle pain and weakness in older adult life (which affects 25% to 50% of polio survivors with paralysis) will compromise the results of reconstructive surgery, but by no means render the procedure a failure. Although paralytic polio likely results in a limp or leg length discrepancy, these results should not be considered failure of the procedure, but rather an inherent limitation resulting from the disease. Put simply, the usual metrics applied to the analysis of the outcome of total hip replacement may unintentionally understate the benefit to patients with diagnoses like polio. It would be important to find better ways to evaluate this special patient population if we want to be able to ascertain whether our interventions on their behalf are effective.

How Do We Get There?

Although the number of patients and the followup reported in this study are limited, the reader should conclude that

with careful attention to surgical technique and postoperative management, substantial benefit is available to this patient population. As surgeons, it would be helpful for us to gain insight into the functional improvement of this class of patients, in addition to longer-term followup. We should not approach these patients with the same expectations we have for nonparalytic osteoarthritis interventions. Instead, we should focus on the functional improvement, while also measuring the patient's satisfaction. "How did your hip

replacement change your life? Would you do it again?" These are the questions we should be asking. I suspect the answers will be generally positive.

Reference

1. World Health Organization. Poliomyelitis. Fact Sheet No. 114. Available at: <http://www.who.int/mediacentre/factsheets/fs114/en/index.html>. Accessed October 16, 2013.