

Editorial Commentary: Does the Scope Have a Role in Painful Shoulder Arthroplasty?



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Abstract: Arthroscopy is a powerful tool in the management of the painful total shoulder arthroplasty and should be considered when evaluating cases in which a clear cause of pain is not present. Patients may present with a painful shoulder arthroplasty due to a number of causes—occult infection, instability, component loosening, malposition, or rotator cuff pathology. In certain cases, advanced imaging may not be diagnostic, given the presence of metal artifact. It is our routine clinical practice to evaluate arthroscopically such cases in which the diagnosis is not readily evident. The most common indication for shoulder arthroscopy is pain with no clear cause or loss of motion (39%), followed by biopsy to rule out occult infection (25%), and finally rotator cuff assessment (19%).

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We read with great interest the article entitled “The Role of Arthroscopy in Painful Shoulder Arthroplasty: Is Revision Always Necessary?” by Guild, Kuhn, Rivers, Cheski, Trenhaile, and Izquierdo.¹ The authors performed a retrospective review of 13 patients who presented with a painful shoulder arthroplasty without clear signs of infection or component loosening between 2016 and 2018. Six patients underwent arthroscopic treatment for adhesive capsulitis, subacromial impingement, acromioclavicular joint arthritis, or synovitis and reported improved function and decreased pain scores postoperatively. Arthroscopy confirmed infection of *Cutibacterium acnes* in 2 patients and identified implant or rotator cuff failure in the remaining 5 patients, requiring further open surgical intervention. The authors concluded that arthroscopic intervention allowed for 6 patients to avoid a potentially unnecessary revision arthroplasty.

Although this is a small series of patients, the authors are to be recognized for highlighting a number of scenarios in which the arthroscope is a useful tool in the armamentarium of the shoulder arthroplasty surgeon. Patients may present with a painful shoulder

arthroplasty due to a number of causes—occult infection, instability, component loosening, malposition, or rotator cuff pathology.² In certain cases, advanced imaging may not be diagnostic, given the presence of metal artifact. It is our routine clinical practice to evaluate cases arthroscopically in which the diagnosis is not readily evident.

The literature supports the role of arthroscopy in the diagnosis of such cases. Our group has published a systematic review of the literature evaluating the indications and outcomes of arthroscopy in the setting of shoulder arthroplasty.³ We found the most common indication for shoulder arthroscopy was pain with no clear cause or loss of motion (39%), followed by biopsy to rule out occult infection (25%), and finally rotator cuff assessment (19%).³ Periprosthetic infections are often difficult to diagnose. Dilisio et al.⁴ found arthroscopic biopsy cultures are far more sensitive and specific and provide significantly greater positive predictive and negative predictive value in comparison with fluoroscopically guided glenohumeral aspiration results for infection. In addition, patient satisfaction is high following the arthroscopic management of infection, given its minimally invasive nature, and reported complications are rare.³ Similar to the authors’ findings, the literature suggests 44% of patients need to go on toward further surgical intervention, such as revision shoulder arthroplasty following arthroscopic assessment.³

In clinical practice, we have found arthroscopy to be very helpful in the diagnosis and management of glenoid component loosening in total shoulder

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arthroplasty. This is particularly true when computed tomography or radiographic findings of loosening is not conclusive. The glenoid component can be carefully evaluated and probed arthroscopically to confirm component loosening and then can be removed piecemeal using osteotomes through the anterior portal, allowing for a potential conversion to a hemiarthroplasty. In our experience, this has resolved symptoms for a limited number of patients and allowed for the avoidance of revision total shoulder replacement.

So, the next time you see a patient with an unexplained painful shoulder replacement—consider the arthroscope!

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