The Clinical Value of the Histopathologic Interpretation of Arthroscopic Hip Shavings: What do we Learn?

Joel M. Post, DO1,2, Landon R. Fine, DO1,2, Joseph A. Parks, BS3, Michael D. Shingles, DO1,2, Michael D. Austin, DO1,2

1McLaren Orthopedic Hospital, Lansing, MI; 2Department of Osteopathic Surgical Subspecialties, Michigan State University, East Lansing, MI; 3Michigan State University College of Osteopathic Medicine, East Lansing, MI

INTRODUCTION

The volume of hip arthroscopy has seen a dramatic rise in the last decade given the evolving indications and patient driven desire for less-invasive surgical treatment options of hip pathology.1 Previous studies have examined the clinical value of the routine examination of the pathologic findings from various orthopaedic specimens.2-8 The purpose of our study was to examine the clinical value of the histopathologic interpretation of arthroscopic hip shavings which has not been determined to date. We hypothesized that this routine practice of pathology consultation was both expensive and ultimately would not affect the long-term care of the patient.

MATERIALS & METHODS

Between January 2008 and December 2011, 567 consecutive hip arthroscopies were performed by two orthopaedic surgeons (M.D.S. and M. D. A.) at a single community hospital (McLaren Greater Lansing, Lansing, MI). We retrospectively reviewed the pre-operative and post-operative diagnoses, procedure performed, and pathology reports from these procedures to determine if the routine histopathologic interpretation of the arthroscopy shavings altered patient care. We then estimated the total cost in 2012 dollars of these analyses based on Medicare reimbursement rates for CPT codes 88304 (examination of gross/microscopic surgical pathology) and 88311 (decalcification procedure).

RESULTS

• 567 hip arthroscopies in 534 patients (Table 1).
• Labral tear and femoroacetabular impingement (FAI) were the most common post-operative diagnoses (Table 2).
• In 2 of 567 (0.004%) cases, the histopathologic interpretation differed from the surgeon’s post-operative diagnosis.
• One case of pigmented villonodular synovitis (PVNS) was discovered and one case of chondroid metaplasia was diagnosed histologically.
• No cases demonstrated neoplasia or acute inflammation.
• Patient care was directly affected in only one (0.002%) of the analyses.
• In 2012 dollars, the total cost for these 567 analyses was estimated at $70,600 for our institution.

DISCUSSION

Previous orthopaedic pathology studies have questioned the clinical value of the routine analysis of arthroscopic specimens, their cost, and suggested that hospital and state regulations governing this routine practice be addressed.2-7,8 We defined clinical value similarly to previous studies as both the cost of histopathologic analysis as well as diagnostic value of the procedure. Our findings are consistent with previous studies regarding routine pathologic referral of arthroscopic specimens.

CONCLUSION

The routine histopathologic analysis of arthroscopic hip specimens offers little clinical value, is costly, and mandatory hospital and state regulations for such analysis should be re-examined.

REFERENCES