Hip arthroscopy is an evolving surgical technique used to address intra-articular bony, cartilaginous, and labral pathologies and the respective underlying morphopathology. Recently, the use of hip arthroscopy has increased rapidly and is considered the fastest growing field in sports surgery. A steady flow of research focused on patient outcomes, radiographic analyses, basic science, and innovative surgical techniques is being accumulated. As a result, ongoing alterations and improvements in surgical techniques around the hip joint are pushing the limits of what we thought could be done through 2 small puncture holes.

Surgical procedures that were once considered complicated in the hands of an experienced open surgeon are now being performed on a regular basis arthroscopically. At the same time, novel procedures, such as labral or ligamentum teres reconstructions, are increasingly performed in select patients by hip preservation experts at subspecialized centers. Hip arthroscopy has a steep learning curve due to the highly constrained hip anatomy and because the surgical field is located deep beneath the skin. Treatment decision making in patients with hip or groin pain is more complex compared with other joints because of the hips’ close anatomic relationship with potentially painful adjacent structures. The differential diagnosis of groin pain needs to include pathology of the lower spine, lower abdomen, upper thigh, and pelvic structures, making the differential diagnosis far from straightforward and requiring treating physicians to have a strong understanding of each disease process.

Recent publications have shown that the surgeon’s experience is an important predictor of failure after hip arthroscopy. At the same time, the volumes of revision surgeries at some hip preservation centers comprise 20% to 30% of the total hip arthroscopies performed. This is often due to failure of the initial surgery to adequately address the pathology or failure to establish the appropriate treatment strategy from the onset. Revision surgery tends to be more technically demanding and harder on patients and may result in suboptimal outcomes compared with primary surgery.

For example, several recent reports showed poor clinical outcomes after arthroscopic surgery in hips with dysplastic characteristics. Albeit attractive as a less invasive, labral-preserving surgery, arthroscopic labral repair not only may fail to provide symptomatic improvement, but also may compromise or preclude a later acetabular realignment procedure if rapidly progressive osteoarthrosis ensues. It is not an easy task to inform a 25-year-old woman, after inadequate arthroscopic surgery, that her hip is now too far gone for hip preservation/realignment procedure and that she is now faced with undergoing hip arthroplasty.

It is not surprising that many of these initial surgeries simply failed to address the underlying pathology or overlooked important anatomical and biomechanical factors that may have dictated a different treatment strategy. Many of these procedures were performed by highly skilled, fellowship-trained arthroscopists who perform outstandingly in other joints but have minimal specific training in state-of-the-art hip preservation techniques. Adequate training should not imply simply hands-on or observational experience with a certain number of cases performed by experienced faculty, but must mean a complete understanding of the natural history and clinical and radiographic management of the full spectrum of hip and pelvis pathologies. A proper understanding of the pathology is at least as important as having the physical skills to surgically address the pathology. The most straightforward scenario is likely repair of a torn labrum or trimming of a cam or pincer lesion. However, pre-, intra-, and postoperative decision making based on comprehensive clinical examination, analysis of advanced imaging modalities and a
proper understanding of the dynamic evaluation during surgery contributes far more to successful outcomes.

Let’s look at the way surgeons are being trained globally with regard to hip arthroscopy and hip preservation techniques. Orthopedic residents are exposed to a fair amount of basic arthroscopic skills via knee and shoulder surgeries and may decide to proceed to a sports fellowship. Surgeons who have completed residency and a sports fellowship has participated in hundreds of shoulder and knee arthroscopies by the completion of their training. On the other hand, exposure in residency to pathologies related to hip preservation is limited, and many residents graduate without ever having seen or participated in hip joint-preserving procedures. For the most part, residency provides a glimpse of the pathology and may alert the graduating orthopedic surgeon to its presence but, for the most part, does not prepare the resident to accurately diagnose or surgically treat these cases.5

Observing or participating in 20 hip procedures during that time period is far from adequate to provide the surgeon with the experience and decision-making skills necessary to provide state of the art care for the average hip preservation patient. Recently, a panel of hip preservation experts reported a position paper that aimed to outline strategies that could be used to improve hip preservation training, stating:

Although it seems logical that basic principles of hip preservation surgery such as understanding the pathomorphological mechanisms underlying disease states such as acetabular dysplasia and femoroacetabular impingement (FAI) should be part of the adult orthopaedic training curriculum, in reality, there is great variability in teaching these concepts. Pediatric-based disease processes are widely taught as part of pediatric orthopaedic curricula, but diagnosis and management of young adult hip deformities frequently are not formally covered in sports medicine or adult reconstruction curricula.5

It is imperative to understand that the pathology in the hip is not strictly limited to femoroacetabular impingement. Learning the intricacies of hip and pelvis anatomy and tackling complex pathologies, such as dysplasia, hip instability, sequelae of pediatric hip disease, osteitis pubis, retracted tears of the proximal hamstrings, and version abnormalities, all of which are present within an athletic adult population, requires more than just a sports fellowship. The time dedicated within sports medicine or adult reconstruction fellowships to train fellows in the diagnostic and surgical decision making for either open or arthroscopic management is limited and may not be sufficient to allow fellows to return to unrestricted practice in joint preservation.5

The need for a designated hip preservation fellowship is becoming evident. A program that will expose fellows to high volume of diverse hip and pelvis pathologies, including surgical training in both arthroscopic and open procedures, is essential. This would require the creation of new fellowship training models that would entail training under a single surgeon or several specialists who can contribute diverse areas of expertise, with the aim of providing a full perspective of hip pathologies. Optimally, the hip preservation surgeon should be able to properly diagnose and treat pathologies using open and arthroscopic techniques and would be able to tackle labral repair, hamstrings origin reattachment, and periacetabular osteotomy with the same level of confidence. However, even if the surgeon chooses to make hip arthroscopy the only part of his or her practice, exposure to and understanding of the full spectrum of preservation procedures is important. This would allow the surgeon to fully understand the pros and cons of open and arthroscopic techniques and, importantly, understand the limitations of hip arthroscopy and when referral may be necessary.

Orthopedic surgeons would likely feel uncomfortable with a shoulder surgeon whose training involved only 20 shoulder scopes, but this is often the extent of training those surgeons receive to make hip preservation a part of their practice. The hip is a complex joint and the training required to master it should be respected. A hip preservation fellowship should be viewed similar to a shoulder fellowship, allowing the trainee a vast understanding of the anatomy and pathology, as well as open and arthroscopic treatment strategies, of a single joint.

To promote these concepts and standardize hip preservation training, the expert hip panel also called for the formation of an international society or forum dedicated to understanding the basic etiological and surgical principles underlying the field of hip preservation.5 Finally, because the era of hip preservation is quickly evolving, reading recent publications, conducting research, closely following patient outcomes (preferably using a multicenter registry), and sharing experiences with other specialized surgeons are necessary for the proper development of a good hip preservation practice.

REFERENCES


