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In hip arthroscopy, the physician places great emphasis on patient selection, the surgical procedure, and the rehabilitation process after surgery. It is also important to provide the necessary perioperative care to the patient during this time of disability and altered functional state. The clinical nurse and physician extender have multifaceted roles and play an integral part in the patient's perioperative experience. This commences even before the decision for surgery is made and continues until recuperation and rehabilitation are complete. Much of the clinical nurse's efforts are spent preparing the patient and the patient's family, which will be referred to as caregivers, for the postoperative period. It is important for the nurse to assure that the expectations of patients and caregivers are reasonable and appropriate and that they are prepared for what is to come. The physician extender can provide physical exam and diagnostic information to the surgeon to help guide the patient through the perioperative process.

The clinical nurse and physician extender provide comprehensive care, education, continuity, and support to patients undergoing hip arthroscopy. They serve as a resource not only for the patients but also for the surgeon, outpatient personnel, physical therapists, and other ancillary agencies. The clinical nurse's role includes consulting and collaborating with others to help increase the effectiveness, efficiency, and safety of the care rendered to the patient. Both the clinical nurse and physician extender play an important role in facilitating communication among members of the health care team.

As health care resources and patient needs become more sophisticated, so must the skills of the person to whom the patients and staff turn for assistance and direction. To function most effectively in these multiple roles, the clinical

nurse and physician extender must be knowledgeable of all aspects of hip arthroscopy including anatomy and physical examination of the hip, appropriate diagnostic testing, the surgical procedure and its indications, expected outcomes, possible complications, and the postoperative rehabilitation process. This knowledge enables the nurse to provide the necessary nursing care and enables the physician extender to perform the advanced practice roles of provider, educator, practitioner, consultant, and collaborator.

Preoperative Care

An outpatient surgical setting is routine for many surgical procedures. It is advantageous because it reduces costs and allows patients to recuperate in their own environment. This requires that the patient and caregivers become actively involved in and responsible in the perioperative care [1]. Patient preparation starts with the first visit to the orthopedic office. This visit may be for diagnostic purposes, conservative treatment measures, or for the decision for surgery. It is important to establish an open and trusting relationship with the patient and other caregivers from the first encounter. It is through this special relationship and unique interaction that the foundation for the perioperative course is laid.

It is important to provide continuity of care through direct patient interaction. Both the nurse and physician extender can serve as a resource with whom patients can feel comfortable conversing and asking questions. This is important in helping patients and caregivers manage their anxiety and to provide information regarding diagnoses, testing, surgery, and postoperative recovery.

It takes a comprehensive systematic approach to care for the patient undergoing hip arthroscopy. The providers must demonstrate an aptitude to foresee and discuss care options including potential short-term and long-term consequences. This requires continual assessment, diagnosis, intervention, and evaluation of the patient and the plan of care.

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Patient Health History

To obtain a thorough health history, adequate time must be spent with the patient. This is done on the patient's first visit to the office. This history is a composition of subjective and objective data that will assist in identifying diagnoses and collaborative health problems.

In our opinion, the history is the single most essential element in patient evaluation. The surgeon may use some of the information provided by the clinical nurse specialist or physician extender, but he or she may also ask their own set of questions based on their dialogue with the patient. Nonetheless, this initial history is important for two reasons. First, it provides the patient an opportunity to formulate and organize their thoughts, making the subsequent interaction with the surgeon more time-efficient. Also, just as part of human nature, it is not uncommon to encounter contradictions in the patient's response between the two interviews. This provides an opportunity to establish clarification since the information obtained may have significant influence on the subsequent course of treatment.

Subjective Data

The patient interview is a communication process that focuses on developmental, psychological, sociocultural, and spiritual responses. It is important to be cognizant of the patient's comfort and anxiety levels, age, and current health status. These factors can influence the patient's ability to fully participate in the interview.

The interview process has three phases. During the introductory phase, the nurse or extender and the patient get to know each other. At this time, the patient is given a brief overview of the interview process, and its purpose is explained. The second phase is the working phase, in which the history is obtained. It is important to take cues from the patient, listen, and use critical thinking skills in interpreting and validating the information received from the patient. The final phase of the interview process is the summary phase, in which the information obtained is summarized to ensure accuracy and to validate problems and goals. Possible plans for problem resolution are discussed with the patient during the summary phase [2].

A few specific communication techniques can be employed to facilitate the interview and ensure its efficiency. It is important to ask open-ended questions to obtain patient perceptions. These questions begin with "What," "When," "Where," and "How" and are important because they encourage the patient to use more than a one-word response. Close-ended questions are also important to help obtain facts and elicit specific information. This may help keep the patient from rambling. Offering the patient a list of words to choose from may help obtain specific answers while reducing the

chance that patients will perceive and try to provide an expected answer. For example, in reference to the quality of pain, one might ask, "Is the pain dull, sharp, or stabbing?"

When data is obtained that digresses from normal, further exploration is necessary. These questions are useful: "What alleviates or aggravates the problem?" "How long has it occurred?" "When does it occur?" "Was the onset gradual or sudden?" Throughout the interview, it is important to rephrase the patient's responses to clarify information obtained [2].

There are several key points to remember when interviewing a patient. The first is to avoid being judgmental. This will help put the patient at ease and more inclined to provide specific information. It is important to utilize silence to help patients organize their thoughts. It is also helpful to provide answers to questions as they arise during the interview. Avoid leading questions, rushing the patient, and performing other tasks while taking the history [2]. By employing these principles during the interview, the information obtained is used in developing a plan of care and in providing information necessary for making a diagnosis.

While obtaining the patient's history, one must be aware that many disorders can present as a painful hip, including problems of the lower back as well as visceral disorders and that the patient may describe "hip pain" that actually represents referred symptoms from a different origin. Once the problem has been localized to the hip area, a distinction must be made between intra-articular and extra-articular symptoms.

A few characteristic features may clue the examiner to suspect an intra-articular hip problem. These hallmarks include complaints of anterior, inguinal, or medial thigh pain. Complaints of lateral hip pain or posterior or buttock symptoms are more commonly caused by extra-articular sources such as trochanteric bursitis, abductor muscle injury, or sciatica. A history of catching or popping in the hip may be related to intra-articular pathology but can also occur with disorders outside the joint.

Patients with abnormal intra-articular hip pathology commonly complain of pain in the groin with standing and ambulation. They may relate that they cannot sit for prolonged periods of time and that sitting with the hip in a flexed position is especially uncomfortable. Increased pain may be experienced with weight-bearing activities and when ascending or descending stairs. The patient may report difficulty with putting on socks and shoes or getting in and out of the car. Usually, a correlation is seen between the activity level and the pain perceived.

Objective Data: Physical Examination

After the subjective information has been obtained, the objective aspects of the patient's complaints can be explored. The physician extender or surgeon may obtain this information,

but it is important for the clinical nurse to understand the physical assessment process. This is discussed in detail in Chap. 2 and summarized here.

Examination of the patient with a complaint of hip pain is straightforward but inclusive of the lumbar spine and pelvis. Many patients present with a chief complaint of “hip pain” but do not have an intra-articular hip problem. Therefore, the examiner must first consider extra-articular sources that could cause the patient’s “hip pain.” Once the extra-articular sources are ruled out, intra-articular sources of the patient’s pain can be considered.

Some extra-articular disorders may mimic a hip problem and may sometimes coexist with a hip disorder. A common example among athletes is athletic pubalgia (“sports hernia”), which can occur in conjunction with femoroacetabular impingement (FAI). Some patients with early signs of hip disease may also have a component of lumbar spine disease. Patients with chronic hip problems may demonstrate gluteal tenderness to palpation simply as these muscles have been overworked attempting to protect the joint. Snapping of the iliopsoas tendon is incidentally present in up to 10% of a normal active population and could simply be present in conjunction with a joint problem. For every one of these apparent extra-articular problems, there are numerous less obvious disorders of the lumbar spine, pelvis, and viscera that may be the source of symptoms.

Observation of the patient’s gait pattern is meaningful. The gait may be antalgic or possibly reveal an abductor lurch, which reduces the forces generated across the hip. The patient may use an assistive device such as a cane or crutches. It is important to note the patient’s base of support. While standing, the patient may assume a slightly flexed position of the affected hip. When seated, the patient may slouch to avoid excessive hip flexion or lean to the uninvolved side with the hip in a slightly abducted, externally rotated position.

It is important to inspect the patient’s hips and lower extremities for any asymmetry, gross atrophy, spinal malalignment, or pelvic obliquity that may be fixed or associated with a gross leg length discrepancy. Leg lengths can be measured as a routine part of the exam. In some situations, documenting thigh circumference may reflect the chronicity of the problem and may be a rough indicator of the response to therapy. It is also important to document range of motion of the affected hip compared with the unaffected hip.

It is helpful to ask the patient to use one finger to point to the area of most discomfort. This is a useful way of determining the area of maximal involvement. Intra-articular hip pathology typically has a component of anterior hip pain. The patient may also relate a sensation of deep, lateral discomfort or posterior pain, but this is usually in conjunction with a significant anterior component. Often, the patient will demonstrate the C-sign in describing deep hip pain. This sign is characterized by placing the index finger and thumb

around the hip, forming a C-shaped pattern over the area of involvement. The index finger rests in the groin area and the thumb rests over the posterior aspect of the trochanter.

Palpation is rarely helpful in determining intra-articular pathology, but it is important in the overall assessment of other sources of pain in the hip region, such as trochanteric bursitis or abductor tendinopathy. The examiner palpates the lumbar spine, sacroiliac joints, ischium, iliac crest, and the lateral hip around the greater trochanter, always comparing the unaffected to the affected side and examining the unaffected hip first.

Range of motion should be assessed and recorded, looking for asymmetry or bilateral anomalies. While reduced rotation often accompanies FAI, excessive mobility may imply dysplasia or capsular laxity. Popping or snapping may be present and can occur from a variety of intra-articular and extra-articular sources which can be indicative of pathology or sometimes just a normal finding. Manual muscle testing is a crude measure of hip function but may elicit symptoms localized to a specific muscle injury. The most specific indicator for hip joint pain is log rolling of the patient’s leg. This action moves only the femoral head in relation to the acetabulum and the surrounding capsule. The absence of pain on log rolling does not preclude the hip as the source of symptoms, but the presence of pain with this maneuver greatly raises the suspicion of mechanical joint pathology.

Extreme forceful end ranges of motion may elicit pain with even subtle hip pathology. Maximal flexion with internal rotation is referred to as an “impingement test,” but we have found this maneuver to be uncomfortable in association with virtually any intra-articular pathology and not just specific for impingement. The Patrick or FABER (flexion, abduction, external rotation) test has been used to induce symptoms from both the hip and sacroiliac joint. The distinction is usually based on the origin of the pain. An active straight leg raise will often elicit symptoms. This maneuver creates a force of several times body weight across the articular surfaces and actually generates more force than walking.

Objective Data: Diagnostic Testing

Patient history and clinical examination are important tools, but diagnostic testing also plays a large role in the evaluation of hip arthroscopy candidates. This begins with plain radiographs and may include various advanced imaging as discussed in Chap. 3. Beyond the normal clinical assessment, the best indicator of true joint pathology is pronounced temporary pain relief from an intra-articular injection of anesthetic. We have reported that positive anesthetic relief of hip pain has been found to be indicative of abnormal intra-articular pathology with 90% accuracy [3]. Traditionally, fluoroscopy has been used for this type of injection, which is not readily available in most orthopedic offices.

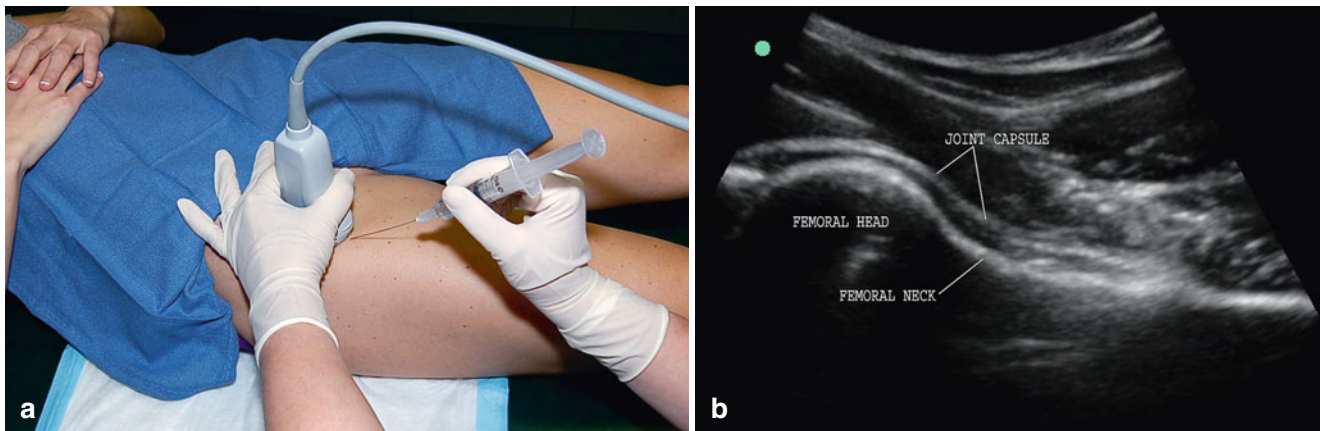


Fig. 34.1 (a) Visualization of the hip is performed by placing the transducer firmly over the area of the femoral head/neck junction in long axis and slightly oblique. A slight oblique angle to the transducer allows a more lateral entry site for the needle into the joint and increases the distance between the needle and the femoral neurovascular structures

anterior to the hip. The skin has been sterilely prepped and sterile gel is used. Prior to the injection, a scan should be performed to visualize the location of the neurovascular bundle. (b) Ultrasound image of anterior hip joint with probe positioned over femoral head/neck junction as described above. (All rights are retained by Dr. Byrd)

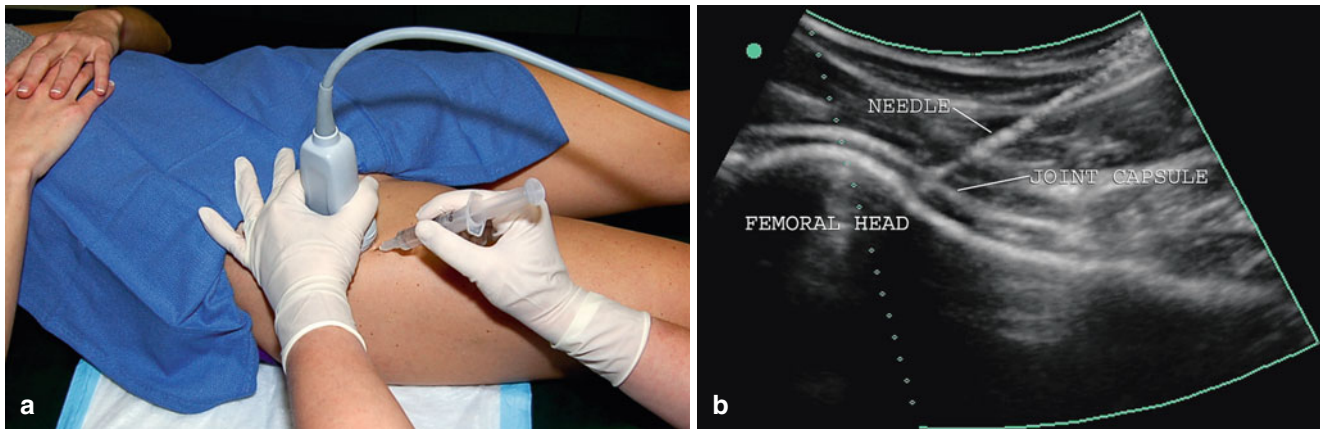


Fig. 34.2 (a) The needle is inserted in plane with the transducer which allows visualization of the needle throughout the course of its advancement to the capsule. (b) The needle can be seen entering the joint capsule at the base of the femoral head. (All rights are retained by Dr. Byrd)

Ultrasonography

There have been substantial technological advancements in ultrasonography since the second edition of this textbook. It is now available in an office setting with numerous diagnostic and interventional roles applicable to surgeons and physician extenders.

Intra-articular hip injections for diagnostic and therapeutic purposes can be reliably performed under ultrasound guidance (Video 34.1: <http://goo.gl/F5kEs>) (Figs. 34.1, 34.2, 34.3, and 34.4). We have found the technique to be very reproducible. Perhaps most importantly, our patients have uniformly found that the experience of an in-office ultrasound injection of the joint is a much gentler experience than one performed under fluoroscopy. This is especially compounded by the convenience when the patient does not have to travel

to a hospital or imaging center for fluoroscopy. The clinical advantage is substantial, as a real-time assessment of the patient's pre- and postinjection pain level is readily obtained. Sometimes this may necessitate specific functional activities on the part of the patient in order to make this determination.

Ultrasound is much more than just an injection tool. It can be used to look for an effusion which, historically, has been one of the most reliable positive indicators of hip pathology. Extra-articular structures can be assessed including the iliopsoas tendon (Video 34.2: <http://goo.gl/e0SRr>), (Video 34.3: <http://goo.gl/VNefU>) (Figs. 34.5, 34.6, 34.7, and 34.8), abductor tears (Figs. 34.9, and 34.10), (Video 34.4: <http://goo.gl/7Aod1>) and the piriformis (Video 34.5: <http://goo.gl/FOSiu>) (Figs. 34.11, 34.12, 34.13, and 34.14), among others. Diagnostic and therapeutic injections of these areas can be

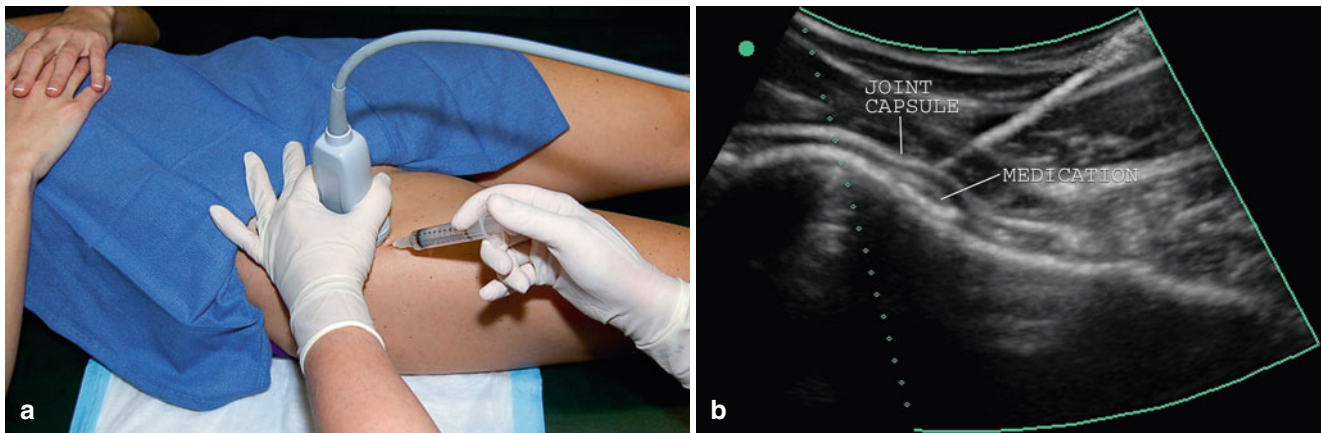


Fig. 34.3 (a) The transducer remains in the same plane throughout the injection. (b) The medication can be visualized entering the joint capsule. (All rights are retained by Dr. Byrd)

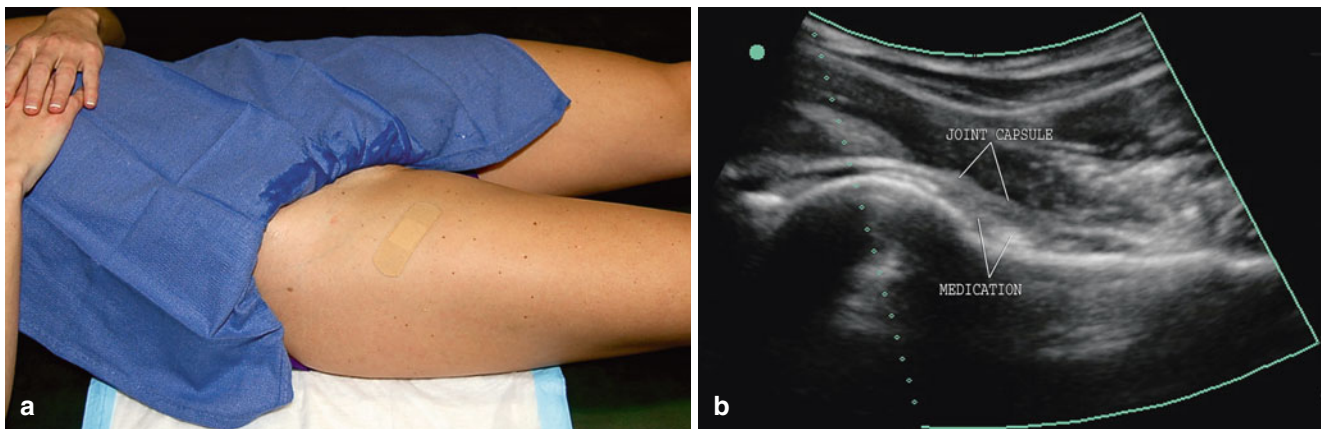


Fig. 34.4 (a) After completing the injection process, the syringe is removed and a small bandage is applied. (b) The medication can be visualized in the joint capsule. (All rights are retained by Dr. Byrd)

performed with reliable localization for corticosteroids or platelet-rich plasma for select conditions.

Ultrasound also offers the ability for dynamic examination of numerous soft tissue structures, including muscles and tendons, ligaments, and neurovascular structures. There is much ongoing work in this area evaluating the contribution of these numerous structures as causes of pain and dysfunction in the hip region.

Postoperative Care

By the time the patient arrives in the operating suite, the educational process should be complete and the patient prepared to handle the events that will follow. As discussed earlier, this educational process is best accomplished before the patient arrives at the hospital. Three salient features are important in the postoperative care of the patient: pain control, wound care, and activity level. It is important that these

are understood by the patient and the caregivers. These concepts may be difficult to comprehend preoperatively but should be discussed.

It is helpful to have written postoperative instructions for the patient and caregiver ([Appendix](#)). This will reiterate much of the information that has been verbalized preoperatively and immediately postoperatively. Providing written discharge instructions will help increase retention and understanding of the information provided [4]. The 1994 study by Oberle et al. [5] showed that timing of preoperative teaching is critical to retention and patient satisfaction. Approximately 25% of the patients in the study reported being given little or no information about their surgery even through nurses had provided information during the perioperative period. This report suggests that patients and their caregivers do not always hear and understand the information being conveyed. Written postoperative discharge instructions can serve as a reference once the patient has returned home.

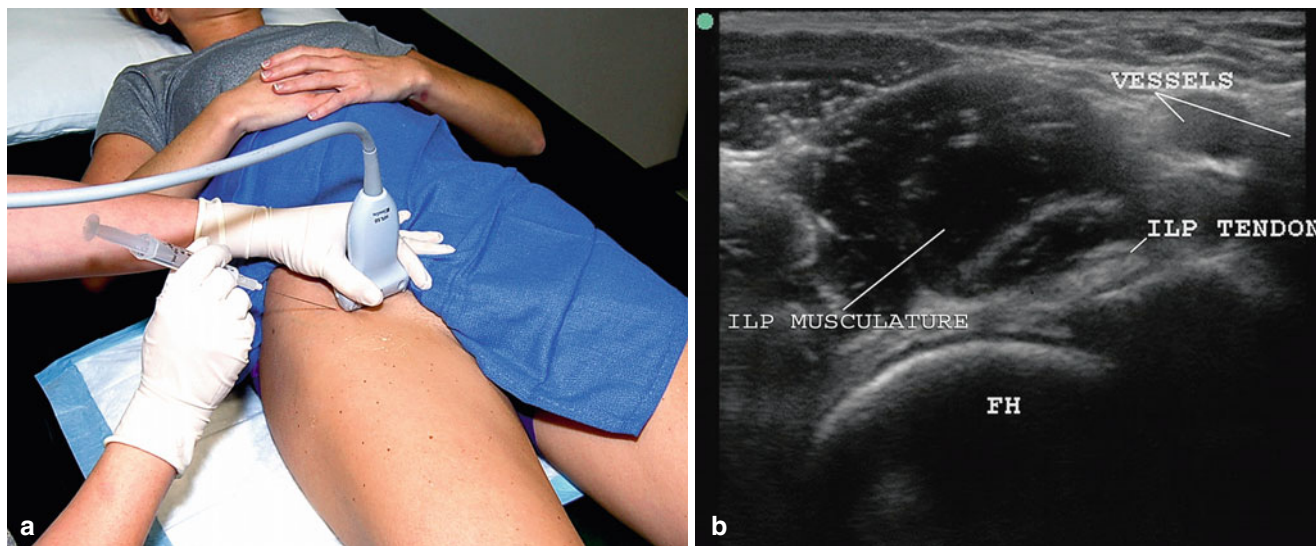


Fig. 34.5 (a) Visualization of the iliopsoas is performed with the transducer placed over the area of the iliopsoas in short axis. (b) Short axis ultrasound image illustrates visualization of the iliopsoas (ILP)

tendon, musculature, blood vessels, and femoral head (FH). (All rights are retained by Dr. Byrd)

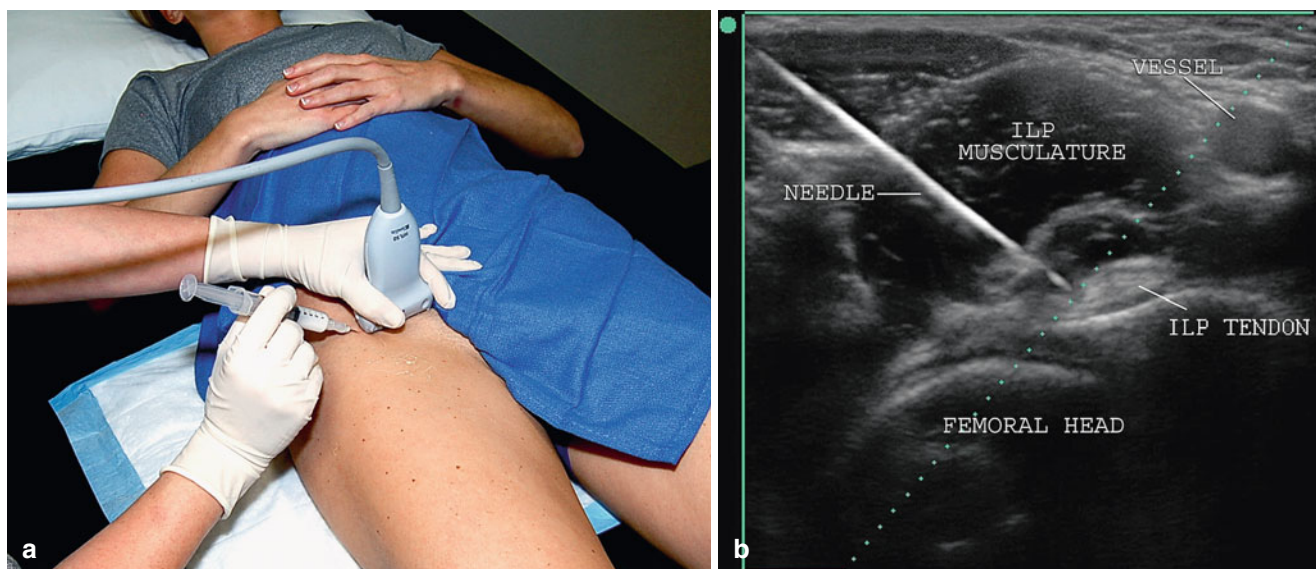


Fig. 34.6 (a) The needle is inserted in plane with the transducer to allow visualization of the needle during the injection. The tip of the needle should be placed just lateral to the tendon and into the anterior

recess of the bursa. (b) Ultrasound image depicts position of needle in relation to the iliopsoas tendon. (All rights are retained by Dr. Byrd)

Pain Control

Postoperative pain is one of the greatest fears patients have about surgery and is often poorly addressed by physicians [6]. Pain control should be discussed preoperatively to allay patient apprehension. Patients should expect postoperative pain and/or discomfort. The pain experienced is typically the worst in the recovery room. Once the acute postsurgical pain is controlled, many patients are surprised at the low intensity

of pain they actually experience. Patients describe postoperative pain as a burning ache in the hip, but the severity depends on the pathology addressed. For example, a patient with loose bodies may find that the postoperative pain is less than the discomfort experienced preoperatively. Conversely, a patient undergoing bony work for impingement may experience considerably more discomfort immediately after surgery.

Educating patients about postoperative pain is an important step in the preoperative discussion. The patient should

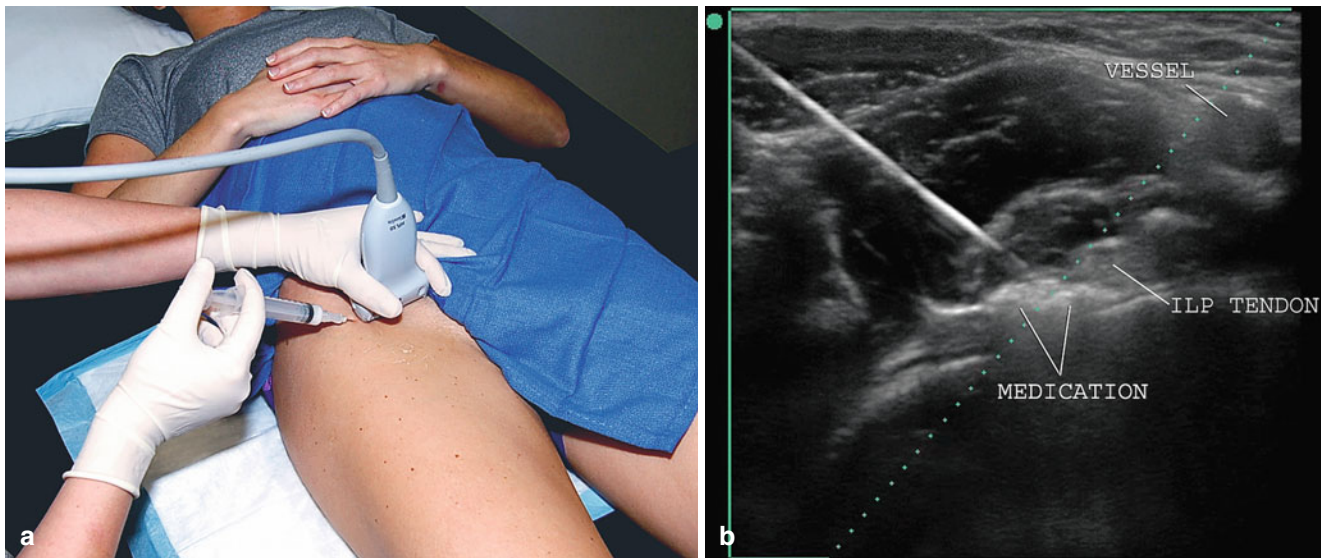


Fig. 34.7 (a) The medication is injected. (b) The medication is visualized entering the anterior recess of the iliopsoas bursa. (All rights are retained by Dr. Byrd)

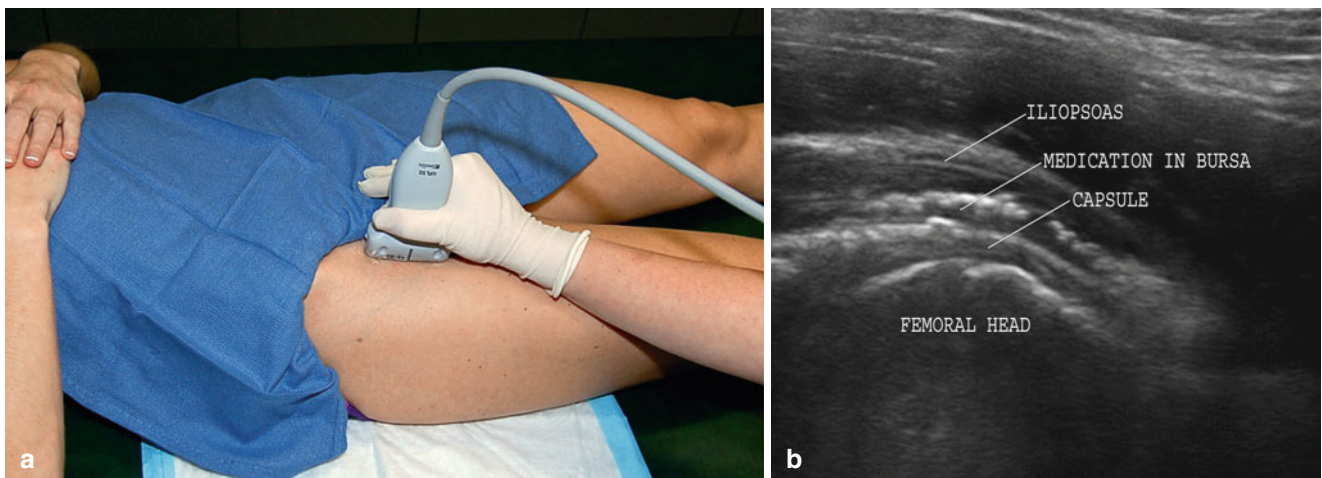


Fig. 34.8 (a) After the injection, placing the transducer over the iliopsoas in long axis will allow visualization of the medication in the bursa between the joint capsule and the iliopsoas musculature. (b) Long axis ultrasound image after injection of medication into the bursa. The image

shows clearly defined layers indicating the femoral head, joint capsule, bursa, and the iliopsoas musculature. (All rights are retained by Dr. Byrd)

know to expect pain from instrumentation of the joint and any bony work performed as well as muscular soreness in the operative leg that is often noted after the acute surgical pain has abated. This muscular soreness can be caused by manipulation of the hip, traction forces applied during the procedure, and the use of the perineal post. The typical description is overall soreness around the hip and many patients report feeling like they have ridden a horse and have soreness in the saddle area. Ankle soreness in the operative leg is also a common complaint and is related to the traction boot. It is reassuring for the patient to know that these various aches normally resolve in 5–7 days. The amount of dis-

comfort is variable, but we generally find the greatest pain control issues in conjunction with extensive bony work to the acetabulum and concomitant labral refixation. The peak of pain usually subsides within 8–10 h. Adequate pain control is one criterion for discharge from the recovery room. Occasionally, some patients may not achieve adequate control with oral analgesics. For these circumstances, patients may be well suited for a regional block performed by the anesthesia service. We do not use these routinely for all patients, but all patients are assessed in the recovery area and, if initial pain control is problematic, a regional block can be chosen.

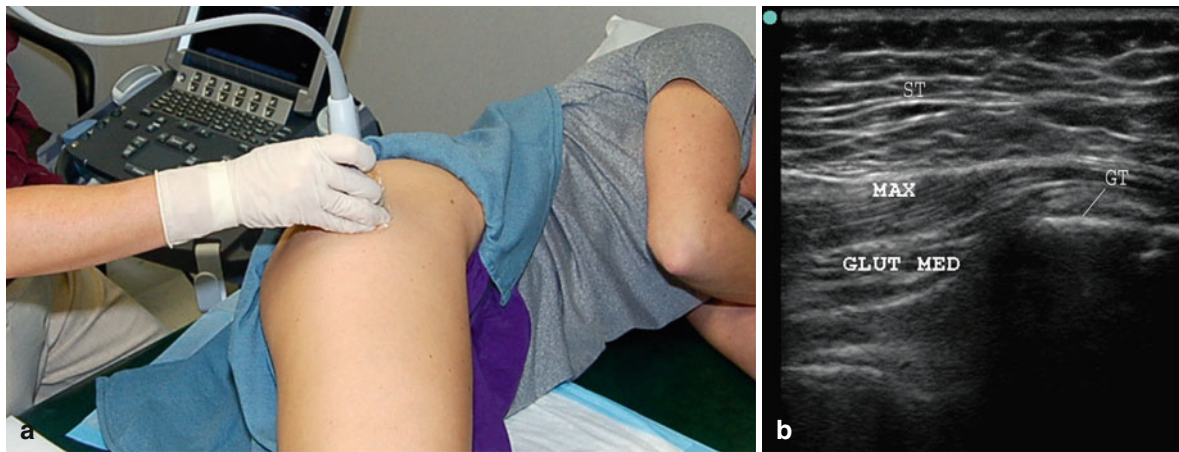


Fig. 34.9 (a) The peritrochanteric region is scanned over the lateral hip. The location of the transducer will vary depending on the location of the pathology and desired injection site. (b) Ultrasound image shows

the subcutaneous tissues (*ST*), gluteus maximus (*MAX*), gluteus medius (*GLUT MED*), and the greater trochanter (*GT*). (All rights are retained by Dr. Byrd)

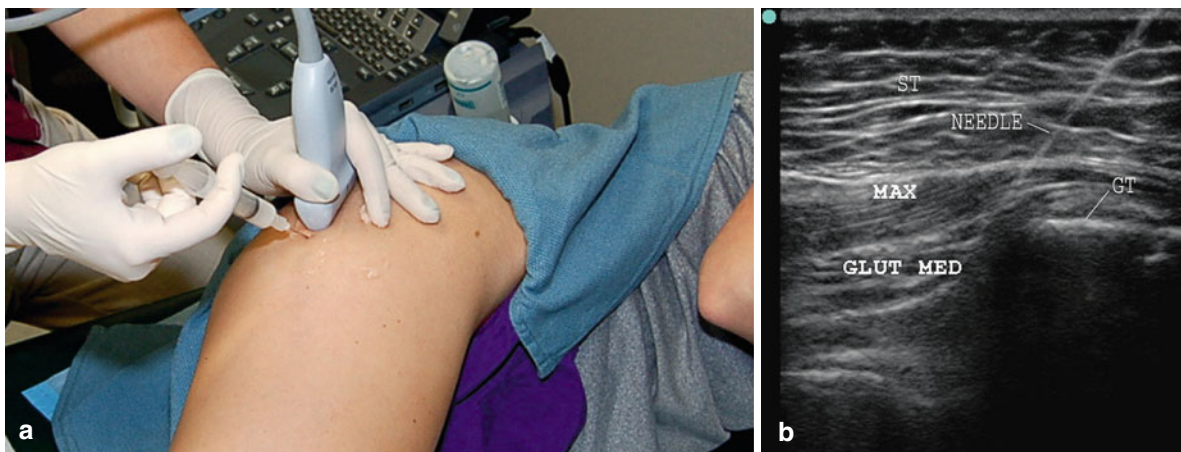


Fig. 34.10 (a) The needle is placed in plane with the transducer to allow visualization of the needle throughout the procedure. Visualization of the needle ensures that the medication is injected into the desired

location. (b) Ultrasound image demonstrates the needle entering the tissue of the gluteus medius as it nears its insertion on the greater trochanter. (All rights are retained by Dr. Byrd)

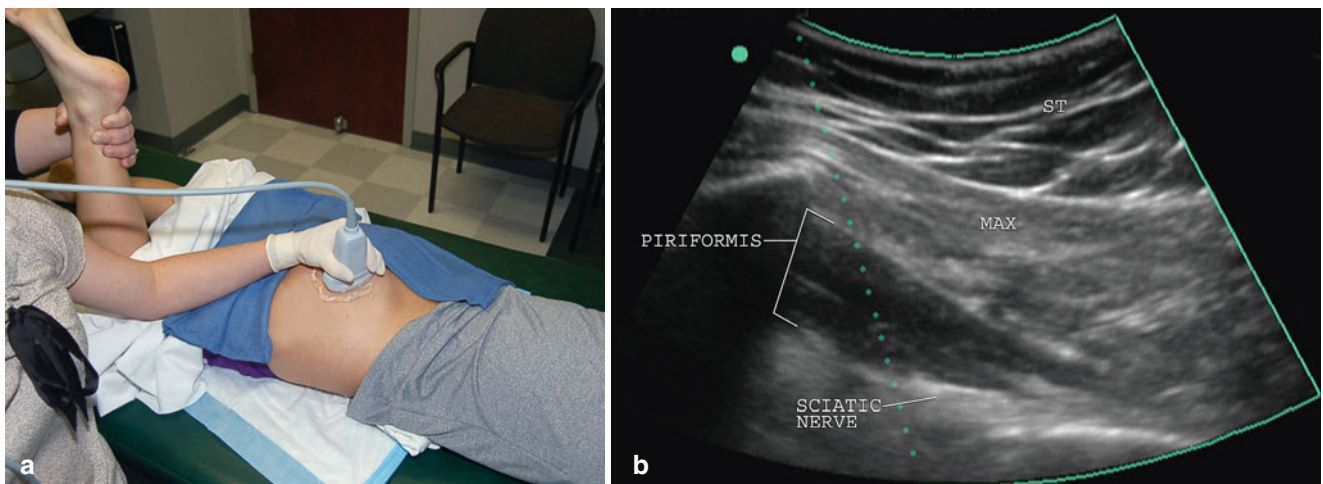


Fig. 34.11 (a) Inspection of the piriformis is performed with the patient prone and the transducer placed firmly over the piriformis in long axis. With the knee flexed, an assistant can internally and externally rotate the leg allowing visualization of the piriformis in motion

throughout the subgluteal space. (b) This long axis ultrasound image depicts the relationship between the subcutaneous tissue (*ST*), gluteus maximus (*MAX*), piriformis, and sciatic nerve. (All rights are retained by Dr. Byrd)



Fig. 34.12 The needle is placed in plane with the transducer. This allows the needle to be visualized throughout its advancement to the piriformis, avoiding the sciatic nerve. (All rights are retained by Dr. Byrd)

A lateral femoral cutaneous nerve block or fascia iliaca compartment block is most commonly used. These types of regional nerve blocks are preferred because they give mostly sensory nerve anesthesia with very little motor nerve anesthesia. Occasionally, these blocks do not provide the patient with adequate pain control so a femoral nerve block is used. One caution about femoral blocks is that there is concomitant motor inhibition of the quadriceps. Patients must be educated regarding the potential for falls and should be instructed on strict protected weight bearing until they regain full motor function.

Narcotics or oral centrally acting medications, such as oxycodone 5 mg with acetaminophen 325 mg, are prescribed for pain control. Prescription pain medicine is generally used for the first 5–7 days after surgery. By the end of the first postoperative week, the need for narcotic pain control is more sporadic. Patients should be reminded to take medications with food to prevent gastrointestinal discomfort. They

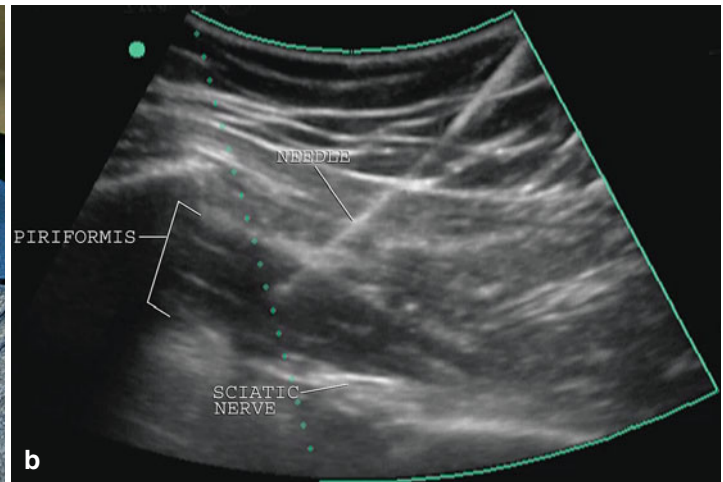


Fig. 34.13 (a) The needle is inserted into the musculature of the piriformis avoiding the sciatic nerve. (b) The ultrasound image shows the needle entering the piriformis a safe distance from the sciatic nerve. (All rights are retained by Dr. Byrd)

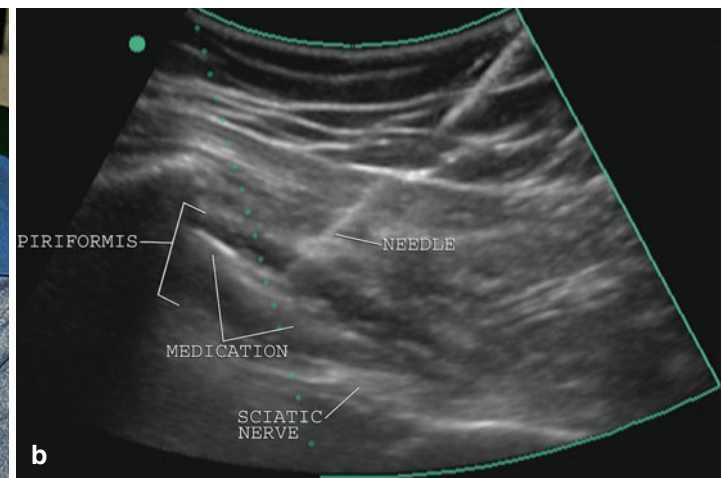


Fig. 34.14 (a) The medication is injected. (b) The medication is visualized entering the muscle tissue of the piriformis. (All rights are retained by Dr. Byrd)

should also be instructed to refrain from driving or operating heavy machinery while medicated.

With the introduction of impingement surgery, the need to prevent heterotopic ossification must be considered by the surgeon. This is routinely accomplished with nonsteroidal anti-inflammatory drugs. The patient should be educated on the purpose of the drug regime and the importance of their compliance in the prevention of heterotopic ossification. The patient should also be reminded about the potential side effects that can be experienced and to call the surgeon's office if they experience any such effects.

After narcotics are discontinued, alternative nonprescription medications such as acetaminophen, ibuprofen, or other nonsteroidal anti-inflammatories may be useful to ameliorate discomfort. It is important to note that analgesics, possibly narcotics, may be needed when physical therapy is initiated or when performing exercises. Some patients may experience prolonged discomfort or more intense pain. The reasons for this should be explored by the clinician.

The use of ice (cryotherapy) has several beneficial effects for tissues that have been injured, whether from trauma or surgery. When ice is applied immediately after surgery, the body attempts to preserve core heat by constricting superficial cutaneous vessels, causing decreased capillary permeability and hemorrhaging. This therapeutically alters the physiologic response of the tissues to injury by reducing inflammation, swelling, and pain [7].

Ice is most effective when used immediately after surgery. The ice bag can first be applied by the recovery room nurse. The patient should be instructed to apply ice for 15–20 min every 3 h for the first 24 h and even for 2–3 days after surgery if it helps alleviate discomfort. There are several different cold therapy devices available that are effective to help control pain. They are convenient in that they often cycle through the cooling process and are designed to maintain a constant cool temperature over the joint. Patients who use cold compression therapy devices rave over the difference that they make compared to traditional ice packs.

Cryotherapy is not without hazards. Cold should not be used for longer than 30 min with conventional methods (ice bags/packs) due to the potential for freezing the skin. This could result in frostnip or frostbite. Nerve palsies can result from the application of cold to an extremity for longer than 30 min, or when cold is improperly applied to vulnerable areas [8].

Contraindications to cryotherapy include patients recovering from an epidural infusion or spinal/nerve block. Ice should not be used until full sensation has returned in both lower extremities. Cryotherapy should not be used at all in the patient with a suspected neuropathy, such as with diabetes or on patients with a true hypersensitivity or allergy to cold [8].



Fig. 34.15 A first postoperative day wound site following correction of FAI including acetabuloplasty with labral refixation and femoroplasty. The three standard portals (*black arrows*) were used for access to the central compartment. A distal puncture wound (*green arrow*) was used for percutaneous anchor placement, and an accessory proximal portal (*gray arrow*) aided in access to the periphery and femoroplasty. (All rights are retained by Dr. Byrd)

Wound Care

A bulky dressing is applied to the surgical site. This dressing is left in place until the first postoperative day, allowing time for extravasated fluid from surgery to be absorbed into the dressing. Usually, this has subsided enough to remove the dressing within the first 24 h. The patient should be reassured that it is normal for the dressing to feel wet from the irrigation fluid and that it may be blood-tinged.

The patient should be aware that the surgeon will make several arthroscopy portals. Each of these portals is typically about 1 cm but could be larger and will be closed with sutures. Patients, and even allied health professionals, are often surprised at the anatomic location of the portals. They envision them being located more cephalad (Fig. 34.15).

The portals are cleaned daily with hydrogen peroxide and water. A small adhesive bandage can then be placed over each portal site until the sutures are removed. The patient may shower on the first postoperative day, taking care to keep water from running directly over the portals. If the portals show signs of adequate healing, the sutures may be removed approximately 7 days postoperatively and Steri-Strips applied.

It takes approximately 10–14 days for the portals to heal completely. During this time, showering is allowed, but the patient should avoid submersing the operative hip in a bathtub, hot tub, or swimming pool.

It is important to educate patients regarding the signs and symptoms of infection. They should be advised to contact the nurse if they develop any redness or drainage at the portal sites or if they develop a high fever.

Activity Level

The activity level prescribed after hip arthroscopy is variable, depending on the pathology found at the time of surgery and the surgeon's preference. Assistive devices, usually crutches, are used at least until the gait pattern is normalized and limp resolved, which can take 5–7 days. At a minimum, patients are encouraged to use their assistive devices until they have been seen by the physical therapist or return to the surgeon's office. More complex procedures such as correction of FAI, labral repair or refixation, microfracture or capsular stabilizations may require a more protracted period of protected weight bearing ranging from 4 to 8 weeks. The specifics of this must be directed by the surgeon and can be implemented by the clinical nurse and physician extender.

The patient will be most comfortable immediately after surgery in a reclining or sitting position. The most comfortable sleeping positions are usually supine or on the nonoperative side with a pillow between the legs. Sleeping on the operative side has no known adverse effects, but this is usually not comfortable for several weeks postoperatively.

Patients need to be reminded that it is easy for them to overdo in the first few days after surgery and should be encouraged to limit their activities. Once they feel like being up and around, daily activities can be performed to tolerance, but they should be respectful of any discomfort felt in the hip. Oftentimes, for simpler procedures, patients experience a "honeymoon" phase for the first 3–4 weeks postoperatively. During this time, the patient experiences pronounced pain relief compared to their preoperative status. They do need to be reminded that they have just had hip surgery and need to pace themselves accordingly. Often, the patients are not back to regular activities of daily living, and when they do return to their normal level of functioning, they will experience pain and soreness. When this does happen, the patient often gets discouraged or thinks that the surgical procedure was not successful. The nurse can explain to them that it really takes a month to get over the actual surgical procedure. After that initial month, it can take 3–4 months before they may actually appreciate the benefits of the surgery.

For more complex procedures such as FAI, it is not uncommon for patients to spontaneously experience a setback at around 8–10 weeks postoperatively. The etiology is not always clear, but it is probably a combination of the patient starting to do more and the joint experiencing forces for the first time since surgery. This requires attention on behalf of the patients to assure them that this is not necessarily a worrisome sign but may obligate some alteration in the rehab strategy to accommodate their discomfort and perhaps a brief course of anti-inflammatory medication. It is best to warn patients preoperatively about this occasional occurrence. Thus, they will have more confidence in your

explanation and encouragement that things will be okay when this occurs postoperatively.

Fatigue is one of the biggest considerations after surgery [4]. This can be related to several factors including the anesthetic, analgesics, pain, or sleep disruption. The nurse should inform the patient that this will generally dissipate after postoperative day 3 but can last as long as several weeks.

Physical therapy is usually initiated 1–2 days after surgery. The rehabilitation program for the postoperative patient is individualized to the pathology and the procedure performed. The primary focus of the rehabilitation process is to reduce discomfort and improve function. A successful result after surgery is often dependent on a properly constructed rehabilitation program. This is an important concept to be relayed to the patient because there may often be a reluctance to go to physical therapy. When the hip hurts, the idea of "exercise" may not be appealing to the patient.

The most frequently asked question regarding activity is "When can I drive?" General guidelines include the following two parameters: the patient must have discontinued the use of narcotic analgesics and have regained adequate leg control to operate the accelerator and brake pedals or clutch. Right hip arthroscopy often delays the resumption of driving. Restrictions for up to a month may be necessary for complex procedures, especially with labral repair in the driving leg.

It is important for the clinical nurse and physician extender to remember several things pertinent to the postoperative recuperation. Patients want and need to hear that they are doing well and are on schedule in their recovery. Patients are often impatient and may expect to recover more quickly than they actually do. Rarely will a patient tell you that their recovery was quicker than they had anticipated. Many prefer to have guidelines by which to gauge their progress. They want to know how other patients normally respond under the same circumstances [5]. Patients and their caregivers may have selective hearing or may forget to read postoperative instructions; therefore, frequent contact by telephone is one of the keys to the successful recovery of the hip arthroscopy patient [9]. The frequent contact between the clinical nurse and the patient and/or their caregivers can have a positive effect on patient satisfaction and also provides a mechanism for feedback [4].

Conclusions

Appropriate patient selection and education, skillful implementation of the surgical procedure, and a properly constructed rehabilitation program are all important factors in the success of hip arthroscopy. Of equal importance, the patient's expectations must be properly matched with the results anticipated by the surgeon. The clinical nurse and physician extender play a crucial role in assuring the integration of these factors, all of which are critical to an optimal outcome.

The role of the clinical nurse is an integral part of the perioperative experience. While the patient is carefully guided through surgery and the rehabilitation process, the nurse monitors expectations to assure the most likely degree of overall patient satisfaction. The clinical nurse's perspective, attained through direct patient assessment and interaction, can help to define coexistent conditions or circumstances that could potentially influence the success of arthroscopy.

Physician extenders facilitate all aspects of patient care but also provide a useful additional diagnostic and therapeutic resource for surgeons. The history and physical examination direct most patient care, but adjunct imaging such as office ultrasonography greatly enhances both diagnosis and treatment while leaving the surgeon free to steer all aspects of the patient's care.

Success is also dependent on patients' ability not only to understand what is happening but also to be an active participant in their perioperative care. The focus on ambulatory outpatient surgery allows more efficient utilization of resources but places more responsibility on patients and caregivers. Patients undergoing arthroscopic surgery of the hip must be equipped to handle their postoperative course. This is best accomplished with detailed education and nursing care, beginning preoperatively.

An optimal outcome is dependent on coordination of the perioperative care, from preoperative assessment through postoperative rehabilitation. The clinical nurse and physician extender help facilitate the patient's smooth transition through this experience and serve as a vital resource for other members of the health care team. The nurse and extender are educators, practitioners, consultants, and collaborators. By serving in this multifaceted role, they ensure appropriate and efficient utilization of resources through close patient follow-up and timely response to changes in the clinical circumstance. This allows the other members of the health care team, whether it is as the patient, caregiver, surgeon, operating room personnel, or physical therapist, to better fulfill their respective roles.

Appendix: Postoperative Instructions

J.W. Thomas Byrd

Arthroscopic Surgery of the Hip

The following information is designed to answer some of the frequently asked questions regarding what to expect and what to do after arthroscopic surgery. These are general guidelines, if you have any questions or concerns, please give us a call.

Dressing and Wound Care – During arthroscopic surgery, the joint is irrigated with water. There will typically be 3 to 5 small incisions closed with sutures. Your hip will be covered with a bulky dressing. Water may gradually leak through these incisions, saturating the bandage. This blood-tinged drainage may persist for 24–36 h. If it has not significantly decreased by this time, please call our office.

The bandage may be removed the day after surgery. The incisions should be cleaned with hydrogen peroxide then covered with band-aids. As soon as the incisions are dry, you may leave them uncovered. Do not use ointments such as Neosporin on the incisions. You may shower the day after surgery, but avoid water running directly over the incisions. The incisions should not be soaked under water (e.g., bathtub, hot tub, swimming pool, etc.). The sutures should be removed 7–10 days after surgery.

If the incisions show any signs of infection, please contact our office. Specifically, if there is increased redness, persistent drainage, if you have fever, or if the pain does not progressively decrease, you should call the office.

ICE – During the first 48 h, ice can be helpful to decrease pain and swelling and is especially important during the first 24 h. Ice bags/packs should never be applied directly to the skin. They should be wrapped in a towel and applied for 15 min at a time every 2–3 h. If the skin becomes very cold or burns, discontinue the ice application immediately. If you are using the Game Ready system, please use the program outlined at the time of your instruction on how to use the machine.

Ambulation and Movement – Unless you have been otherwise instructed, you will be allowed to bear as much weight on your leg as is comfortable immediately after surgery. Crutches should be used and are necessary to help decrease discomfort and to protect your hip while walking after surgery. If there is any question about how much weight to place on your leg or how long to be on crutches, please call our office.

Your level of discomfort will most often be your best guide in determining how much activity is allowed. Remember that it is very easy to overdo in the first few days after surgery and any increase in pain or swelling usually indicates that you need to decrease your activities. Please be careful on slippery surfaces, steps, or anywhere you might fall and injure yourself.

Medications – You will be given a prescription for pain medication. You may also be given a prescription for an anti-inflammatory medication that you will need to take twice a day for 3 weeks. It is very important that you start this medication the night of your surgery and that you take this medication for the full 3 weeks. If there is any problem with you tolerating this medication, please call and let the nurse know. If you have any known drug allergies, check with the nurse prior to taking any medication.

Some medications do have side effects. If you have any difficulty with itching, nausea, or other side effects,

discontinue the medication immediately and call our office. Pain medication often causes drowsiness and we advise that you do not drive, operate machinery, or make important decisions while taking medication.

Please note that we are unable to call in prescriptions for narcotics (pain pills) after office hours. If you need a refill, please call early in the day or before the weekend so the nurses can take care of that for you.

If you are able to take aspirin, you should take one aspirin (325 mg) twice daily for two weeks following your surgery. Aspirin serves as a mild blood thinner and may decrease the chance of blood clots forming in the leg. Although this is uncommon, it can be a difficult problem. It is best to take one in the morning and one in the evening and to avoid taking them on an empty stomach. If you are under the age of 16 or have any unusual medical problems, please check with the nurse about whether you should take aspirin.

Exercise/Physical Therapy – Physical therapy usually begins within a few days after your surgery. The therapist will outline an exercise program specific to your type of surgery. The purpose of physical therapy is to help you regain the use of your hip in a safe and progressive fashion. If you have any questions regarding your exercise program, please contact the physical therapist. If you are unaware of when or where your therapy is, please call the nurse and she can help you determine this.

First Post-Operative Visit – Your first post-operative appointment will be within one week of your surgery. The findings at surgery, long-term prognosis, and plans for rehabilitation will be discussed at this appointment. If you are

unsure of when your first post-op visit with Dr. Byrd is, please call the office and someone will help get one scheduled.

Communications – If you are having any problems, contact us right away. If it is after office hours, the answering service will contact the nurse or doctor on call.

Remember, if your pain increases, check for signs of infection (redness, fever, etc.), decrease your activities, use ice, and take your pain medication as prescribed. If the pain persists, or if there are signs of infection, call our office (615) 284-5800.

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