

# Hip Injection as a Diagnostic and Therapeutic Tool

## Editorial

The causes of Hip pain could be diagnosed by clinical examination if the underlying cause shows clear signs and has clear radiological features of arthritis for example, but sometimes to reach the actual diagnosis is not so easy and there are other referring causes that can make reaching the diagnosis is challenging like referred pain or extra-articular pain causes.

The diagnostic hip block with local anesthetic under imaging guide would be a very useful tool to eliminate hip cause and identify the source of the pain and in certain cases; it is a useful tool to prove the unconvinced patient that the hip joint is not the source of the pain as the hip joint will be blocked and anaesthetized and if the pain still existed then it's an extra articular cause. So it can be useful to shift the attention of the patient from the hip joint and at the same time, helps the hip surgeon that any arthroplasty surgery will not be effective. However, on the other hand if the injection masked the pain during the half life of local anesthetic then it's an intra articular cause.

The pre injection explanation should be given to the patients as the injection is only diagnostic in nature and it's not intended as a therapeutic treatment, to eliminate any miss understanding.

Majority of hip pains sources is osteoarthritis with a different degree of wear and tear. Severe established osteoarthritis only responds to arthroplasty surgery. However, the early stages-of joint osteoarthritis and some of other causes like synovitis as a primary cause or secondary to dysplastic hip anatomy could respond very well to steroid hip injection. The therapeutic effect can be temporary or permanent depending on lack of predisposing factor like mechanical friction which could cause the recurrent symptoms. So the length of steroid effect could mean the source of the pain is primary in joint and the long term effect means pure inflammatory of the hip joint and the injection could be repeat it again in the future, but recurrent symptoms after short term injection might indicate other additional factor that cause the symptoms, like abnormal hip friction that cause pain recurrence.

But the biggest problem after the hip injection is the joint should not undergo any open surgery at least for three months' post injection due to the fact of the possibility of high risk of deep infection post operatively meeting 2016 Florida.

## Intra Articular Hip Injection Procedure

Hip joint is tight joint with negative pressure which means once the hip injected and the joint linked to outside atmosphere the joint will expand and become positively pressurized therefore to make sure the needle in the right place the following parameters should be followed

1. Patient should be aware of the procedure and inform consent should be obtained
2. Patient can be positioned supine or lateral

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3. The procedure ideally should be done under imaging
4. If the hip injection was done Under X-ray control an arthrogram with approved substance should be used to assure the correct intra articular approach
5. The injection approach can be anterior or lateral above tip of the trochanter
6. Local anesthetic should be used with the steroid substance.

## Extra Articular Hip Injection Procedure

The areas around the hip joint that can be injected are many but the common areas are trochanteric injection and iliopsoas tendon injection (Figure 1).



**Figure 1:** Extra articular hip injection.

## Trochanteric Injection

This can be done with ultrasound aid or free hand but the actual site of the injection and the depth of the injection should be respected to achieve effective injection usually posterior upper facet of the greater trochanter is the usual site and the needle should be long enough to reach the bursa near the bone (Figure 2).

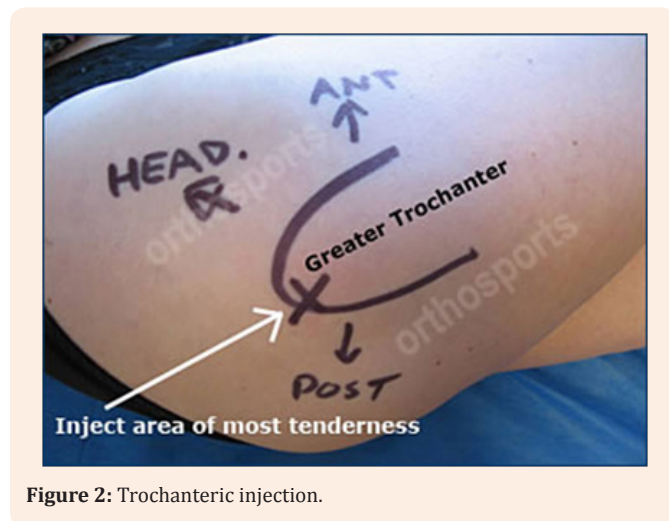


Figure 2: Trochanteric injection.

## Iliopsoas Tendonitis Injection

Patients with IPS tendonitis often present with complaints of an insidious onset of anterior hip or groin pain. As in other cases of tendinitis, initially the patient may note pain after onset of aggravating activity with resolution soon thereafter. This condition may progress to pain that persists during activity but subsides with rest, and eventually to pain during activity and at rest. Patients may note pain with specific sports-related activities, such as jogging, running, or kicking. Pain with simple activities, such as putting on socks and shoes, rising from a seated position with the hips flexed for some time, walking up stairs or inclines, or brisk walking may be reported.

Pain may radiate down the anterior thigh toward the knee. Reports of an audible snap or click in the hip or groin commonly are reported and associated with internal snapping hip syndrome. Patients may report anterior knee pain consistent with patellar tendinitis or patellofemoral dysfunction, which may be the result of a tight iliopsoas muscle.

The primary objective of the acute rehabilitation phase is to alleviate pain, spasm, and swelling. A secondary issue, if necessary, is to return the patient to activities of daily living (eg, walking unassisted). A combination of medication, ice, rest, and gentle stretching assists these goals in coming to fruition. Note that stretching must not immediately follow icing, when the sensitivity to pain is lessened, because a potential to overstretch exists. The patient can practice walking in front of a full-length mirror to ensure that ambulatory rhythm and techniques are correct.

The average time from onset of symptoms to diagnosis typically ranges from months to years; therefore, most patients may present in the sub acute or chronic phases of the condition. Despite this, medical treatment during the acute phase consists of relative rest and avoidance of activities that cause pain. Rarely, crutches may be necessary if sufficient pain is associated with

ambulation or activities of daily living. The application of ice for 20 minutes every 1-2 hours for the first 1-3 days is recommended in addition to a short course (eg, 5-14 d) of non steroidal anti-inflammatory drugs (NSAIDs) in order to potentially limit inflammation and assist with analgesia.

But steroid injection with imaging guide like X ray or CT scan or ultrasound at the usual levels which is the lesser trochanter or at muscular tendons junction and usually radio opaque substance is used for accuracy. The level of injection can be at lesser trochanteric level as the iliopsoas tendon attached to it or at the level of acetabulum (in cases of metal friction as a cause of iliopsoas tendonitis). This could be used to confirm the diagnosis and/or apply as a treatment [1] (Figure 3).

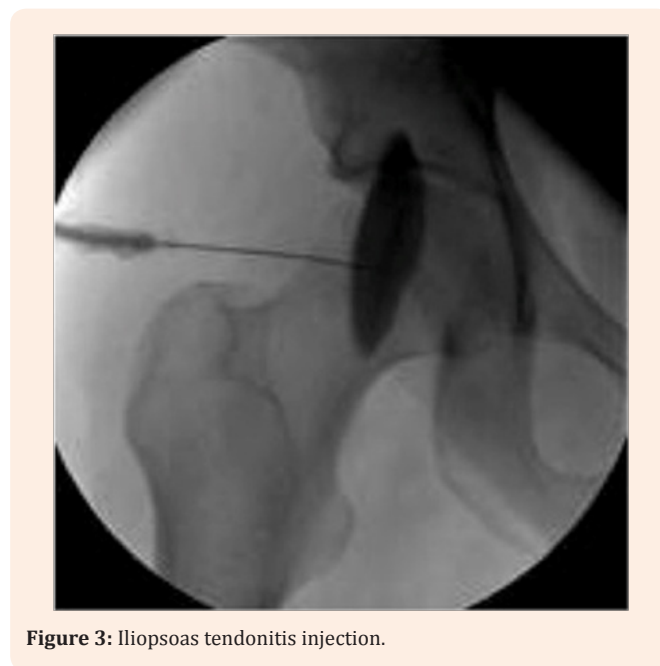


Figure 3: Iliopsoas tendonitis injection.

## Complications of Steroid Joint Injections Include

1. An increase in pain and swelling in the injected area - this usually settles within a few days
2. A flushed or red face.
3. A rise in your blood sugar for a few days if you have diabetes
4. Infection
5. Damage to the cartilage within your joint or tendons around it. This may be more likely with repeated injections
6. Thinning or a change in the color of the skin around the injection site. This tends to be more common with stronger or repeated
7. Irregular periods in women, or vaginal bleeding even if you're past the menopause
8. Changes in your mood.

## References

1. Iliopsoas Tendinitis Treatment & Management.