INTRODUCTION

This guideline addresses the use of sacroiliac joint injections for the treatment of low back pain that originates in the region of the sacroiliac joint. An injection of anesthetic and/or steroid may be used for the diagnosis and treatment of sacroiliac joint (SIJ) pain syndrome disorders (such as degenerative joint disease, postsurgical injuries, or traumatic injuries), or for treatment of spondyloarthropathy (inflammatory disorders of the joints and ligaments of the spine).

Sacroiliac joint injections are typically used for the following conditions:

Sacroiliac joint pain syndrome may be caused by various events, including pain secondary to postsurgical or traumatic injury, degeneration (wear and tear), or pregnancy. Physical examination (history and physical, provocative maneuvers) and diagnostic injection help to identify the source of pain as the SIJ.

Diagnostic SIJ injections are used to determine if the SIJ pain originates with the SIJ. Diagnostic blocks can reveal (or fail to reveal) that the source of pain is originating from the SIJ, and then an appropriate treatment plan can be developed (Curatolo and Bogduk, 2010; Manchikanti et al., 2013a).

Therapeutic SIJ injections may be used to treat SIJ pain once it has been determined that the SIJ is the origin of the pain. A therapeutic injection typically includes a corticosteroid and a local anesthetic that can be injected directly into the joint (intra-articular) or into the tissues surrounding the joint (periarticular).

Spondyloarthropathy (also known as spondyloarthritis) is the name for a family of rheumatic diseases that cause arthritis. Sacroiliitis is a key indicator of spondyloarthritis and is diagnosed with imaging. Patients with spondyloarthropathy are generally managed by rheumatologists and account for only a small percentage of the cases that present in interventional pain management settings.
INDICATIONS FOR SACROILIAC JOINT INJECTIONS (SIJ)

For the treatment of SIJ pain:
- **All** of the following must be met:
  - Low back pain maximal below level of L5 which may radiate to the groin or lower extremity persisting at least 3 months; AND
  - Positive exam findings to suggest the diagnosis which may include the pelvic distraction test, pelvic compression test, thigh thrust test, FABER (Patrick’s test) or Gaenslen’s test; AND
  - Active conservative treatment for a minimum of 6 weeks in the last 6 months (including physical therapy, home exercise, patient education, psychosocial support, and/or medication) has failed unless the medical reason this conservative treatment cannot be done is clearly documented.

For the treatment of spondyloarthritis:
- **All** of the following must be met:
  - The patient has experienced ≥ 3 months of low back pain; AND
  - Age of onset < 45 years; AND
  - Comprehensive pain management program including physical therapy, home exercise, patient education, psychosocial support and/or oral medication is in place; AND
  - Prior history of evidence of sacroiliitis on imaging (i.e., active inflammation on magnetic resonance imaging [MRI] or definite radiographic sacroiliitis grade > 2 bilaterally or grade 3-4 unilaterally); AND
  - **1 or more** spondyloarthritis features:
    a. Inflammatory back pain with **at least 4** of the following criteria present:
      i. Age at onset < 45 years
      ii. Insidious onset
      iii. Improvement with exercise
      iv. No improvement with rest
      v. Pain at night (with improvement upon getting up)
    b. Arthritis
    c. Enthesitis of the heel (irritability of muscles, tendons, or ligaments where they enter the bone)
    d. Uveitis (inflammation of the uvea, the middle layer of the eye)
    e. Dactylitis (inflammation of a finger or toe)
    f. Psoriasis
    g. Crohn’s/colitis
    h. Good response to NSAIDs
    i. Family history of spondyloarthritis
    j. Positive testing for HLA-B27
    k. Elevated C-reactive protein (CRP)

FREQUENCY OF REPEAT THERAPEUTIC INJECTIONS

- SIJ injections may only be repeated if symptoms recur and the patient has had at least a 50% improvement after each injection; AND
The injections are performed as one part of a comprehensive treatment program, which will nearly always include an exercise program to improve or maintain spinal mobility; AND
Repeat injections should not be done more frequently than every six weeks for a total of 4 injections in a 12 month period. (Cardone and Tallia, 2002).

CONTRAINDICATIONS FOR SACROIILIAC JOINT INJECTIONS

- Active systemic infection
- Skin infection at the site of needle puncture
- Bleeding disorder or anticoagulation therapy
- Uncontrolled high blood pressure
- Uncontrolled diabetes
- Unstable angina
- Congestive heart failure
- Allergies to contrast, anesthetics, or steroids (AAOS, 2009)

ADDITIONAL INFORMATION

Conservative Therapy: (musculoskeletal) includes a combination of modalities, such as rest, ice, heat, modified activities, medical devices, (such as crutches, immobilizer, metal braces, orthotics, rigid stabilizer or splints, etc and not to include neoprene sleeves), medications, diathermy, chiropractic treatments, or physician supervised home exercise program. Part of this combination may include the physician instructing patient to rest the area or stay off the injured part.

Home Exercise Program - (HEP) – the following two elements are required to meet guidelines for completion of conservative therapy:
- Information provided on exercise prescription/plan AND
- Follow up with member with information provided regarding completion of HEP (after suitable 4-6 week period), or inability to complete HEP due to physical reason - i.e. increased pain, inability to physically perform exercises. (Patient inconvenience or noncompliance without explanation does not constitute “inability to complete” HEP).

Low back pain is one of the most common of all spinal pain problems. According to the Centers for Disease Control and Prevention (CDC), the prevalence of low back pain in adults 18 years of age and older is 28.4% and may range as high as 32.1% in adults ≥ 75 years (CDC, 2012). Symptoms of low back pain may arise from multiple sites, including lumbar intervertebral discs, facet joints, sacroiliac joints, ligaments, fascia, muscles, and nerve root dura. The sacroiliac joint has been shown to be a source of pain in 10% to 27% of chronic low back pain (Hansen et al., 2007; Simopoulos et al., 2012; Manchikanti et al., 2013a).

The sacroiliac joint (SIJ) is located between the sacrum (located at the base of the spine) and the pelvis, and supports the weight of the upper body in the standing position. There are SIJs in both the right and left side of the lower back. Strong ligaments hold the joints in place. The SIJ is well innervated and has been shown to be capable of being a source of low back pain and referred pain in the lower extremity. Low back pain originating from the SIJ
can result from inflammatory conditions such as sacroiliitis, spondyloarthropathy (ankylosing spondylitis; rheumatoid spondylitis), or from postsurgical or traumatic injury, degeneration (wear and tear), or pregnancy. SIJ pain most often occurs in the buttocks and lower back, and may radiate down through the buttocks and the leg. Physical examination and radiographic techniques may confirm a diagnosis related to spondyloarthropathy. Physical examination, including provocative maneuvers to elicit pain response, and controlled SIJ injections can help diagnose noninflammatory pain arising from the SIJ (Hansen et al., 2007; Medline Plus, 2012; Mayo Clinic, 2013).

In order to confirm correct placement of the injectable medication into the intra-articular space, fluoroscopic or computed tomography (CT) guidance is used. A periarticular injection into the soft tissue may be used if ligamentous or muscular attachments are suspected to be involved. The goal of the therapeutic injection is to reduce inflammation and/or pain and provide longer pain relief. Long-term relief is generally defined as 6 weeks or longer, but positive responders generally have a much longer duration of response: serial injections may be required in order to maintain therapeutic effectiveness (Hansen et al., 2007; AAOS, 2009; Luukkainen et al., 2002; Hawkins and Schofferman, 2009).

Spinal injections for the treatment of SIJ pain syndrome are typically performed as one part of a comprehensive treatment program, which will nearly always include an exercise program to improve or maintain spinal mobility. Potential candidates for SIJ injections include those with low back pain originating from the SIJ that is unresponsive to conservative treatments.

Treatment for SIJ pain depends upon the signs and symptoms, as well as the underlying cause for the pain. Medications, such as over-the-counter analgesics, a short course of narcotics, muscle relaxants or tumor necrosis factor (TNF) inhibitors, such as etanercept (Enbrel), adalimumab (Humira), or infliximab (Remicade), may be prescribed. Therapy sessions with a physical therapist involving range-of-motion, stretching, and strengthening exercises may be used to maintain joint flexibility and strengthen the muscles. Other interventional procedures used to treat SIJ pain include corticosteroid injections to reduce inflammation and pain, radiofrequency denervation, electrical stimulation, or in rare cases, joint fusion (Mayo Clinic, 2013).

The indications for coverage for the treatment of spondyloarthropathy have been established through use of the reviewed clinical studies and through criteria developed by the Assessment of SpondyloArthritis International Society (ASAS) for the classification of axial spondyloarthritis (Sieper et al., 2009). They are in keeping with the benefit guidelines developed by the Centers for Medicare & Medicaid Services (CMS).

While evidence supports that SIJ injection is an effective method of determining the source of pain, evidence supporting the efficacy of SIJ in the treatment of SIJ pain syndrome is considerably limited. There are limited controlled or prospective clinical studies to support SIJ injection for therapeutic purposes. Despite the limited quality of the clinical studies supporting SIJ injection for the treatment of SIJ pain, the procedure is recommended by the American Society of Anesthesiologists (ASA) and the American Society of Regional Anesthesia and Pain Management (ASRAPM) Practice Guidelines. The indications for coverage have been established from the 2009 Comprehensive Evidence-Based Guidelines for Interventional Techniques in the Management of Chronic Spinal Pain, and updated
with the 2013 *An Update of Comprehensive Evidence-Based Guidelines for Interventional Techniques in Chronic Spinal Pain. Part II: Guidance and Recommendations.*
REFERENCES


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