SI-BONE® | **iFuse** Implant System®
Minimally Invasive Sacroiliac Joint Surgery

Sacroiliac Joint Diagnostic Injections

DESCRIPTION

A sacroiliac joint block is a diagnostic procedure to determine if the sacroiliac joint is the source of the patient's pain.[1]
The procedure involves injecting local anesthetic into the articular portion of the sacroiliac joint.

INDICATIONS

The indication for a sacroiliac joint block is the need to know if the sacroiliac joint is the source of a patient's pain.

Consideration for an SI joint injection should be based on a positive response to a cluster of provocative tests. A positive response to three or more provocative tests of the SI joint is the best predictor of a positive intra-articular SI joint block.[2,3]

MATERIALS

A 25-gauge spinal needle is optimal. A 22-gauge needle may be preferred for greater stiffness to facilitate entry into a narrow, sclerotic joint.[1]

TECHNIQUE

Image guidance (Fluoroscopy or CT Scan) is mandatory to confirm intra-articular placement of contrast. Lidocaine (1% or 2%, 4%) or bupivacaine (0.5% or 0.75%) may be used to anesthetize the joint.[1]

The patient is positioned on the imaging table prone with a pillow under the abdomen at the level of the iliac crests.
The C-arm is be adjusted laterally or medially from its original anterior-posterior (AP) position to optimally visualize the most inferior portion of the joint **(FIGS. 1 and 2)**. The ideal view is when the anterior and posterior joint surfaces of the inferior portion of the joint are parallel.

"Sacroiliac joint blocks have diagnostic utility."
– Spine Intervention Society (SIS) Practice Guidelines[1]

Proper initial patient positioning will provide more reliable access. After marking the skin over the area identified with fluoroscopy, the area is sterilized, and a 22-gauge, 5" styletted spinal needle is advanced toward the target using intermittent fluoroscopic guidance. A distinct "pop" is felt when the joint is penetrated. Once the needle is properly positioned within the inferior portion of the joint **(FIG. 3)**, a small volume of contrast material (0.3 – 0.5 ml) is injected into the joint.

If placed correctly, the contrast will outline the joint space[1] **(FIGS. 4 and 5)**.

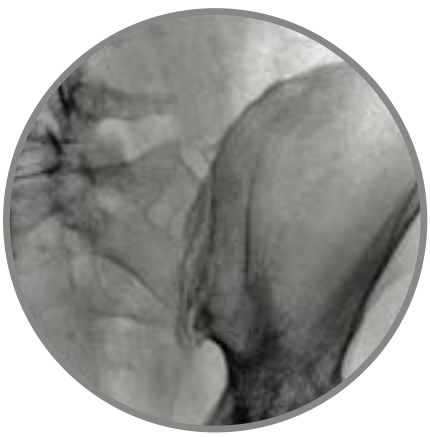

FIG. 1

SI joint initial AP view demonstrating inferior target

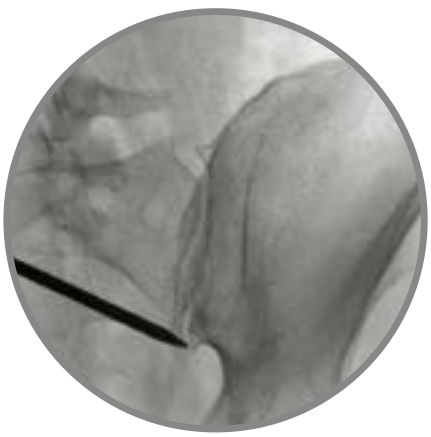

FIG. 2

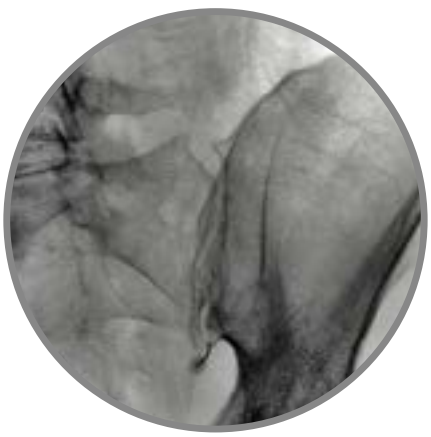

FIG. 3

AP view of SI joint with needle inserted in the joint before injection of contrast

Images provided by Joseph Schifini, M.D.

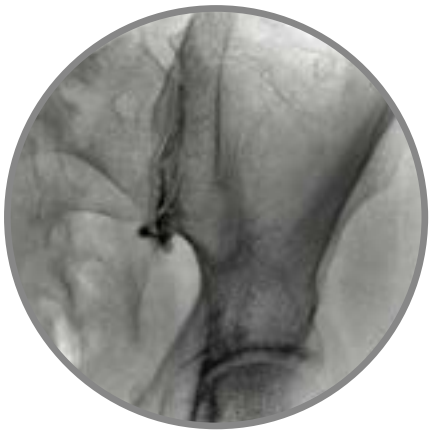

FIG. 4

AP view of SI joint with needle in place demonstrating arthrogram

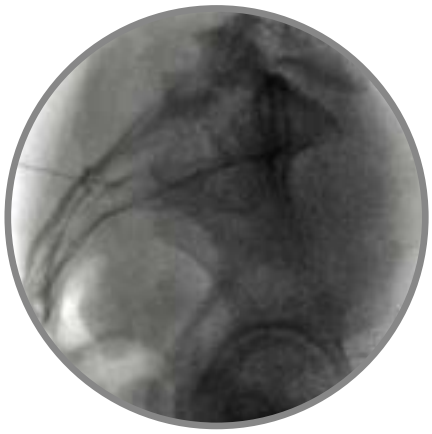

FIG. 5

Lateral view of SI joint with needle in place after injection of contrast

Given the limited capacity of the sacroiliac joint, the following guidelines may be useful. The anesthetic should continue to be injected until:[1]

- **a firm end-point has been reached**
- **extra-capsular escape is observed**
- **a maximum volume of 2.5 ml is reached** [4,5,6,7]

ANESTHETIC RESPONSE

After the injection, the patient should rate their pain while attempting activities that typically provoke their symptoms (i.e., sitting, standing, walking, stairs, etc.). [7,8] **The patient's response is considered negative if ≤ 50% relief, equivocal if there is 51-74% relief, and positive if there is ≥75% improvement.**[1]

Some guidelines recommend second injection to rule out "false positives." [1,7]

References

1. Bogduk N, et al. Practice Guidelines Spinal Diagnostic and Treatment protocols. International Spine Intervention Society (ISIS), Second Edition. 2013.
2. Laslett M. Evidence-Based Diagnosis and Treatment of the Painful Sacroiliac Joint. J Man Manip Ther. 2008;16:142–52.
3. van der Wurff P, et al. A multitest regimen of pain provocation tests as an aid to reduce unnecessary minimally invasive sacroiliac joint procedures. Arch Phys Med Rehabil. 2006.87:10-4.
4. Fortin JD, et al. Sacroiliac joint provocation and arthrography. Arch Phys Med Rehabil. 1993. 74:1259-1261. (Dr. Fortin ist ein bezahlter Berater von SI-BONE Inc.)
5. Schwarzer AC, et al. The sacroiliac joint in chronic low back pain. Spine. 1995;20:31–7.
6. Aprill C. The role of anatomically specific injections into the sacroiliac joint. In: Vleeming A*, Mooney V, Snijders C, Dorman T, eds. Proceedings: First Interdisciplinary World Congress on Low Back Pain and its Relation to the Sacroiliac Joint. San Diego, CA. 1992:373-80.
7. Pauza KJ. Educational Guidelines for Interventional Spinal Procedures. American Academy of Physical Medicine and Rehabilitation (AAPM&R). 2001. Critical Review 2001, 2004. Editorial Update 2007, 2008. http://www.aapmr.org/practice/guidelines/documents/edguidelines.pdf. Abgerufen am 11. Nov. 2014.
8. Manchikanti L, et al. An update of comprehensive evidence-based guidelines for interventional techniques in chronic spinal pain. Part II: guidance and recommendations. Pain Physician. 2013;16 (2 suppl):S49-283.

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