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. The procedure involves injecting local anesthetic into the cavity 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.

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.

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.

A C-arm is used to identify the inferior portion of the SI joint with the patient in the prone position with a pillow under the abdomen at the level of the iliac crests. The C-arm may 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 bony planes of the inferior portion of the joint are parallel.

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.

“Sacroiliac joint blocks have diagnostic utility.”

Figs. 1 and 2: SI joint initial AP view demonstrating inferior target

AP view of SI joint with needle inserted in the joint before injection of contrast
If placed correctly, the contrast will outline the joint space (Figs. 4 and 5).

There is no consensus on the volume of contrast and anesthetic that should be used. However, 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
2. Extra-capsular escape is observed
3. A maximum volume of 2.5 ml is reached

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.). The patient’s response is considered negative if ≤ 50% relief, equivocal if there is 51-74% relief, and positive if there is ≥75% improvement.

Some guidelines recommend second injection to rule out “false positives.”

References