

# The Controversy Over Diagnosis and Treatment of Facet Pain

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## General Concept

The facet joints are innervated by the medial branch of the posterior primary ramus of the existing spinal nerve. Facet pain is defined as nociceptive pain emanating from the moving joints of the adjacent motion segment of the spinal column.<sup>1,2</sup> The capsule attached to these joints is rich in nerve endings. In a typical case of facet pain, there is local back pain aggravated on hyperextension but not on flexion. A detailed physical examination may help the diagnosis. However, there may be referred pain, usually to the lateral aspect of the upper leg and sometimes confused with lumbar radiculopathy. Both imaging and neurophysiologic examination are of limited value in the diagnosis of facet pain.<sup>3</sup> Clinically, the prevalence of facet pain is estimated to be 15–40%, depending on the population studied.

Facet pain should be differentiated from other spinal pain originating from the disc, nerve root, and any soft tissues surrounding the spinal column before any major intervention.<sup>4,5</sup> Many articles support that if conservative management fails, a diagnostic facet injection should be considered as the initial intervention.<sup>6,7</sup>

## Minimally Invasive Treatment, Excluding Surgery, for Spinal Pain

Spinal pain is complex, and various treatments have been advocated and claimed to be successful: for example, spinal epidural injection (trans-foraminal, interlaminar or caudal), facet injection (including the medial branch of the posterior primary ramus, or intra-articular injection), radiofrequency therapy (to the facet, ganglion, sympathetic chain, or disc), epidural electro-stimulation, and intraspinal medication through

implanted pumps. Clearly, simple treatments should be considered first and more complicated ones later. Through diagnostic facet block, which may also serve as a treatment for some patients, the source of spinal pain can be identified more accurately. This is helpful for deciding the next management step in patients with recurrent spinal pain, especially when radiofrequency therapy is being considered.<sup>8,9</sup>

Interestingly, Shih and colleagues stated that the efficacy of lumbar zygapophyseal joint injection for back pain declined to 31.4% after 12 weeks, although earlier results yielded promising and surprising outcomes.<sup>10</sup> These investigators used a single intra-articular injection in a broad age range of patients (15–82 years), and more detailed evaluation of similar patients and procedures is now required.

## Clinical Viewpoint

Comparing the results of Shih et al<sup>10</sup> with those from other injection studies, further analyses are needed of local anesthetic procedures before intra-articular injection, of patient selection criteria, and of pain-scale results. Nevertheless, these authors provide a list of general recommendations to minimize major neuro-destructive procedures, the results are encouraging, and the arthrogram method is valuable.

Generally, the injection method used in the lumbar region is straightforward and has a low complication rate. However, a full understanding of anatomic variation, and normal on-screen X-ray projections during operation are essential. Of course, a preoperative study of spinal pain is crucial.<sup>11</sup> If there is any uncertainty, precise neurophysical examinations, and detailed imaging and neurophysiologic studies should be conducted before any intervention.

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