

## FACET MEDIATED BACK PAIN

Back and neck pain originates from one or more of five sources: arthrogenic, discogenic, neurogenic, musculoskeletal, and/or psychogenic. Arthrogenic pain occurs from the facet joints and is a frequent cause of spine pain. Each facet joint receives 2 small nerve branches (Medial Nerves) from the spinal nerves, which send sensory information from the facet joint to the spinal cord and then to the brain. If the facet joint is arthritic, injured or otherwise irritated, the nerves send the information to the brain, which translates the information as "pain". Cervical and lumbar pain mediated from the facet joints is known as "**Facet syndrome**". Facet joint disorders are some of the most common and overlooked of all the recurrent, disabling low back

and neck problems, and can cause serious symptoms and disability for patients. Lumbar facet pain often radiates down into the buttocks and the back of the thigh but rarely below the knee, as pain from a disc herniation often

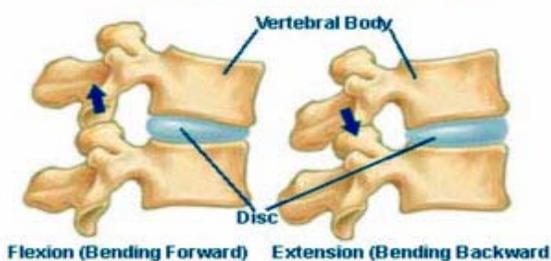
may manifest itself as pain and tenderness in the neck, shoulder and upper back, referred pain into the arm but not usually past the elbow, and loss of cervical spinal curve. The facet joints are highly innervated by mechanoreceptor, thus

when the facets are inflamed a protective reflex arrangement arises which causes muscles to go into spasm. We therefore see inflamed facets causing antalgia lean from powerful muscle spasm. This is commonly seen in toricollis

and in patients that come to your office flexed at the waist and have no positive disc signs.

Patients with facet syndrome typically have increased pain over the facet joints with point tenderness, and some degree of loss in the spinal flexibility and their pain

### Facet Joints in Motion



Facet Joint injury is one of the most common and most overlooked of the recurrent back problems.

does. Facet syndrome in the upper neck region may present as headache at the base of the skull, aching behind the eyes, ringing in the ears, and upper neck pain and tenderness. Extension and rotation of the neck usually aggravates the symptoms. Facet syndrome in the lower neck region

### Special points of interest:

- Pain Management Consultations
- In office procedure room with fluoroscope Guided Injections Including:
  - Epidural Steroid Injections
  - Facet Injections
  - Discograms
  - Nerve Blocks
  - Sacroiliac Injections
  - Radiofrequency Neural Ablation
  - Onsite X-ray
  - Musculoskeletal Diagnostic Ultrasound
  - DEXA Bone Density
  - Physical Rehabilitation
  - Nerve conduction/EMG

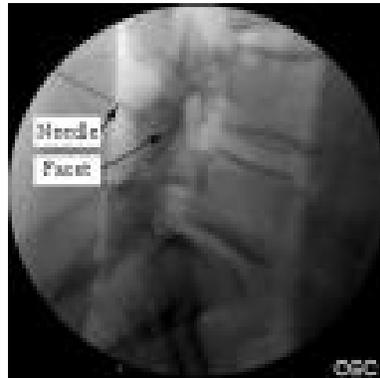
## FACET MEDIATE BACK PAIN (CONTINUED)

is exacerbated by extension of the spine or closing of the facets. X-ray (posterior oblique views) and CT are best for imaging the facet joints. An MRI may or may not show facet hypertrophy. In patients with normal MRI but continued back pain, facet syndrome should be considered.

Facet pain can respond to epidural steroid injections, since the potential epidural space is anatomically contiguous with the joint capsules. Thus while the epidural is useful as a first-line interventional therapy for most types of spine pain, it is nonspecific. If a patient has responded well to epidurals, then it can be concluded that the patient's pain generator is of spinal etiology. If a patient has not responded well to epidurals it does not necessarily mean that the pain is not of spinal origin, but it might indicate that the injectate did not cover the pain generator within the spine.

If a patient has not received significant relief with epidurals or is receiving minimal benefit from them, the source of pain should be more closely localized. Discogenic pain requires a procedure know as discography (we will discuss Discogenic pain in our next article), and arthrogenic pain involving the facet joints requires a procedure known as facet blocks or median branch blocks. The definitive way to diagnose facets as the pain generators is to block the corresponding medial branch nerves. By blocking the nerve branches, the brain no longer

receives the painful signals from the damaged facet joint and therefore, temporary (several hours), pain relief is achieved. The procedure is done under fluoroscopy as an out-patient procedure.



Facet Injection on Fluoroscope

Medial branch blocks provide valuable diagnostic information. If the patient's pain is of facet origin, the median branch block should give

*The most common injury in Whiplash is to the facet joint. Thus patients with persisting pain after a motor vehicle accident ten to respond well to facet injections.*

the patient 2 to 4 hours of pain relief. If the block reduces the pain transiently by at least 50%, the block is considered positive. If the blocks reduce the pain less than 50%, most experts consider the results to be negative and usually look for other etiology. Therapeutic benefit is achieved in these blocks with the addition of steroids, which have longer acting analgesic effects once the local anesthetic has worn off. If most or all of the pain is determined to be coming from identified medial branch nerves or facets, then those nerves can be treated long term with a technique know as radiofrequency ablation (RF).

Radiofrequency ablation involves heating the medial branches with a filament placed near the sensory nerve using fluoroscopic guidance. Heat from radiofrequency disables the sensory nerves that innervate the facet joints (known as Denervation). Patients with suspected facet pain who respond well to diagnostic blocks are good candidates for RF of their medial branch nerves. An RF procedure takes about 30 minutes. RF results can give patients significant pain relief for 12 to 18 months at a time and can be repeated indefinitely when needed. The benefit of RF, other than long lasting relief for your patient, is fewer procedures and medications overall since the results from RF last much longer than blocks with steroid alone.

If you have a patient with chronic cervical or lumbar pain, and think that the patient may respond to epidural or facet injections, or for a consultation, please call our office at (843)678-9777.

Dr Lisa Mancuso earned her M.D. degree at the Medical College of Pennsylvania in Philadelphia and completed an anesthesiology residency in Pittsburg. She completed an Interventional Pain Management fellowship at West Virginia University.

