Lumbar Facet Syndrome: A Case Report

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Introduction

A "Facet Syndrome" is defined as an overriding of the posterior articulating facets or contiguous spinal segments.[1] Classically a facet syndrome is described as being of sudden onset, usually brought on by trauma and either unilateral or bilateral in distribution.[1,2] There can be radiations of pain reported although many cases are free of radicular pain. Neurological tests are negative however there is a considerable amount of back spasm present. The patient will usually attain an antalgic position and the pain is aggravated by spinal motions that are in opposition to the motion that caused the initial insult.[1]

The spinal facet joints are true synovial joints with complete capsules. Upon traumatic insult there is inflammation of the facet capsules which causes irritation of the nociceptors in the affected area.[1] In addition to the irritation of the nociceptors there is also an overlying spasm to the musculature of the compromised segment.

Clinical Presentation

A 65 year old Caucasian male presented to the chiropractic office with acute low back pain. The pain was located on the right side of the spine adjacent to the L4-L5 segmental unit. It began that morning when the patient was returning to a normal posture from a standing flexed position at work. The pain was described as being constant and dull in character. There was no report of radicular pain or radiation. The pain is relieved when the patient assumes a flexed position, especially while sitting and is aggravated by extension. The patient noted that a previous traumatic incident one year prior produced similar symptomatology coupled with radicular pain due to discal interference and irritation. Spinal manipulative therapy was performed and the condition successfully resolved. Application of an ice pack to reduce the inflammation in the lumbar area was performed on a 10 day cycle concurrent with the treatment.

Examination findings relating to the patients vital signs were within normal range. On postural examination it was noted that there was a low right shoulder, flattened lumbar lordosis and anterior head carriage. Neurological examination was unremarkable. When testing the ranges of motion in the lumbar spine it was noted that flexion was full and pain free but extension was decreased by 30% and produced a sharp pain in the affected right L4-L5 zygopophyseal joint region. Lateral flexion of the lumbar spine was painful and restricted. Marked decrease in lumbar rotation to the left was noted. Upon static palpation it was noted that joint lateral challenge to the right L4-L5 spinal segment produced a sharp pain as previously described upon in the patients history.

Clinic Impression

The patient was diagnosed with a L4 facet syndrome with concomitant acute myofascitis of the paraspinal muscles.

Plan of Management

Due to the previous discal injury in the area of chief complaint an integrative therapy was proposed. Utilizing the professional services of a licensed naturopath a dedicated regimen of Devil's Claw Root Extract was prescribed. Each capsule prescribed contained 400 mg of Devil's Claw Root Extract guaranteed to contain 3% harpagocides in a base of Devil's Claw Root. The patient was instructed to take one cap-

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sule three times daily just prior to meal time. A series of subsequent appointments were set up with a time span of one week intervals to reevaluate the patients condition relative to hypertonicity of spinal musculature as well as joint range of motion and changing patterns of pain presentation.

Pharmacognosy Relating to Devil's Claw

Devil's Claw (Harpagophytum procumbens DC) is a herbaceous plant native to Southern Africa that produces brilliant purple flower and woody bared fruit. The roots have enjoyed a long medicinal history being used by the first indigenous peoples for a variety of digestive and rheumatic conditions.[3] Mehnert introduced it to Europe where it rapidly became one of the most popular herbal products.[4]

The results of in vitro and in vivo trails are far from conclusive. Aqueous extracts of Devil's Claw have been shown to possess anti-inflammatory properties in both rats and mice.[5,6] The action was seen following intraperitoneal administration and was abolished following either oral administration[5] and or an acid treatment.[6] Any anti-inflammatory action noted seems to be more pronounced in chronic rather than acute situations.[7] These findings are not supported by other studies, where extracts of Devil's Claw failed to exert any appreciable action in reducing rat hind paw edema induced by either carragennan or Mycobacterium butricum even when in amounts "far higher than the standard recommended doses."[8,9]

Devil's Claw appears not to inhibit prostaglandin synthetase[8] or influence either the cyclooxygenase or lipoxygenase pathways.[10] Any anti-inflammatory action seen with Devil's Claw, therefore, is due to a mechanism distinct from that seen with most classic non-steroidal anti-inflammatory drugs.

A number of attempts have been made to demonstrate the anti-inflammatory action of Devil's Claw in human volunteers with varying success. These studies varied greatly in design, quality and conditions treated. While some have proved positive,[11] a number of studies have failed to demonstrate that Devil's Claw has any clinically significant anti-inflammatory action.[4,12] A recent randomized, placebo controlled, double blind four week study of patients (n=118) presenting with low back pain concluded that Devil's Claw was not significantly more effective than placebo in two of the three outcome measures.[12]

While the above findings do not conclusively support the current use of Devil's Claw as an anti-inflammatory agent, they do suggest that further clinical evaluation is warranted.

Conclusion

After reading the literature, there exists an discrepancy between Devil's Claw botanicals properties and its clinical application. In this case a favorable response vis-à-vis the reduction of the focal inflammation was evident. The patient demonstrated a restoration of 90% of the motion at the affected segments. The application of a mobilization technique coupled with a therapeutic regimen of Harpagophytum procumbens should be considered for the irritation of the facet joints after repeated history of trauma.

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