

Myofascial Pain -- Spinal Lesion

J.E. Thomas, DC, FACO

It appears that considerable confusion or misdirection for the physician is caused when terms such as myofascial pain syndromes, referred pain syndromes, myofascial trigger points, or trigger points are used without giving a valid reason for their existence, or how they may be associated with spinal joint injury or pathology.

John Lowe, D.C., in the article he wrote on August 29, 1990, in MPI's Dynamic Chiropractic, has a valid complaint in feeling that the mechanism of pain should be known and discussed when articles are written or lectures given discussing pain caused by spinal joint lesions.

Dr. Lowe states that myofascial pain is the most common source of back pain, and that he effectively relieves most patients by treating their myofasciae. He asks, "How can I explain to these patients the source of their pain with an anatomical model that excludes the tissue most often involved?" He is, of course, referring to a model of the spine showing spinal joints.

Myofascial pain and trigger points in areas of the back and gluteal region most frequently result from abnormal spinal changes, injuries, or pathology, rather than direct trauma to those tissues expressing pain.¹ Areas of pain cannot be divorced from the nerves supplying that body area, nor can muscles and their attachments be disregarded when considering the reason for, or mechanism of pain.² Spinal joint and foraminal integrity influences the soft tissues associated with neural systems, both the anterior and posterior primary rami, and is the governing factor related to neural reaction.³ This neural reaction is expressed in pain, either to cutaneous or to subcutaneous body areas which the nerve supplies, by causing antalgic muscle reaction that produces pain to the body of the muscle, its attachments, or both.⁴ An original spinal joint lesion with a reduced load limit may become chronic with little or no pain at the joint and its immediate surrounding tissue, unless the joint load limit is exceeded. But this abnormal joint and associated tissues can cause persistent abnormal neural reaction resulting in areas of pain that are frequently called myofascial or referred pains.⁵

Typical examples are:

1. Pain in the gluteal region resulting from chronic low grade irritation of the cluneal nerve.^{6,7} This nerve supplies portions of the gluteal region and arises from the 1st, 2nd, and 3rd lumbar segments. The trigger point could be at paraspinal muscles even above or below the 1st lumbar, or at muscles associated with antalgic contraction for the 1st lumbar segment, while the area of pain would be found at the gluteal region, the cutaneous distribution of the nerve. Cause: Joint injury or pathology causing neural reaction at the lumbar segments housing cluneal nerve fibers.
2. Pain may be found at areas along the upper and medial side of the scapula at muscle attachments.⁸ The upper attachments of some of these muscles extend to the occipital bone, and 1st and 2nd cervical segments. The nerve supply to these muscles is upper cervical

nerves. Injury to upper cervical joints causing neural and muscle reaction can be responsible for this scapular pain, especially when they become chronic and low grade lesions with reduced load limits. Trigger points may be found at the cervical paraspinal muscles associated with these joints. Cause: Cervical subluxation disrelation lesions involving nerve fibers supplying muscles that attach to the scapula.

There are many pain areas in the back and gluteal region, and even areas of pain that are found on the front of the body, all resulting from neural reaction and/or muscle antalgic contraction as the result of spinal joint injury and/or pathology. It is necessary, however, for the physician to know the areas of neural cutaneous distribution and their spinal root levels, and also the muscle attachments related to spinal joint motion including regional motion, and how these muscles react related to the spinal protective mechanism.

While it appears that treatment to the myofascial pain area may give considerable relief and occasionally removal of pain in that area, it does not change the fact that the original cause of areas of myofascial pain in the back is related either to direct muscle imbalance or cutaneous and/or subcutaneous irritation to a nerve, both of which are caused by spinal lesions.

An investigation should be conducted of those spinal joints which house the root of the nerve or nerve group that supplies the myofascial pain area, and those muscles that attach to structures at the pain area which also attach to spinal structures at the region of the nerve root. This investigation should enable you to determine whether joint or soft tissue repair, improvement, or a reduction in the associated neural reaction at the abnormal joint is possible.

Treatment should be given to the reactive spinal segment causing the neural and/or muscle reaction, while treating the area of myofascial pain.

References

1. Thomas, J.E. "Classification of Low Back/Leg Pain. Pain Syndromes Part II." FCA Journal Nov-Dec, 1985; pg. 18-21.
2. Thomas, J.E. "Classification of Low Back/Leg Pain Syndromes, Part II. Low Back/Leg Pain Mechanism." FCA Journal July-Aug, 1986; pg. 32-33.
3. Thomas, J.E. "Classification of Low Back/Leg Pain Syndromes, Part IV. Spinal Subluxation/Disrelation." FCA Journal Mar/April, 1986; pg. 32-36.
4. Thomas, J.E. "Classification of Low Back/Leg Pain Syndromes. Part III." FCA Journal Jan-Feb, 1986; pg. 37-40.
5. Gracovitsky/Farfan. "The Optimum Spine," Spine; 11(6): pg. 543-573.
6. Thomas, J.E. "Classification of Low Back/Leg Pain Syndromes. Part IV. Spinal Subluxation/Disrelation." FCA Journal Mar/April, 1986; pg. 39, Fig. Schematic of pain syndromes -- lateral view.

7. Callient, Rene. *Soft Tissue Pain and Disability*. 1977; pg. 214, Fig. 180, pg. 213 -- Pain from other sites.

8. Dvorak, Jiri; Dvorak, Vaclav. *Manual Medicine*. 1984; pg. 36, Fig. 41 -- under trapezius, levator scapulae, and rectus capitis posterior major muscles.

J.E. Thomas, D.C., F.A.C.O.
Port Charlotte, Florida

JANUARY 1991