

## Sacroiliac Causation of Headache

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Dysfunction of the cervical spine has definitely been related to the causation of headaches.<sup>1,2</sup> The question that has been difficult to answer is how does dysfunction of the lower areas of the spine and pelvis adversely affect the cervical spine. Lewit states: "In pelvic distortion the most frequent lesion is blockage at the craniocervical junction."<sup>3</sup> He further states that psoas spasm is associated with pelvic distortion, which is related to thoracolumbar restriction and iliac spasm which stresses the lumbosacral junction or coccyx with associated tension in the gluteus maximus and levator ani.<sup>3</sup>

It is apparent that an articular blockage and a shortened or tight muscle or a muscle in spasm can be directly related to each other. Janda says that a painful or painless sacroiliac blockage can result in a hypotonic gluteus maximus and/or a hypertonic piriformis.<sup>4</sup> By the use of multichannel surface EMG studies, Janda proved that a patient with a hypotonic gluteus maximus will exhibit an abnormal pattern of hip extension that can occur during ordinary walking.<sup>5</sup> Due to this abnormal hip extension pattern, there was an exaggeration or over activation of the neck extensors and thereby "dysfunction of all cervical structures." The pattern of abnormal hip extension was precipitated by the hypotonic gluteus maximus.

The EMG study was done on a 50 year-old actress who, after a neck injury that occurred 30 years ago, suffered with dizziness, vertigo and tension headaches. Manipulation of the atlanto-occipital and atlantoaxial joints gave her only short-term relief. Possibly in this case, if the blocked sacroiliac joint was the cause of the hypotonic gluteus maximus, then manipulation of the sacroiliac joint would have eliminated the hyperactivity of the cervical musculature and would have been more effective than just manipulation of the upper cervicals.

It appears that the underlying cause of headache in this case was really related to a hypotonic gluteus maximus, which can have other causes besides a sacroiliac blockage. An internally rotated hip will inhibit the gluteus maximus, as will a chronically shortened psoas muscle. The gluteus maximus will be inhibited by its antagonist, the short psoas. Attempting to strengthen the weak gluteus maximus without normalizing the tightened psoas would prove fruitless.

In ordinary walking there should be minimal activity of the upper trapezius and levator scapulae but if these muscles are hyperactive, there will be over stress to the cervical spine. Janda has stated that with over activation of the shoulder and neck muscles, due to decreased activation of the gluteus maximus during hip extension, results in abnormal anterior tilt and rotation of the lower cervical segments, mostly at C6 and partly at C5 and C7.<sup>6</sup> With each step there is excessive rotation and tilting occurring in the cervical spine.

With a patient lying prone with feet off the edge of a table, it is possible to see the hyperactivity of the shoulder neck muscles as the patient extends the hip.

This discussion emphasizes the fact that an abnormal pattern of movement in one areas (lumbar spine, hip and pelvis) was related to over activity of muscle activity in a distant area (cervical

spine). The cause could have been articular (sacroiliac blockage) or muscular (shortened psoas). Obviously, we must look at the total subluxation complex with each patient.

### *References*

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### Editor's Note:

Dr. Hammer will conduct his next Subluxation Myopathology (SM) seminar on February 5-6, 1994 in New York and another SM seminar on March 12-13 in Davenport, Iowa. You may call 1-800-359-2289 to register.

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