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The Psoas Syndrome

By Warren Hammer, MS, DC, DABCO

We must constantly strive to develop a functional examination that touches all the bases. Since I wrote about the piriformis syndrome in the June 21 and July 19 issue of *Dynamic Chiropractic* I have received numerous letters relating to increased results. Just as examination of the piriformis should be a routine part of our examination, so should examination of the iliopsoas.

The iliopsoas is mainly a hip flexor and weak lateral rotator, and shortening will result in pulling the iliac bone anterior-inferior, increasing the lumbosacral angle and increasing lumbar lordosis.

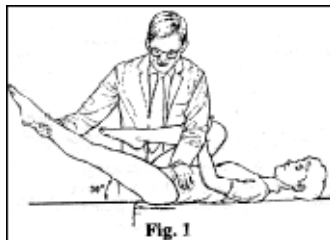
Through the years many doctors within chiropractic and medicine have stressed the importance of the iliopsoas in relation to low back pain and viscera of the human body.^{1-8,10,11} Michele¹ wrote a 550 page textbook, *Iliopsoas*, in which he relates psoas spasm to pelvic tilt, exaggerated lumbar lordosis, compensatory dorsal kyphosis, back pain, sacroiliac dysfunction, degenerative hip arthrosis, degenerative disc disease, spondylolysis, spondylolisthesis, scoliosis, malposture, and meralgia paraesthetica, among others. He stated, "Any and all defects of the spine and the hip joint structures should be evaluated in terms of disturbance of function of the iliopsoas."

Chronic psoas shortening and weakness may occur due to sleeping in the fetal position, exercise programs emphasizing repetitive hip flexion, and sedentary life styles. Most sports and daily activity emphasize a forward orientation and repetitive psoas contraction without offsetting stretching.² Sypher³ feels that since the psoas is close to the axis of flexion and extension of the lumbar portion of the spine, it must compensate for imbalance between anterior abdominal muscles and posterior spinal muscles to stabilize the lumbar spine. Goodheart feels that psoas weakness is more common than hypertonicity.⁴ Nachemson feels that a chronically contracted psoas adds to the gravitational forces on the lumbar discs.⁵

Bachrach et al.² states that the patient with a psoas syndrome may present with pain at the thoracolumbar, lower lumbar or sacroiliac area, sometimes referring pain to the knee. They state that the pain is never midline and is often relieved by sitting. According to Cailliet⁶ the anterior thigh pain associated with an acute scoliosis due to a disc herniation is often due to a compensating iliopsoas spasm splintering the spine away from the irritation. With a unilateral psoas spasm, the patient might be flexed forward with the lumbar spine drawn downward, forward, and rotated to the opposite side. The hip might be externally rotated with the foot everted.¹

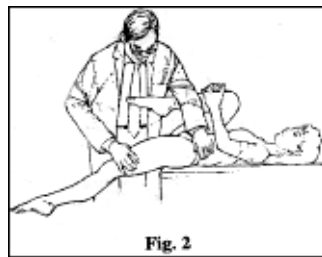
Functional examination may reveal, with the patient standing and the examiner contacting both PSISs, a higher PSIS on the contracted side and a more forward movement of the PSIS on the side of involvement during lumbar flexion. Durianova⁷ examined 30 patients with psoas spasm and found pain in the low back, in the shoulder region, sacroiliac joint, and radiation in the L5/S1 segments. He found pain on lumbar extension, trunk rotation, and hip flexion, with spinal segmental involvement at the thoracolumbar and craniocervical junction. With the patient prone, hip extension would be decreased and painful.

Michele¹ describes a series of tension tests for the tight iliopsoas, one of which is similar to the Thomas test (Fig. 1):



Patient lies at end of table with uninvolved right hip flexed. Examiner extends the left knee and flexes left hip as far as patient will allow. Examiner's left hand is placed on patient's left ASIS in order to palpate for anterior rotation of the innominate. Examiner then allows the left leg to drop (towards extension). If examiner palpates ASIS movement before the leg reaches 30 degrees from the horizontal, there is significant hip flexor tightness. The hip should be able to extend 20 to 30 degrees below the table with ASIS movement.

Treatment of a shortened iliopsoas is to stretch the muscle. (Fig. 2) A painless contract/relax method may also be used. Examination of the iliopsoas for trigger points may be valuable. Trigger points may be located just lateral to the rectus abdominis up to the xyphoid process, at the femoral triangle or at the iliac fossa where the iliacus originates. Back pain is usually felt vertically along the extensor muscles parallel to the spine. Stretching and splaying can be done as positioned in Fig. 2 from the xyphoid down the psoas to the thigh, except that the thigh should be slightly abducted and the knee internally rotated to create optimum stretch.⁸



A home stretching exercise (Fig 3) may be utilized maintaining the stretch 20 to 30 seconds for 10 to 20 reps as often as possible during the day. The normal side could be raised to a height of two to 2-1/2 feet on a stool depending on the height of the patient. The shortened side can be extended about three feet behind with the foot in slight internal rotation. The patient can also put his hand on the posterior buttock of the involved side and apply added pressure. The patient should definitely feel the psoas stretch, possibly a feeling of discomfort, but not pain.



The psoas muscle should be tested for strength with the patient supine and the hip flexed approximately 30 degrees. Examiner resists against the anterior distal femur. There may be pain in psoas tendinitis or iliopsoas bursitis and weakness with pain in avulsion fracture of the lesser trochanter, psoas rupture or upper femur metastasis. Weakness without pain may indicate L1, L2 or L3 nerve root involvement. Cyrias¹² mentions that chronic psoas strain may remain for years unless treated by friction massage below the inguinal ligament, medial to the sartorius.

Patients who do sit-ups from a supine to a full-flexed position are really strengthening their iliopsoas rather than their abdominal muscles. They are creating an increased lordosis during the sit-up. The crunch method of sit-ups with the spine flat on the ground and the knees flexed over a chair is the recommended method.

During the first 30 degrees of hip flexion there is little or no activity in the iliopsoas. After that range there is greatly increased activity.⁹

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Warren Hammer, M.S., D.C., D.A.B.C.O.

Norwalk, Connecticut

Editor's Note:

Dr. Hammer will conduct his next soft tissue seminar on March 14-15, 1992 in Las Vegas, Nevada. You may call 1-800-327-2289 to register.

Dr. Hammer's new book, Functional Soft Tissue Examination and Treatment by Manual Methods: Extremities, is now available. Please see the Preferred Reading and Viewing list on page xx, Part #T126 to order your copy.

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