Dynamic Chiropractic

SOFT TISSUE / TRIGGER POINTS

Piriformis Syndrome -- Part II

Warren Hammer, MS, DC, DABCO

Part I (June 21, 1991 issue of "DC") covered the piriformis syndrome with regards to anatomy, pathology, symptomatology, and diagnosis. This article will consider the variety of manual treatments for the condition.

The pathology of the syndrome governs the manual approach. The piriformis is inflamed, spastic, contains trigger points and, if at all chronic, has connective tissue adhesions.

Pelvic evaluation, especially of the sacrum and iliac bones, must be performed for specific adjustment of the area.

Palpation for active trigger points in the area is necessary. Travell[1] divides the piriformis in thirds from its origin to insertion and presses for trigger points. She states that the main trigger is in the lateral third near the greater tuberosity. The medial portion of the muscle may refer pain to the buttock and ischium, but does not refer pain down the lower limb like the gluteus medius. The lateral third may refer pain to the buttock and posterior thigh. The patient lies on the pain-free side with the upper thigh flexed and adducted over the table. The patient may add to the stretch by resting his arm on the thigh. The stretch and spray method may be used.

In the chronic situation, friction massage may be applied to the most tender portion in a direction perpendicular to the fibers.

The piriformis may be manually stretched[2] by standing on the opposite side of the prone patient's involved piriformis. The clinician reaches across and places the heals of his hands at a right angle to the piriformis, with the arms extended. The doctor leans with his body weight perpendicular to the long axis of the piriformis. Within a few minutes the muscle should relax.

Edwards[3] describes a Nimmo-like technique in which the patient lies on the normal side with flexion of the hip and knees of the painful side. The clinician presses his elbow into the tendinous insertion near the greater trochanter using 40 to 60 pounds of pressure, 8 to 12 times, for 10 seconds each. The patient should feel rapid relief of pain. The procedure may have to be repeated two times a week for two to three weeks. Te Poorten[4] has a similar method as Edwards except while he holds pressure on the piriformis he stretches the piriformis by pulling the leg externally, which internally rotates the hip.

Evjenth and Hamberg[5], Muhlemann, and Cimino[6] stretches a right piriformis with the patient supine and the doctor on the patient's right side. The right hip and knee are flexed about 60 degrees and the right foot is brought onto the lateral side of the left leg. The DC grips the ventral/lateral side of the right knee with the right hand and adducts (stretches the piriformis) the right thigh. The patient is then asked to isometrically contract laterally against the doctor's right hand. This position is held for

at least seven seconds provided there is no pain, or with less resistance for 10 to 30 seconds if there is pain on contraction. The patient is told to relax while the doctor attempts to further stretch the muscle. If this is too painful the patient can actively move the thigh more into the stretched position (adduction). The patient is then asked to resist against adduction in order to stimulate his antagonists. The new position should be maintained for at least ten seconds and the entire procedure repeated a few more times.

References

1. Travell, J.G.; Daitz, B. Myofascial Pain Syndromes: The Travell Trigger-Point Tapes. Myofascial Pain Syndromes of the Low Back and Hip. Baltimore, Maryland; Williams & Wilkins Electronic Media.

2. Steiner, C.; Staubs, C.; Ganon, M.; Buhlinger, C. Piriformis syndrome: Pathogenesis, diagnosis, and treatment. J. of Amer Osteopathic Association 1987; 87:318-323.

3. Edwards, F.O. Piriformis syndrome. Academy of Applied Osteopathy Yearbook 1962; 39-41.

4. Te Poorten, B.A. The piriformis muscle. JAOA 1969; 690:150-160.

5. Evjenth, O.; Hamberg, J. Muscle Stretching in Manual Therapy. Volume I, The Extremities. Alfta, Sweden: Alfta Rehab Forlag 1985; 97.

6. Hammer, W.I. Functional Soft Tissue Examination and Treatment by Manual Methods: The Extremities. Gaithersburg, Maryland: Aspen 1991.

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 September 21-22, 1991 in Los Angeles, California. You may call 1-800-327-2289 to register.

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