



available at www.sciencedirect.com



journal homepage: www.elsevier.com/jbmt



PREVENTION & REHABILITATION: CASE REPORT

Case report: The effects of massage therapy on lumbar spondylolisthesis

Shannon Halpin, CMT

3234 23rd St. Apt. #3 San Francisco, United States, CA 94110

Received 26 May 2010; received in revised form 15 February 2011; accepted 12 April 2011

KEYWORDS

Massage therapy;
Low back pain;
Myofascia;
Muscle energy
techniques;
Postural imbalance

Summary Objective: This study seeks to find out the impact of massage techniques, including myofascial and muscle energy techniques, on the symptoms of pain, muscular hypertonicity, and structural misalignment associated with isthmic lumbar spondylolisthesis.

Methods: A 30-year-old female was diagnosed with spondylolisthesis at age 12, has chronic mild to moderate back pain during prolonged walking/standing, hyperlordosis and anterior rotation of the pelvis. A 7-session treatment series of muscle energy techniques, and a type of myofascial bodywork known as active myofascial technique, was carried out, measuring rotational changes of the ilia, and the length of standing/walking time before low back pain onset.

Results: The onset of low back pain was delayed during walking/standing over the course of treatment, hyperlordosis decreased, and hypertonicity of iliopsoas and quadratus lumborum muscles decreased. Bilateral net reduction of ilial rotation was achieved, but with irregular changes.

Conclusion: Due to inconsistent and unreliable data, results were not conclusive. However, this study brings into question the role of hip flexor and spinal extensor muscles in normalizing postural misalignment associated with spondylolisthesis. It also highlights the importance of precise and detailed measures in massage research, as well the function of body awareness in this condition. Future research is needed to support the efficacy of massage therapy as a conservative strategy for lumbar isthmic spondylolisthesis.

© 2011 Elsevier Ltd. All rights reserved.

Introduction

Low back pain, one of the most prevalent musculoskeletal disorders, can be the result of a structural spinal condition known as spondylolisthesis. 'Spondylos' in Greek means

vertebrae, 'lysis' means a break, and 'olisthesis' means to slip or move (Wong, 2004). Spondylolysis is a vertebral stress fracture of the pars intertarsalis, located between the superior and inferior articular facets of the posterior arch. This fracture is the result of excessive load and occurs most

E-mail address: shalpin77@comcast.net.

frequently at levels L4 and L5. Spondylolysis becomes spondylolisthesis when separation occurs at the fracture site, especially when bilateral, causing a vertebra (typically L5 on S1) to slip anterior to the sacrum (Lowe, 2006a; Pope and Smith, 2006). Of the five different classifications of spondylolisthesis (congenital, isthmic, degenerative, traumatic, and pathologic), isthmic, referring to the defect at the pars, is the most common (Wong, 2004). This condition often affects children and adolescents who are engaged in activities associated with repetitive hyperextension of the spine, such as gymnastics, diving, and weight-lifting (Bezar et al., 2004). In the adult population 4% have spondylolisthesis, although increase in vertebral slip is rare after 16–20 years of age (Freeman, 2006; Wong, 2004; Ganju, 2002). Diagnosis may be confirmed with x-rays (Wong, 2004; Lowe, 2006a).

Patients diagnosed with spondylolisthesis report mild to moderate lower lumbar back pain, occasionally radiating along the posterior buttocks and thighs, and increasing with activity. The iliopsoas and rectus femoris muscles may have limited extensibility and lumbar paraspinal muscles may be in protective spasm (Motley et al., 1998; Lowe, 2006a). Neurological pain symptoms may occur if the slippage affects the nerve roots, dura mater, and/or the cauda equina. Other symptoms include local muscle spasm, the stretching of supportive ligaments, neural tension or compression, disc irritation, facet joint irritation, and the presence of myofascial trigger points. Patients are observed to have a protruding abdomen, flat buttocks, tightened hamstrings, and a shortened stride length (Lowe, 2006a; Wong, 2004). Commonly associated with spondylolisthesis is hyperlordosis, or excessive curvature of the lumbar spine (Motley et al., 1998; Wong, 2004). While not necessarily a causal factor for spondylolisthesis, hyperlordosis can magnify the compressive forces on the posterior arch of the lumbar spine. Anterior tilt or rotation of the pelvis occurs with hyperlordosis, and hypertonicity can be

palpated in the iliopsoas, quadratus lumborum, and lumbar erector spinae group (Lowe, 2006b) (Figure 1).

With conservative treatments, including the discontinuing of aggravating sports, the use of anti-inflammatory medication, trunk-strengthening exercises, and back support, the fracture associated with spondylolysis has been known to heal (Sairyo et al., 2006). However, the ability to heal is dependent upon the degree of lumbar lordosis, the site of the defect of the pars, and the presence of spondylolisthesis. When vertebral slipping occurs, as in spondylolisthesis, the chance of the fracture healing, is greatly reduced (Fujui et al., 2004). Many cases of spondylolisthesis occur in asymptomatic patients without associated pain or disability (Beutler et al., 2003). For symptomatic patients, physical therapy is helpful in decreasing the extension stresses of the lumbar spine and strengthening spinal stabilization muscles, including the abdominal and deep paraspinal muscles (Wong, 2004; Bezar et al., 2004; Haun and Kettber, 2005; Lowe, 2006a). Chiropractic methods, such as spinal manipulation, have also demonstrated short-term effectiveness for reducing low back pain associated with lumbar spondylolisthesis (Dunn et al., 2009). While conservative treatment is recommended first, for patients with progressed grades of spondylolisthesis or neurological symptoms, surgical spinal fusion has been shown to successfully treat the condition (Wong, 2004; Bridwell et al., 2004). Existing research into the effectiveness of massage therapy in relation to lumbar spondylolisthesis is lacking, however, massage therapists are known to be treating this condition within their scope of practice (Lowe, 2006a).

This case report sought to utilize techniques that are commonly practiced in the field of massage therapy. The author, however, recognizes many such techniques are also employed by other health care practitioners, including physical therapists, nurses, chiropractors, and osteopaths. One technique used in this case was a soft tissue

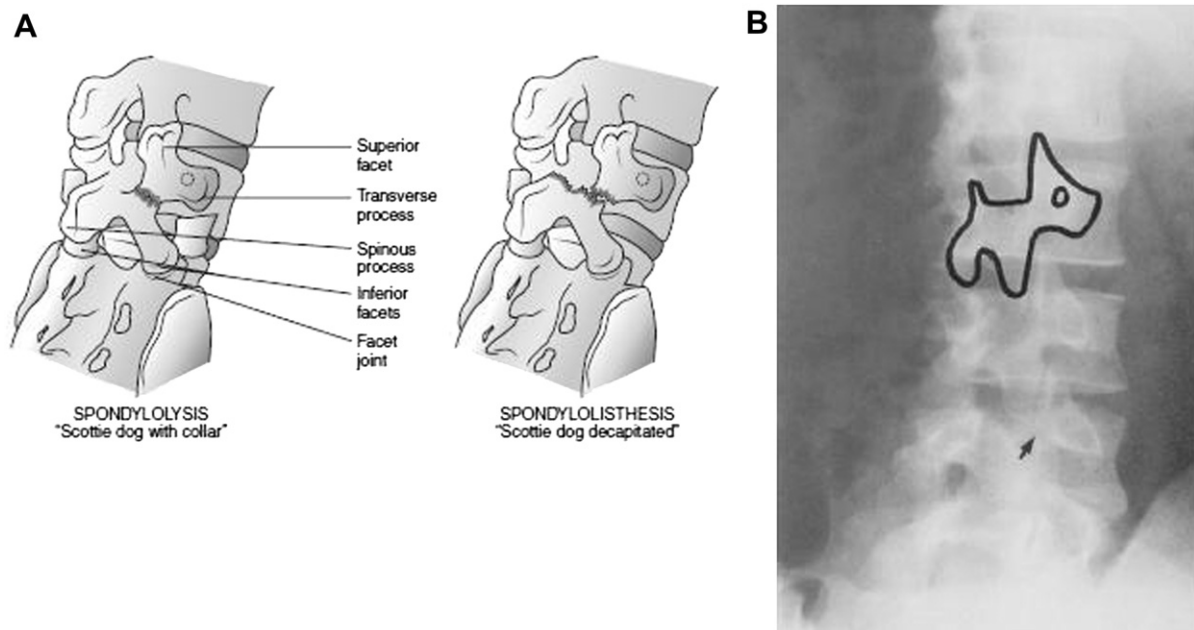


Figure 1 A. Diagrammatic representation (posterior oblique view) of spondylolysis and spondylolisthesis. B. Posterior oblique film showing "Scottie dog" at L2. (reproduced with permission from The Sports Medicine Resource Manual, Webb and Geshel, 2008).

Download English Version:

<https://daneshyari.com/en/article/2619693>

Download Persian Version:

<https://daneshyari.com/article/2619693>

[Daneshyari.com](https://daneshyari.com)