balance

A Student Case Report: The Effects of Massage Therapy on Lumbar Spondylolisthesis

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Why write a case report?

- Legitimizing massage therapy
- Contribute to a growing body of massage research
- Learn about a pathology
- Put the tools of massage to the test
- To win!
The BIG question

Can massage techniques reduce low back pain and hyperlordosis related to lumbar spondylolisthesis?
Why choose spondylolisthesis?

- The ubiquity of low back pain
- Chance and convenience
- Lack of existing research
- Likelihood of success
What is spondylolisthesis?

*spondylos* - vertebrae

*lysis* - break/defect

*olysthesis* - to slip or move
What is *spondylolisthesis*?

- 4-8% adult population
- Isthmic lumbar spondylolisthesis
- Who is affected?
  - **Sx:** Mild to mod. low back pain
  - Limited extensibility in iliopsoas, rectus femoris
  - Local muscle spasm
  - Neurological pain
  - Neural tension, compression
  - Stretching of ligaments
  - Disc irritation
  - Facet joint irritation
  - Myofascial Trigger Points

www.nismat.org

www.sportsmedicina.com
What is **spondylolisthesis**?

**Observable symptoms:**
- Protuding abdomen
- Flat buttocks
- Tight hamstrings
- Shortened stride length
- Hyperlordosis
- Anterior tilt/rotation of pelvis
- Hypertonicity in iliopsoas, quadratus lumborum, lumbar erector spinae group
My client

- 30 year old female
- Full time 2nd year grad school student
- Sits at desk working on laptop 8-10 hours/day.
- Exercises on elliptical and weight machines once/week
- Diagnosed at age 12 with isthmic spondylolisthesis
Client symptoms
**Muscle Energy Techniques (MET)**

- Neuromuscular technique that works with proprioceptors
- Reduces spasm, hypertonicity and pain
- Re-educates neuromuscular movement patterns

**Myofascial Massage**

- Reduces myofascial tension
- Lengthens fascially shortened structures
- Restores balance and alignment in the musculoskeletal body
The Plan

7 sessions
70 minutes each
6 weeks

- Organized from the ground up
- All sessions included both myofasical and MET techniques
- Myofascial strokes applied with client movement
- MET protocol used for previously assessed hypertonic muscles
What was measured?

- Length of time client is able to walk/stand in place before the 1st sensations of pain
- Ilium discrepancy
- Tone on palpation
- Observable change in lumbar hyperlordosis
- Client self-reported measures
What happened??

- Innominate rotation: Overall bilateral reduction in anterior rotation of pelvis.
- Decrease from mod. to mild lumbar hyperlordosis
- Muscular hypertonicity reduced
- Client felt ‘lighter’ and ‘better aware of muscles’ controlling her pelvic posture
- Increased pain-free walking/standing time
- Last session brought the unexpected
What happened?

Sessions 1,2: plantar fascia; anterior, lateral and posterior compartments of lower leg
Session 3: quadriceps, deep lateral rotators, IT band, hip abductors and extensors
Sessions 4,5: iliopsoas, quadratus lumborum,
Sessions 6,7: erector spinae group, deep paraspinals
What can we conclude?

- Improved functional abilities
- Increased client body awareness
- Improved structural alignment
- Hip flexor release could be particularly impactful
- Splinting/guarding reflex
Considerations and Shortfalls

- Natural and ordinary healing/improvement of condition
- Unsophisticated measurements and equipment
- Time allowance and schedule conflicts
- Inability to apply to other age groups, other degrees, types, and lengths of time of condition
Further questions

- The efficacy of neuromuscular and myofascial massage techniques performed together
- Massage therapy as an early prevention strategy and alternative to costly, more invasive surgery
- Massage therapy as a complement to physical therapy techniques for spondylolisthesis
- Inspiring future research
Thank you.

Questions?