Precision Neuromuscular Therapy to treat and reduce acute low back pain: a case report

Low Back Pain (LBP) is the most common recurring concern that Massage Therapists treat. Finding out more information about its treatment will aid both the treating practitioner and the suffering client.

Terms to know

LBP = Low Back Pain, ALBP = Acute low back pain, L = left, R = right

The Condition

Most people will experience back ache in their lifetime and 70%-85% will experience LBP at some point in their lifetime. The most common area of pain is the lumbar area because the low back supports most of the body's weight. LBP is the number two reason for primary care visits, second only to colds and flu. Back pain is largely divided into two categories, acute or chronic, depending on how long the signs and symptoms have presented. Acute low back pain (ALBP) is considered for pain that has existed up to 12 weeks, after that time period the pain is considered chronic (CLBP).

Signs and Symptoms

Most common signs and symptoms of ALBP are:

- Pain felt in the low back
- Low back stiffness
- Decreased trunk range of motion
- Difficulty standing

ALBP frequently occurs after lifting a heavy object, sudden movement (especially wrenching or twisting), long term sitting, or from an injury or accident. Causes can include:

- Compression fractures to the spine from osteoporosis
- Cancer involving the spine
- Fracture of the spinal cord
- Muscle spasm
- Ruptured or herniated disk
- Sciatica
- Spinal stenosis (narrowing of the spinal canal)
- Spine curvatures
- Strain or Sprains (tears to the muscles or ligaments supporting the back)

Treatments

Common treatments for ALBP include:

- Ice or cold packs immediately following an injury to reduce pain and limit swelling.
- Oral medications: Acetaminophen to block pain signals, non-steroidal anti-inflammatory drugs (NSAIDs) to reduce inflammation or muscle relaxants to reduce muscle spasms.
- Heat application may be used after the first 48-72 hours (the inflammatory period) has subsided

- Rest in a comfortable position only for the first few days. Once the worst pain subsides, mild movement and exercise is recommended to bring increased oxygen to the muscles and ligaments of the back.

The Case

The subject was a healthy, Caucasian woman in her early 40's. While she does a lot of sitting and typing as part of her occupation, she stays physically active outside work, and comes for massage therapy when she's in pain.

The client complained of ALBP L > R, that has been felt for 2 days prior to this session. The pain was worse in the morning and after waking. Also after the first day deep breathing has become painful especially on the L. In this session she wanted to reduce her ALBP, specifically as it related to deep breathing.

Pre-treatment observations and assessment

The range of motion in her trunk was limited, especially in forward flexion and L lateral flexion. Trunk forward flexion causes the most discomfort, but she also feels pain in end range of trunk extension. R lateral flexion does not illicit pain, but going L does. Rotation is not painful either direction, but L rotation is more limited. Resisted L lateral flexion does not illicit pain.

Treatment

I palpated L longissimus muscle belly at about L2 and client recognized a pain similar to what she had been feeling. As I moved about ½ inches inferior, the client recognized this as the "exact spot" of her pain.

I treated the lumbar portion of longissimus and the spot had diminished in intensity from an initial 8 to a 6. I went back to a static compression to the hyper irritable spot and this further diminished her pain sensation by another point to a 5.

I shortened the muscle by extending the hip joint and extending the cervical spine. This was done while the client was side-lying on her R and I maintained a static compression while the muscle was in its shortened state. This lessened her pain sensation even more.

Her movement was reassessed and there was only slight pain in the very end range of trunk extension. Pain with trunk forward flexion and L lateral flexion had diminished noticeably to her. Also deep breathing was significantly less painful and much easier. This was after about 25 minutes of treatment.

I did a little further treatment of the L longissimus and spent about 5-10 minutes treating her lumbar fascia. I had her do post Tx stretches (calf- cow) as part of neuromuscular reeducation. The client recognized she could do these stretches at home and felt empowered; and then I reassessed.

Results (Post-treatment)

- Trunk forward flexion- P almost gone entirely
- Trunk L lateral flexion- P nearly gone
- Trunk extension- P gone

- L trunk rotation- was now further than R, the client noted the movement was much easier than pre-session, and it also looked more fluid.
- Most importantly, there was no pain with deep breath.

Discussion and what I learned

Initially I had thought the L QL was going to be a major concern, because of the labored deep breath, but it moved down on the suspect list when R lateral flexion was not painful or difficult and resisted L lateral flexion did not illicit P.

In light of this information I began to consider the L erector spinae. I thought that the L Iliocostalis may have been the major culprit, but palpation revealed another of the erector spinae group.

The complete treatment, including assessments, took ~ 45 minutes. The client was shocked and pleasantly surprised especially with the results. She did not have the need for a follow up session.

Since allopathic treatment of ALBP tends to favor conservative approaches for up to 12 weeks, it's very likely that people suffering with this will seek complimentary/alternative treatment. Treating ALBP by utilizing assessments along with careful, precise treatment of soft tissue structures that are relevant to what the client presents deliver consistent results. However, treatment flexibility and adapting to new information are key elements, as no two clients are a like.

In researching this paper I was reminded of the many possible causes of ALBP and trigger point referred pain is yet another possible source. There is always a lot to consider when dealing with treatment for pain, please keep an open mind and stay flexible in your treatments. The important thing is to seek out information and use something that will help your client. I hope that this case study provided you with pertinent, useable information when dealing with ALBP.

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Key words of search:
acute low back pain and trigger points
low back pain
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