

**Table 2.** Physical findings prior to RIT

<p><b>Observation</b></p> <ul style="list-style-type: none"><li>• Well healed, reddened scar 6 mm from L3-5 spinous process: tender to gentle palpation</li><li>• Lumbar spine positioned in extension, especially L4-5</li><li>• <i>Increased segmental muscle tone at L4-5 noticeable in sitting &amp; sit-to-stand</i></li><li>• Pelvis positioned anteriorly</li><li>• Gait: normal, but weakness with walk-on-heels, especially right side</li></ul> <p><b>Active range of motion</b></p> <ul style="list-style-type: none"><li>• <i>Full forward bending: but hips exhibited increased flexion &amp; lumbar spine held hyper-extended with difficulty returning to neutral, used hands to assist</i></li></ul> <p><b>Neurological</b></p> <ul style="list-style-type: none"><li>• Right knee jerk reflex hypo reflexive compared to the left</li><li>• Weakness with manual muscle testing of right ankle dorsiflexors.</li><li>• Right straight leg raise restricted to 60°</li></ul> <p><b>Motion palpation</b></p> <ul style="list-style-type: none"><li>• PPIVM: L3-5 blocked by painful spasm</li><li>• <i>Passive stability tests: excess movement with torsion &amp; anterior to posterior shear at L4-5 with pain on testing suggesting an increase in the neutral zone.</i></li></ul> <p><b>Motor Control</b></p> <ul style="list-style-type: none"><li>• Able to activate core stabilizing muscles when assessed with palpation but left multifidus fatigued with 1 or 2 repetitions.</li><li>• <i>Attempts to isolate transverse abdominal muscle activation with walking &amp; 4-point kneeling could be achieved for 2 to 3 repetitions but never could be sustained because of increased pain &amp; feeling of "giving way" at L4-5.</i></li><li>• In prone, active R hip extension demonstrated excessive side bend &amp; rotation with shearing through the L4-5 segment</li><li>• Weak right gluteus medius</li><li>• Right hip joint anterior &amp; lax when stability tested for an anterior shear</li><li>• <i>Standing on the right leg &amp; lifting the left to 90° (Gilletts test) demonstrated poor weight transfer &amp; inability to accept load through the right lower extremity.</i></li><li>• A noticeable crease &amp; shearing at L4-5 with right leg standing.</li></ul>
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patterns with normal muscle tone. As well the reduction of an increased neutral zone and normal capsular end feel with passive stability tests of torsion and anterior/posterior direction at the L4-5 segments suggests improved strength in the inert tissue of these segments (i.e. before treatment the neutral zone was excessive and now a palpable resistance could be felt).

Figure 1 shows the change in the Brief Pain Inventory<sup>8</sup> as a function of time starting at the first RIT treatment. Two lines can be seen representing pain ratings. The top line is the pain rating of when pain was at its worst. The bottom line is the pain rating for the average level of pain over the past week. While some variability is evident in the score the follow-up values are less than the pre-treatment values.

### Discussion

The purpose of reviewing this case was to present an interesting and positive outcome for a client with chronic low back pain due to excessive mobility in the lumbar spine and sacroiliac joints. The treatment was cost efficient and provided an alternate choice for a client who did not want extensive medication and life-long restrictions in her activities of daily living. The cost of this treatment at \$160CND per injection amounted to \$1280CND, plus physiotherapy costs equal to \$2000 CND (24 visits over 2 years @\$50.).

One of the most frequent causes of low back pain is the disturbance of motor function and control<sup>9</sup>. With un-

**Table 3.** Subjective findings at 14 month follow-up

<ul style="list-style-type: none"><li>• <i>Client reported 80% improvement in pain and overall function.</i></li><li>• Less low back and pelvic pain, no right leg or foot numbness but some continued right hip discomfort.</li><li>• Able to clean toilets and floors</li><li>• Pain persists with lifting &gt; 5 kilos</li><li>• Can stand and cook for 30 minutes</li><li>• Can sit 30 minutes</li><li>• Bicycle for 80 minutes with no pain</li><li>• Able to walk 90 minutes - no clicking noted</li><li>• <i>Able to sleep 6 to 8 hrs</i></li><li>• <i>Does not fall, can feel leg in space</i></li><li>• <i>Reported no feeling of "giving" way or sliding with active range of movement of lumbar spine or pelvis</i></li><li>• Still noted a need to change positions frequently, rest more often, receive help from other people to do things and avoid heavy activities because of her back</li></ul> <p><b>Outcome Measure</b></p> <ul style="list-style-type: none"><li>• <i>Roland Morris Disability Index 5/24</i></li></ul>
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