LUMBAR DISC INJURY

“JUANITA”
CASE PRESENTATION
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APRIL 2012 – TORONTO COX® SEMINAR PART II
AGENDA

1. Initial visit & presenting complaint
2. Mechanism of injury
3. Previous treatment
4. MRI and results
5. Physical Exam & Clinical Impression
6. Treatment Plan & Progress to date
7. Questions
INITIAL VISIT-PRESENTING COMPLAINT

Patient

- 35 year old female, referred by family physician
- Previously very active (long distance runner)

Symptoms at Presentation

- PAIN: lower back, right hip, left hip, right posterior thigh
- PAIN: fifth toe bilaterally (feels like ‘baby toe pointing outward’)
- NUMBNESS: anterior lower leg and feet

Symptom progression from initial injury

- Began in right lower extremity and then progressed to the left
**PRESENTING COMPLAINT CONT’D**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Description</th>
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<tr>
<td>Bladder dysfunction</td>
<td>Can’t tell at times if she needs to go to washroom. Resorted to going every two hours so she does not have an “accident.”</td>
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<tr>
<td>Cannot drive</td>
<td>Cannot drive due to increased numbness in right foot while sitting</td>
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<tr>
<td>Postural dysfunction</td>
<td>Leans to her left and slightly forward to relieve symptoms after a long day</td>
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| Pain rating                | 6-9/10 in lower back  
|                            | 5/10 in the right thigh                                                              |
AGGRAVATING/ALLEVIATING FACTORS

- Sitting
- Bending at the waist
- Walking
- Coughing / Sneezing
- Bowel movement

- Lying down on her side
- Hot shower, hot pack
MECHANISM OF INJURY & PREVIOUS TREATMENT

- Repetitively lifting special needs child at work - occurred sometime in Sept. 2011
- Referred by family physician to physiotherapy
- Symptoms progressively worsened even with the provision of physiotherapy. Eventually stopped working in first week of December 2011
- Referred for MRI of the lumbar spine by her physician
## MRI & RESULTS

<table>
<thead>
<tr>
<th>MRI</th>
<th>Took place December 6, 2011</th>
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<tbody>
<tr>
<td>Indication for MRI</td>
<td>“Rule out Cauda Equina”</td>
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<tr>
<td>Technique</td>
<td>Multiplanar multisequence MR images of the lumbar spine were performed without contrast</td>
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<tr>
<td>Findings</td>
<td>L5-S1 moderate size posterior canal focal disc protrusion (1.1 cm x 0.6 cm)</td>
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<tr>
<td></td>
<td>No evidence of significant spinal canal or neuroforaminal narrowing</td>
</tr>
<tr>
<td></td>
<td>No evidence of cauda equina.</td>
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</table>
T1 WEIGHTED CORONAL IMAGE
T1 WEIGHTED SAGITTAL IMAGE
T2 WEIGHTED SAGITTAL IMAGE
PHYSICAL EXAM

1. AROM of the lumbar spine severely restricted in all directions except extension (about ¾ normal with pain)
2. Tenderness in lower back paraspinals from approximately L4-S1 and right gluteal musculature
3. Seated SLR positive for lower back pain with either leg elevated, and “slumping” worsened symptoms
4. Positive Minor’s sign
5. Peripheral neurological exam revealed;
   - decreased sensation in sole of right foot
   - weakness in right calf musculature with single leg stance (not an issue with heel and toe walk)
   - reflexes 2+ bilaterally
   - no clonus noted
CLINICAL IMPRESSION

- **S1 radiculopathy secondary to L5-S1 central disc bulge**
- **Physician’s diagnosis: lumbar spine with radiculopathy**
- **Orthopedic surgeon’s/neurologist’s diagnosis: LBP**
TREATMENT PLAN

• Requested MRI report before treatment is to begin
  • Wanted to see MRI and report myself given her symptoms.

• Used Cox® Distraction Manipulation Protocol One
  • 3 times per week and reduce based on 50% rule

• Patient advised to seek emergency care if any worsening of bladder dysfunction occurs
TREATMENT RESPONSE – MONTH 1

Week 1

- Patient develops soreness in lower back after treatment, returns to normal symptoms on follow day.

Week 2

- Patient notices decreased symptoms in lower extremities.
- No bladder dysfunction for 2 consecutive days.
- Able to walk up stairs pain free.

Week 3 – 4

- Patient is able to drive short distances.
- Patient returns to work on modified duty (by Week 5).

Treatment begins 3 X week
Month 2

Treatment continues 3 X week

Month 3

Treatment reduced to 2 X week

Symptom-free for most of the day. Some discomfort in right thigh and numbness in toes bilaterally.

Treatment reduced to 1 X week

Began exercising (elliptical machine) to improve her conditioning.

Able to complete all of COX® lower back exercises without issue.
TODAY, SHE IS ABLE TO DO THE FOLLOWING:

• Sits for approximately 40 minutes without pain or numbness
• Uses elliptical for 25 minutes without symptoms
• Engages in proprioceptive ball (Cox®) exercises without issue
• Engages in light running for short distances