



PROTOCOL FOR COX® TECHNIC FLEXION DISTRACTION AND DECOMPRESSION OF LUMBAR SPINE DISC HERNIATION

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4/7/2021

This is the patient with low back and radicular lower extremity pain.

Protocol I is administered manually until Protocol II is instituted as adequate pain relief (50% Rule) and tolerance testing allows.

1. Preparatory Care.

- A. Ensure all locks are secure
- B. Patient lies prone on instrument with the anterior superior iliac spines 2 inches from the caudal thoracic piece. This places the lumbar spine on the thoracic section for controlled distraction spine manipulation as specified levels.

2. Manual Distraction Manipulation Is Applied As Follows:

- A. Flexion distraction of the caudal section is delivered as the doctor hand contacts the spinous process superior to the segment to be distracted.
- B. Tolerance testing is carried out from the most cephalward segment down to the last lumbar segment to be treated. (this testing is central, lateral, and with and without ankle restraints). Ask for patient input as to any discomfort and reduce force to a non-painful level. As taught in didactic lecture, test at low force (2 pounds) increasing to 8lbs incrementally by 2 pounds until 8 pounds is reached. Always continue treatment from the determined tolerance level. The force application is taught by visualizing the computer graph of forces, so the doctor learns the tissue tension of such forces. Some doctors retest their force levels in their practice by watching the force graph.
- C. Apply manual flexion distraction from the taut point, which is the point of interspinous process tautening and separation, at the chosen level. Patient tolerance at levels of 2,4,6 and 8 pounds of distraction force are delivered while asking if this causes any discomfort to the patient. If so, decrease to lesser force. Always contact the arch of the vertebra superior to the disc herniation level as the caudal section of the instrument is moved into distraction and flexion. Tolerance testing is done constantly by asking the patient if any back or extremity pain is noted.
- D. Five 4 second distraction forces are delivered for a time of 20 seconds. This 20 second distraction force is given 3 times and between each 20 second delivery trigger point, acupuncture point, or acupressure is applied. As taught in didactic lecture, test at low force (2 pounds) increasing to 8 pounds incrementally by 2 pounds until 8 pounds is reached. Always continue treatment from the determined tolerance level. The force application is taught by visualizing the computer graph of

- forces so that the doctor learns the tissue tension of such forces. Some doctors retest their force levels in their practice by watching the force graph.
- E. Apply manual distraction from the taut point, which is the point of interspinous process tautening and separation, at the chosen level. Patient tolerance at levels of 2, 4, 6, 8 pounds of distraction force are delivered while asking if this causes any discomfort to the patient. If so, decrease to lesser force. Always contact the arch of the vertebra superior to the disc herniation for applying the contact described at A. Tolerance testing is constant as the distraction is applied. The force applied is that which causes no discomfort to the patient.
 - F. Protocol II is started as adequate pain relief is attained (50% Rule), and tolerance testing allows full range of motion to be started. Range of motion is applied with the lumbar spine under distraction. At this distracted point, lateral flexion, flexion, extension, rotation, and circumduction are performed at each lumbar level. These motions are delivered with coupled motions under distraction. The number of repetitions stop when increased range of motion with less pain are elicited.

3. Automated Distraction (AD) = long-y axis distraction

- A. Tolerance testing is performed as described under manual flexion distraction. Automated distraction is started following patient tolerance and positive response to manual flexion distraction manipulation described above.
- B. AD yields greater distraction force than manual distraction; therefore, use small increments of AD when starting and increase to patient tolerance
- C. Protocol I is the only application of distraction given until adequate radicular pain is attained and tolerance testing for AD is found to not cause pain. AD application follows the description given in section A above. Doctor hand force can decrease or increase lordosis as deemed appropriate.
- D. When adequate radicular pain and tolerance testing reveals no pain increase, Protocol II of the lumbar spine is started. For Protocol II, distraction is first given to reduce spinal stenosis factors. To institute long y axis distraction (AD), the doctor can lock the caudal segment in AD at a determined distracted point and then lateral flexion, flexion, extension, rotation and circumduction are performed at each lumbar level. This may be continued into the thoracic spine.
- E. These ranges of motion can be delivered with coupled motions that combine distraction with each movement of lateral flexion, flexion, extension, rotation and circumduction .
- F. Appropriate electrical stimulation can be applied to trigger points before or after distraction manipulation. Ultrasound, acupuncture, gua sha, vibration, heat or cold, or other modalities as deemed needed are given.

NOTE: Manual and automated AD can also be given in side-lying position as shown in didactic lecture.