

COMMON CASE REQUIRING WELL-DESIGNED SPINAL MANIPULATION PROTOCOL: CERVICAL SPINE DEGENERATIVE DISC DISEASE WITH SCLERATOGENOUS PAIN DISTRIBUTION



Figure 1: Note the degenerative disc changes from the C3-C4 through the C6-C7 levels with reversed sagittal curve. This is a common condition seen in daily practice.



Figure 2: There is posterior unciniate degenerative changes seen at the C4-C6 levels due to endplate hypertrophy and facet arthrosis is noted.

This case is presented because it is common to see it in daily clinical practice and that makes it very important to address from a chiropractic manipulation viewpoint. I remember Hurwitz et al pointing out that high velocity low amplitude adjusting caused up to 30% to 50% of patients to have pain following the adjustment. He also recommended mobilization adjusting for those patients.

This case exemplifies such a case. This man cannot be rotated and thrust adjusted. It is not only impossible to get him into such an adjustment posture, but it hurts him. Allow me to share this case with you.

This 73 year old man was first seen for low back and hip and thigh pain in June of 2007. He was diagnosed with degenerative arthritis of the right hip and it was surgically replaced with great relief of pain. The patient was satisfied with the clinical outcome.

In April 2008, he returns with the chief complaint of cervical spine pain radiating to the left shoulder and arm to the elbow with a VAS score of 5 at worst and 4 on average. His Oswestry cervical neck disability score was 16. His examination showed range of motion of the cervical spine of 20 degrees flexion, 10 degrees extension with pain, 10-15 degrees of right and left lateral bending and rotation motion of 65 degrees. Deep musculotendinous reflexes of the upper extremity were 2/5 bilaterally, no thoracic outlet signs, muscle strengths 5/5 bilaterally of the biceps, triceps, deltoid muscles, positive compression for pain in the cervical spine and left shoulder, with relief on distraction.

The diagnosis was as seen on Figure 1 and 2 x-rays. Cervical spine and scleratogenous pain due to degenerative disc disease and its stenotic effects.

Treatment was instituted of long y axis decompression of the cervical and upper thoracic spine on the Cox®7 Table instrument with Protocol II. This was followed with tetanizing current and ice to the cervical spine from the C5-6 level to the left shoulder infraspinatous and supraspinatous muscles. Treatments were given three times weekly with the goal of at least 50% relief of pain within one month of care and a VAS of 2/10.

On the fourth visit the pain was 25% reduced with a VAS score of 3. On the ninth visit the pain was recorded at VAS 1 with no arm pain. This pain relief was attained at three weeks of care. This man also received long y axis decompression on the Cox®7 Table instrument for low back disc degeneration and disc herniation and spinal stenosis at the L1 through L5 levels which decreased his pain from a VAS of 8 to 2 in the same time period as the cervical spine and left shoulder pain.

A common condition but worthy of documenting the benefits of flexion distraction and decompression adjusting for a patient who could not tolerate high velocity thrust adjusting. We need to adapt our manipulation techniques to the patient's condition. The patient is very happy with his relief.

Respectfully submitted,

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Following is data on applying this work for cervical spine that may be of benefit in applying Cox® Technic as described in this paper...

D. Cervical Spine Adjusting

The addition of long y axis for cervical spine distraction adjusting offers a more controlled, safer application.

IMPORTANT NOTES:

- Cervical spine adjusting is performed without the occipital restraint system.
- All ranges of motion are done in conjunction with long y axis distraction.
- The contact hand on the spine moves parallel with the instrument's cervical axial distraction with the same force and velocity.
- Each movement is performed to the barrier of elastic resistance as determined by the doctor's tissue tension sense and taken then slightly beyond that barrier. *Patient tolerance is monitored at all times.*

PROTOCOL 1 FOR THE CERVICAL DISC HERNIATION PATIENT (PAIN BELOW THE ELBOW):

- **Position the patient** with the specific area to be treated over the division between the cervical and thoracic pieces.
- **Only long y axis distraction (with an optional slight degree of flexion set at a comfort level for the patient) is used to treat acute radiculopathy.**
- **Test for tolerance.**
 - Contact cervical spinous process-transverse process with one hand while long y axis traction with the cervical headpiece is applied with the other hand on the traction handle at the head of the table. (*Alternative Plan: Use the patient's headweight as the traction force so that very gentle distraction is given if the hand contact causes pain.*)
 - Hold each spinous process-transverse process segment for 4 seconds.
 - Ask patient if he/she feels any pain in the neck shoulder, arm or thoracic spine.
NOTE: Muscle resistance in the form of spasm is palpated for. If any such sign is present, do not use distraction. Instead use trigger point, acupressure, alternating hot/cold and massage until local irritation reduces to allow distraction with no signs of discomfort.
 - Test the next level moving caudad.
- Apply long y axis distraction to set **treatment start point** which is the point of tautness of the interspinous space.
- Apply 3 twenty second distractions
 - 5 pumps of 4 seconds each with F/D or long-y-axis
- Between each 20-second session, treat appropriate trigger points of the affected dermatome.
- End the adjustment session.
 - Instruct patient to push up on the arm rests.
 - Assist patient to upright position.

PROTOCOL 2 FOR THE NON-DISC HERNIATION PATIENT (NO PAIN BELOW THE ELBOW):**Position the patient**

- Place the specific area to be treated over the division between the cervical and thoracic pieces.

Test for tolerance.

- Contact cervical spinous process-transverse process with one hand while long y axis traction and all ranges of motion with the cervical headpiece are applied with the other hand on the traction handle at the head of the table. . (*Alternative Plan: Use the patient's headweight as the traction force so that very gentle distraction is given if the hand contact causes pain.*)
- Hold each spinous process-transverse process segment for 4 seconds.
- Ask patient if he/she feels any pain in the neck shoulder, arm or thoracic spine.
- NOTE: Muscle resistance in the form of spasm is palpated for. If any such sign is present, do not use distraction. Instead use trigger point, acupressure, alternating hot/cold and massage until local irritation reduce to allow distraction with no signs of discomfort.
- Test the next level moving caudad.

Long Y Axis Axial Distraction

- Grasp the spinous-transverse process of the vertebra at the level of distraction motion desired. (ex: Grasp C5 to move the C5 segment.)
- Release the axial distraction lock.
- Standing at the side of the instrument, gently push the headpiece axially using the ball handle and the vertebra contracted with the doctor's hand until tissue tension sense notes the barrier of elastic resistance (*the treatment start point*).
- Go slightly beyond the barrier of elastic resistance, carefully monitoring patient tolerance.
- ***The contact hand and the instrument's motion guided by the cervical tiller bar move parallel.***
- Gently bring back to neutral.
- Move to the next level, and repeat.

Lateral Flexion

- Grasp the spinous-transverse process of the vertebra at the level of lateral flexion motion desired.
- Unlock the lateral flexion lock.
- Move the headpiece into long y axis distraction.
- Laterally flex to the left first, then the right.
- Stabilize the transverse process away on the side of lateral headpiece flexion with the contact hand as the level to be laterally flexed is brought into lateral flexion by the headpiece motion.
- Laterally flex the headpiece until tissue tension sense notes normal physiological motion.
- Gently bring back to neutral.
- Move to the next level, and repeat.

Circumduction (a combination of lateral flexion and flexion movement)

- Grasp the spinous-transverse process of the vertebra at the level of circumduction motion desired.
- Unlock the flexion and lateral locks.
- Move the headpiece into long y axis distraction.
- Circumduct to the left, then to the right.
- Circumduct the headpiece until tissue tension sense notes normal physiological motion. (*This is a strong movement and important to regain mobilization of the cervical facets.*)
- Gently bring back to neutral.
- Move to the next level, and repeat.

Extension

- Grasp the arch of the spinous-transverse process of the vertebra at the level of extension motion desired.
- Unlock the flexion-extension lock.
- Extend the headpiece until tissue tension sense notes normal physiological motion.
- Gently bring back to neutral.
- Repeat as necessary at each joint level. Move to the next level, and repeat.

Rotation

- Grasp the spinous-transverse process of the vertebra at the level of rotation motion desired.
- Unlock the rotation twist lock.
- Move the headpiece into long y axis distraction.
- Rotate to the left, then to the right.
- Rotate the headpiece until tissue tension sense notes normal physiological motion by holding the arch securely while the segment rotates.
- Gently bring back to neutral.
- Move to the next level, and repeat.

End the adjustment session.

- Instruct patient to push up on the arm rests.
- Assist patient to upright position.

REFERENCES:

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