**American Academy of Osteopathy**

Convocation

**PHYSICIAN**
Thursday, March 18, 2010
2:30 – 4:00 PM

**STUDENT**
Friday, March 19, 2010
8:00 – 9:30 AM
4:30 – 6:00 PM
10:00 – 11:30 AM

---

**Direct techniques to treat sacrum and pelvis somatic dysfunction (HVLA, MET)**

Dennis J. Dowling, DO, FAAO

---

**DIAGNOSIS**

**ANTEIOR PELVIC ROTATION**

**FINDINGS - RIGHT**

+ STANDING FLEXION TEST RIGHT

RIGHT ASIS LOW – RIGHT PSIS HIGH

**TREATMENT**

FACILITATED POSITIONAL RELEASE

---

**Anterior Ilium/Anterior Innominate (Right) – Patient supine**

1. Patient position: supine.
2. Physician position: standing at the side of the patient, typically on the same side, facing the patient.
3. Technique:
   1. The physician places the pad of his index or middle finger of his monitoring cephalad hand (the hand that is closer to the patient’s head) medial to the posterior superior iliac spine (PSIS) in a manner of following the ilioSacral motion (the left finger contacts the patient’s anterior ilium, stabilizing the sacrum). The right hand grasps and flexes the patient’s hip and knee until motion is felt at the monitoring finger (Figure 64-A). A modification is for the physician to invert the forearm of his caudal arm from lateral to medial beneath the patient’s knee and places his hand on the patient’s anterior thigh. This can add tension to the modifying and localizing forces.
   2. The physician resists compression with his caudal (right) arm or shoulder from the patient’s knee through his femur, towards the pelvis and hip, and directed towards the sacroiliac joint until further soft tissue is noted at the monitoring finger.
   3. While maintaining the compression, the patient’s leg is gently carried through abduction in an arc across the midline and with increased hip flexion by engaging the sacroiliac barrier (rotating the innominate/sacrum posteriorly).
   4. The patient’s hip and knee are brought back to the neutral position by extending both and then the iliacal somatic dysfunction is reassessed.

---

**DIAGNOSIS**

**ANTEIOR PELVIC ROTATION**

**FINDINGS - RIGHT**

+ STANDING FLEXION TEST RIGHT

RIGHT ASIS LOW – RIGHT PSIS HIGH

**TREATMENT**

MUSCLE ENERGY

---

**Diagnosis**

**Anterior Pelvic Rotation**

**Findings - Right**

+ Standing Flexion Test Right

Right ASIS Low – Right PSIS High

**Treatment**

Facilitated Positional Release

---

**Anterior Ilium/Anterior Innominate (Right) – Patient supine**

1. Anterior Ilium/Anterior Innominate (Right) – Patient supine
2. 1. Patient position: supine.
3. 2. Physician position: standing at the side of the patient, typically on the same side, facing the patient.
4. 3. Technique:
   5. The physician places the pad of his index or middle finger of his monitoring cephalad hand (the hand that is closer to the patient’s head) medial to the posterior superior iliac spine (PSIS) in a manner of following the ilioSacral motion (the left finger contacts the patient’s anterior ilium, stabilizing the sacrum). The right hand grasps and flexes the patient’s hip and knee until motion is felt at the monitoring finger (Figure 64-A). A modification is for the physician to invert the forearm of his caudal arm from lateral to medial beneath the patient’s knee and places his hand on the patient’s anterior thigh. This can add tension to the modifying and localizing forces.
6. The physician uses his other hand to grasp the patient’s leg on the dysfunctional side and flexes the patient’s hip and knee until motion is felt at the monitoring finger (the physician’s right hand grasps and flexes the patient’s right leg in this example). (Figure 64-A)
7. The physician affects the patient’s knee of the affected side and externally rotates the leg until motion and soft tissue relaxation is felt at the monitoring finger. (Figure 64-A-B) A modification is for the physician to invert the forearm of his caudal arm from lateral to medial beneath the patient’s knee and places his hand on the patient’s anterior thigh. This can add tension to the modifying and localizing forces.
8. The physician puts downward compression with his caudal (right) arm or shoulder from the patient’s knee through his femur, towards the pelvis and hip, and directed towards the sacroiliac joint until further soft tissue is noted at the monitoring finger.
9. While maintaining the compression, the patient’s leg is gently carried through abduction in an arc across the midline and with increased hip flexion by engaging the sacroiliac barrier (rotating the innominate/sacrum posteriorly).
10. The patient’s hip and knee are brought back to the neutral position by extending both and then the iliacal somatic dysfunction is reassessed.
**DIAGNOSIS**

**ANTERIOR PELVIC ROTATION**

**FINDINGS** - RIGHT
+ STANDING FLEXION TEST RIGHT
RIGHT ASIS LOW – RIGHT PSIS HIGH

**TREATMENT**
HVLA

---

**DIAGNOSIS**

**POSTERIOR PELVIC ROTATION**

**FINDINGS** - RIGHT
+ STANDING FLEXION TEST RIGHT
RIGHT ASIS HIGH – RIGHT PSIS LOW

**TREATMENT**
MUSCLE ENERGY
**DIAGNOSIS**

**POSTERIOR PELVIC ROTATION**

**FINDINGS - RIGHT**
+ **STANDING FLEXION TEST RIGHT**
  **RIGHT ASIS HIGH – RIGHT PSIS LOW**

**TREATMENT**
FACILITATED POSITIONAL RELEASE

---

**Posterior Innominate /Posterior Ilium (Right) – Patient supine**

1. **Patient position:** supine
2. **Physician position:** standing on the side of the patient, typically on the same side, facing the patient.
3. **Technique:**
   - The physician places the pad of his index or middle finger of his monitoring cephalad hand (the hand that is closer to the patient’s head) medially to the posterior superior iliac spine (PSIS) or a minute of following the iliac crest motion. (The left finger contacts the patient’s medial to PSIS on the right.)
   - The physician uses his other hand to grasp the patient’s leg on the iliofemoral side, and flexes the hip to 90 degrees. The physician’s right hand (the monitoring hand) is then positioned on the posterior iliac crest, on the same side where the monitor’s cephalad hand is positioned. (Figure 64A).
   - The physician puts downward pressure on the monitor’s hand (the cephalad hand) as he externally rotates the hip (right) while the physician slides his right hand towards the patient’s opposite leg. (The patient resists this pressure with his body by attempting to lift the leg.)
   - The physician’s right hand grasps the patient’s right leg. While the right leg is abducted, the physician’s right hand grasps and flexes the patient’s right leg at the hip joint (right). (Figure 64B).
   - The physician stabilizes the patient’s pelvis by the right hand while the right leg is flexed. The physician then uses his abdomen or hip to maintain compression through the femur. (Figure 64C). The physician flexes the patient’s hip to a greater degree than neutral.
   - The patient is instructed to slide that foot down along the opposite leg while the physician resists with both hands on the ischial tuberosity and the hand on the knee (can be repeated).

---

**DIAGNOSIS**

**POSTERIOR PELVIC ROTATION**

**FINDINGS - RIGHT**
+ **STANDING FLEXION TEST RIGHT**
  **RIGHT ASIS LOW – RIGHT PSIS HIGH**

**TREATMENT**
STILL TECHNIQUE

---

**POSTERIOR INNOMINATE / POSTERIOR ILIUM (RIGHT) – Patient supine**

- Posterior Innominate / Posterior Ilium (Right) – Patient supine
- 1. Patient position: supine
- 2. Physician position: standing on the side of the patient, typically on the same side, facing the patient.
- 3. Technique:

---

**DIAGNOSIS**

**POSTERIOR PELVIC ROTATION**

**FINDINGS - RIGHT**
+ **STANDING FLEXION TEST RIGHT**
  **RIGHT ASIS HIGH – RIGHT PSIS LOW**

**TREATMENT**
HVLA
Upslipped Innominate (Right) – Patient supine

- Uplipped Innominate (Right) – Patient supine
- Patient position: supine.
- Physician position: initially standing at the foot of the table.
- Technique:
  - The physician grasps the ankle on the dysfunctional side with both hands and externally rotates and compresses the leg towards the hip and iliosacral joint. (Figure 64-3)
  - The physician then internally rotates the patient’s leg on the involved side until just prior to the ASIS lifting upwards.
  - The physician then progressively reduces the compression and transitions to traction until localized to the involved joint (Occasionally, a slighter sharper long axis tug can be placed to encourage downsip of the somatic dysfunction).
  - The Still technique for a posteriorly rotated innominate/ilium is applied; followed by:
    - The Still technique applied for an anteriorly rotated innominate/ilium.
  - This series is designed to “ratchet” the upslipped innominate/ilium into place.
  - The dysfunction is reassessed.

DIAGNOSIS
UPSLIPPED INNOMINATE

FINDINGS - RIGHT
+ STANDING FLEXION TEST RIGHT
RIGHT ASIS HIGH – RIGHT PSIS HIGH

TREATMENT
STILL TECHNIQUE
DIAGNOSIS
UPSLIPPED INNOMINATE

FINDINGS - RIGHT
+ STANDING FLEXION TEST RIGHT
RIGHT ASIS HIGH – RIGHT PSIS HIGH

TREATMENT
HVLA

R SUPERIOR ILIAC SHEAR
• Patient supine – patient holds onto sides of table
• Select superior shear side (ASIS & PSIS side higher)

R SUPERIOR ILIAC SHEAR
• Patient supine – patient holds onto sides of table
• Select superior shear side (ASIS & PSIS side higher)
• Physician stands at foot of table

R SUPERIOR ILIAC SHEAR
• Patient supine – patient holds onto sides of table
• Select superior shear side (ASIS & PSIS side higher)
• Physician grasps affected leg with both hands above ankle

R SUPERIOR ILIAC SHEAR
• Patient supine – patient holds onto sides of table
• Select superior shear side (ASIS & PSIS side higher)
• Physician grasps affected leg with both hands above ankle
• Leg is lifted slightly (hip flexion), internally rotated, and slight adduction is introduced
R SUPERIOR ILIAC SHEAR
• Patient is instructed to take a deep breath
• *(Patient can be instructed to give a deep cough)*
• Physician performs a sharp tug along leg

---

**DIAGNOSIS**

**DOWNSLIPPED INNOMINATE**

**FINDINGS - RIGHT**
+ STANDING FLEXION TEST RIGHT
RIGHT ASIS LOW – RIGHT PSIS LOW

**TREATMENT**
STILL TECHNIQUE

---

**Downslipped Innominate (Right) – Patient supine**

- **Downslipped Innominate (Right) – Patient supine**
- **Patient position:** supine.
- **Physician position:** initially standing at the foot of the table.
- **Techniques:**
  - The physician grasps the ankle on the dysfunctional side with both hands and externally rotates and tractions the leg towards the physician by pulling parallel to the table.
  - The physician then internally rotates the patient’s leg on the involved side until just prior to the ASIS lifting upwards.
  - The physician then progressively reduces the traction and transitions to compression until localized to the involved joint.
  - The Still technique for an anteriorly rotated innominate/ilium is applied, followed by:
    - The Still technique applied for a posteriorly rotated innominate/ilium.
    - This series is designed to “ratchet” the downslipped innominate/ilium into place.
  - The dysfunction is reassessed.

---

**Downslipped Innominate (Right) – Patient supine**

- **Patient stands on foot of side of inferior iliac shear**
- **The patient is instructed to hop on one foot**
DIAGNOSIS
PUBIC DYSFUNCTION

PUBIC RESTRICTION

TREATMENT
MUSCLE ENERGY AMHVLA

PUBIC DYSFUNCTION
• Patient supine

• Knees and hips bent; feet together and flat on table

• Physician at side of table
Patient supine
Knees and hips bent; feet together and flat on table
Physician at side of table – holds outside of patient’s knees

Patient pushes knees laterally (abduction) against isometric resistance provided by physician

Patient supine
Knees and hips bent; feet together and flat on table
Physician at side of table – holds outside of patient’s knees

Patient pushes knees medially (adduction) against isometric resistance provided by physician

Puts 2 fists between patient’s knees

Patient pushes knees medially (adduction) against isometric resistance provided by physician

Patient’s legs are externally rotated (knees abducted) to barrier
Puts hands against patient’s knees

Patient pushes knees medially (adduction) against isometric resistance provided by physician

At the conclusion of the previous effort, the patient is instructed to relax completely
A slight exaggeration of external rotation/abduction is introduced
DIAGNOSIS
SACRAL DYSFUNCTIONS

FINDINGS – RIGHT DEEP SULCUS
L on L; L on R; R Unilateral

TREATMENT
“jiggle the doodad”

Description of Supine HVLA technique for Sacroiliac dysfunction

• Patient supine
• The side of the deeper sulcus is as close to the edge of the table as possible
• The physician stands on side of the deeper sacral sulcus
• The physician faces the patient
• The physician positions the patient
• The cephalad hand holds the patient’s pelvis
• The caudad hand pushes the patient’s legs side towards the opposite table side (away from the deep sulcus)
• The physician positions the patient’s torso
• The caudad hand holds the patient’s pelvis
• The cephalad hand pushes the patient at the shoulders towards the opposite side of the table (away from the deep sulcus)
• The patient is instructed to
• lace his fingers together
• place them behind his neck as low down the neck as possible
• bring his elbows together
• The physician places his cephalad hand
• across the patient
• then medially through the opening at the patient’s elbow
• rests the dorsal aspect of his hand on the patient’s upper sternum
• The physician places his caudad hand
• on the patient’s ASIS of the opposite side
• The physician places his cephalad knee
• next to the patient’s shoulder on the same side
• Procedure
• roll the patients towards the deep sulcus side
• when the patient’s shoulder is planted on the table, the physician’s knee can be removed
• as the rolling occurs, the physician maintains the pelvis in place by holding onto the ASIS
• on the exhalation, a rotary motion is introduced towards the physician with the cephalad hand
• the patient is returned to neutral
• the findings are reassessed
R UNILATERAL SACRAL SHEAR, L on L, L on R
• Patient supine
• Select deep sulcus side

R UNILATERAL SACRAL SHEAR, L on L, L on R
• Patient supine
• Select deep sulcus side
• Sidebend patient completely away

R UNILATERAL SACRAL SHEAR, L on L, L on R
• Patient supine
• Select deep sulcus side
• Sidebend patient completely away
• Patient laces fingers together behind neck

R UNILATERAL SACRAL SHEAR, L on L, L on R
• Physician stands on side of deep sulcus

R UNILATERAL SACRAL SHEAR, L on L, L on R
• Physician stands on side of deep sulcus
• Hand that is closer to patient’s feet holds opposite ASIS
R UNILATERAL SACRAL SHEAR, L on L, L on R
• Physician stands on side of deep sulcus
• Hand that is closer to patient’s feet holds opposite ASIS
• Hand that is closer to patient’s head reaches across...

R UNILATERAL SACRAL SHEAR, L on L, L on R
• Physician stands on side of deep sulcus
• Hand that is closer to patient’s feet holds opposite ASIS
• Hand that is closer to patient’s head reaches across and is inserted through opening of opposite arm

R UNILATERAL SACRAL SHEAR, L on L, L on R
• Upper body is rotated towards the deep sulcus side while the opposite ASIS is held in position

DIAGNOSIS
SACRAL TORSIONS
FINDINGS – LEFT DEEP SULCUS
POSTERIOR RIGHT ILA
R on L
TREATMENT
HVLA

R on L BACKWARD Sacral TORSION
• Place top leg off table
• Thrusting arm posterior/superior to ischial tuberosity
• Direction of THRUST (posterior) – bring ilium to meet sacrum
**DIAGNOSIS**

**SACRAL TORSIONS**

**FINDINGS** – **RIGHT DEEP SULCUS**

LEFT POSTERIOR ILA

L on L

**TREATMENT**

HVLA

---

**DIAGNOSIS**

**UNILATERAL SACRAL**

**FINDINGS** – **RIGHT DEEP SULCUS**

RIGHT UNILATERAL SHEAR

**TREATMENT**

HVLA
**SACRAL DYSFUNCTION – UNILATERAL SACRAL SHEAR**

- Patient prone

- Physician at side of table – on dysfunction side
  - Physician’s hand that is closer to the patient’s head – thenar eminence on posterior/inferior ILA; fingertips at SI joint (medially to PSIS at same side)

- Physician’s hand that is closer to the patient’s feet grasps the same sided leg above the ankle; the leg is externally rotated and abducted

- Muscle Energy treatment for a UNILATERAL SACRAL SHEAR is performed

**DIAGNOSIS**

**UNILATERAL SACRAL FINDINGS – RIGHT DEEP SULCUS**

**RIGHT UNILATERAL SHEAR**

**TREATMENT**

HVLA
UNILATERAL SACRAL SHEAR

- Top leg foot behind knee
- Thrusting arm inferior to ischial tuberosity
- Direction of THRUST (anterior) – to bring ilium to the sacrum

TREATED THE SAME

- Posteriorly Rotated Ilium
- Forward Sacral Torsion
- Unilateral Sacral Shear

TREATED THE SAME

- Anteriorly Rotated Ilium
- Backward Sacral Torsion