Incorporating OMM to Enhance Your Clinical Practice – Osteopathic Structural Examination

Sheldon C. Yao, D.O.
Acting Department Chair
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Objectives

- Introduction to examination skills – LISTEN - LOOK – FEEL – MOVE
- Introduce observation of a patient from a posterior, anterior, and lateral view.
- Review special palpatory tests.
- Discuss gross motion testing of the spine.
- Introduction to the Modified 10 Step Screening Examination according to Greenman
- Incorporating an osteopathic structural examination into your physical examination.
- Finding the area of greatest restriction (AGR) – Dr. Stiles
Where do we start?
Somatic Dysfunctions

- Definition - Impaired or altered function of related components of the somatic (body framework) system; skeletal, arthrodial and myofascial structures; and related vascular, lymphatic and neural elements.

- Diagnosis
  T - tissue texture abnormalities
  A - asymmetry
  R - range of motion abnormalities
  T - tenderness
Your first impression

• Observation – Look
• How does your patient carries themselves, sitting, moves, gets up from the chair, gait/walking?
• Any gross asymmetries? Guarding? Scars, injuries?
• Your observation will pick up on your patients functional dysfunctions.
Static examination

• Look at symmetry – Posterior view
  – Ear height
  – Shoulder height
  – Scapula height
  – Wrist creases (angle and height)
  – Finger tip height
  – Iliac crest, gluteal and popliteal creases
  – Malleoli height, Achilles arches and foot arches

• Look at any overt spinal curves
Observation

- Look at symmetry – Anterior view
  - Eyes and ear level
  - Shoulder height, clavicle height
  - Nipple level (men)
  - Finger tip height
  - Wrist creases, Iliac crest
  - Patellae, malleoli height, and foot arches
Observation

- Look at symmetry – Lateral view: are there any differences in rotation in the following areas?
  - Face
  - Thorax
  - Abdominal region
  - Pelvic region
  - Gross Posture

- Look at any overt abnormal spinal curves
Figure 3-5. Points of interest on the static symmetry examination. (A) Anterior view. (B) Lateral view. (C) Posterior view.
Feel – Palpation

- Thermal scan
- Check soft tissue for texture changes
- Areas of hyper/hypotonicity?
- Areas of tenderness?
- Palpate landmarks
Tissue Texture Changes

• Acute Changes
  – Warm/Hot - Increased Temperature
  – Boggy/rough texture
  – Increased moisture
  – Increased tension
  • Rigid/boardlike
  – Much Tenderness
  – Edematous
  – Erythema test
  • Redness lasts

• Chronic changes
  – Cool/or only a slight increase in temperature
  – Thin/smooth texture
  – Dry
  – Slight increased tension
  • Ropy/stringy
  – Less tender
  – No edema
  – Erythema test
  • Red fades fast or blanching
Special Tests – Skin Drag

- Slide fingertips lightly across the skin to sense areas of increased or decreased drag.
- Increased drag (SLOWER) may be caused by a fine film of moisture (= an ACUTE finding).
- Decreased drag (FASTER) may be caused by atrophic or dry skin (= CHRONIC finding).
- IF EXCESSIVE perspiration/moisture OR oily skin is present, then, the skin drag test CANNOT be used.
Special Tests – Red reflex

- Rub skin with fingers in a **firm** stroke.
- Observe for blanching (whiteness) or erythema (redness).
- Note the length of time required for the skin to return to normal color.
- Areas of acute somatic dysfunction tend to remain red longer.
- Chronicity of the somatic dysfunction tends to lead to blanching of the skin.
Vicerosomatic Reflexes

- Inflammation is a powerful stimulator of local nociceptors.
- The convergence of visceral nociceptors with the nociceptors from all somatic tissues produces several clinical effects:
  - Referred pain
  - Segmental facilitation at the spinal cord level
As a rule, organs above the thoracoabdominal diaphragm manifest their sympathetic VSR in the paravertebral soft tissues at or above the level of T5, while organs below the diaphragm manifest their sympathetic VSR at or below the level of T5.
Motion testing

• Utilizing motion testing to check for asymmetry, resistance to movement, decrease range of motion, in order to diagnose somatic dysfunctions.
• Motion testing may be active or passive.
• Testing involves the characteristics of the joint and its tissues.
Motion testing

- Physiologic - The point to which a patient can actively move any given joint (active ROM).
- Anatomic - Point at which the joint can be passively moved through the physiologic barrier.

FIG. 4-2 (A) Physiologic barrier engaged by the patient. (B) Anatomic barrier engaged passively, with ligaments stretched. (C) Anatomic barrier has been passed, causing tissue disruption.
Abnormal barriers – Somatic dysfunction

- Alterations in range of motion is essential for structural diagnosis

RESTRICTIVE BARRIER

- Physician must evaluate:
  - Total range of motion
  - Quality of range of motion
  - Feel at end point of range of motion

Manipulative medicine is aimed at restoring and maximizing normal physiologic motion
Clinical significance

• Diagnosis somatic dysfunction can assist with finding the cause of a patient’s complaint.

• It is an **anatomical** structural restriction that is preventing optimum function thus affecting **physiology** including autonomic, lymphatic, and muscular.

• Clinical significance and correlation is imperative when making the connections to whether a finding is significant.
Summary on Diagnosing Somatic Dysfunctions

Look – Feel - Move

Check for TART changes
T - tissue texture abnormalities
A - asymmetry
R - range of motion abnormalities
T - tenderness
<table>
<thead>
<tr>
<th>Step</th>
<th>Test Description</th>
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<tbody>
<tr>
<td>Step 1</td>
<td>Postural Analysis: static evaluation/palpate paired landmarks</td>
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<tr>
<td>Step 2</td>
<td>Gait Analysis: screen &amp; ask patient to “duck-walk” – lower extremity screen</td>
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<td>Step 3</td>
<td>Dynamic trunk side-bending (standing)</td>
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<td>Step 4</td>
<td>Standing flexion test</td>
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<td>Step 5</td>
<td>Stork test</td>
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<td>Step 6</td>
<td>Seated flexion test</td>
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<td>Step 7</td>
<td>Screening of upper extremities (seated)</td>
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<td>Step 8</td>
<td>Trunk mobility testing – Rotation and side-bending (seated)</td>
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<td>Step 9</td>
<td>Head and neck mobility – multiple planes</td>
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<tr>
<td>Step 10</td>
<td>Quick “total body screen palpation/motion testing” – Patient supine</td>
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<td>“From feet up” – and specific maneuvers</td>
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<td>(e.g. LE passive and ribs): Malleoli – ASIS – rib cage/breathing/SLR (straight</td>
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<td>leg raise test) and FABERE for hip ROM (range of motion)</td>
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Area of Greatest Restriction & Sequencing

- Gives a starting place and an order to treatment.
- Allows the physician to focus in on the root of the problem and not just the areas of compensation.
- Reminds us to keep the whole person in mind during treatment and not to just focus on the area of complaint.
Perform rapid screen

• Contact cervical spine with one hand with the other provide sweeping motion with hand on top of the head. Assess tissue resistance and joint motion.

• Continue into thoracic region and lumbar.

• Perform seated and standing flexion.
Analysis

- Treat area most restricted
- If upper cervical consider cranial primary source
- If unilateral finding in upper thoracic region it can be upper extremity
- If unilateral finding in lumbar region it can be lower extremity
SEQUENCING: interpretation

- **KEY CONCEPT:** THE AREA OF GREATEST RESTRICTION (KEY) MAY BE, AND FREQUENTLY IS, IN A TOTALLY DIFFERENT AREA OF THE BODY THAN THE SITE OF CHIEF COMPLAINT!!

- THE PAIN IS FREQUENTLY LOCATED WHERE THE BODY IS ATTEMPTING TO COMPENSATE; **NOT AT AGR**
SEQUENCING: interpretation

- Once you find the **Regional A.G.R.**
- Find the **Segmental A.G.R.**
- Establish the **Segmental Diagnosis**
- **Start treatment there!!!!**
- **Re-screen**
- Then go to the next **Regional A.G.R.** & continue until **treated area releases poorly**...you’re done for that visit
Rapid OSE screen

- Incorporate into targeted examination
- Starts with careful history
- Observe for restriction in function
- Screen for acute changes in midline spine
- Targeted neurologic exam
- ROM & motion test for restriction