

Osteopathy for the OB-GYN

SCS September 2017
Barbara Zajdel, D.O.
Assistant Professor Department Of Osteopathic
Manipulative Medicine
Michigan State University

Gynecological Patients

- Present with a wide variety of symptoms related to Gyn issues.
 - Dysmenorrhea
 - Excessive Bleeding
 - Uterine Fibroids
 - Cancer
 - Ovarian Cysts
 - Pelvic pain
 - Ruptured cyst, ectopic pregnancy, endometriosis....

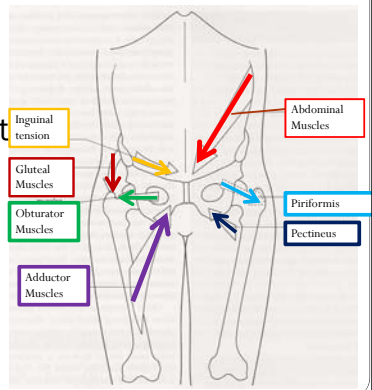
Obstetrical Patients

- A patient with unique medical needs
 - Pain
 - Induced by pregnancy
 - Back pain/postural changes/ round ligament/ sciatica/ carpal tunnel
 - Predates pregnancy
 - Headaches/migraine/back pain/disk disease, carpal tunnel
 - Hypothyroid
 - Hypertension
 - Diabetic
 - Pre-eclamptic/Eclamptic
 - Trauma suffered in pregnancy
 - Preterm Labor
 - Bleeding/Spotting during pregnancy

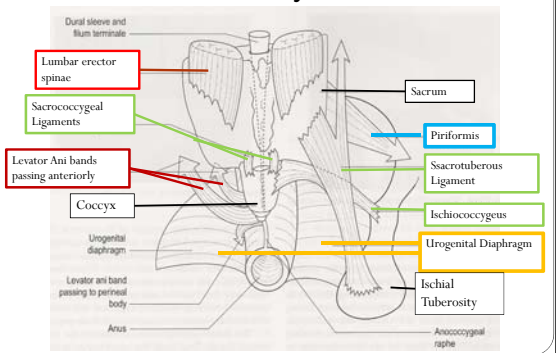
Gynecologic Patients

- Pelvic Pain
- Uterine Prolapse
- Urinary Incontinence
- Dysmenorrhea
- Dysparunia
- Coccydynia

Influences on the Pelvis



Influences on Coccyx



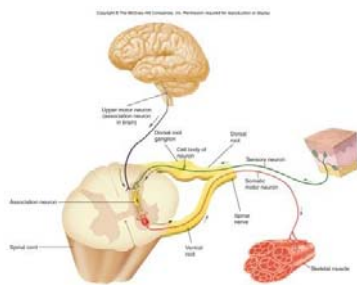
Use OMM Principles and Physiology to Help Guide Diagnosis and Treatment

- Viscerosomatic reflex
 - Has been in literature since 1938 (Pottenger)
 - Discussed in Gray's Anatomy and by other authors (Pansky, Crosby, Kuchera, Korr & Denslow)
 - Definition
 - A localized somatic stimulation producing patterns of reflex response in segmentally related somatic structures.

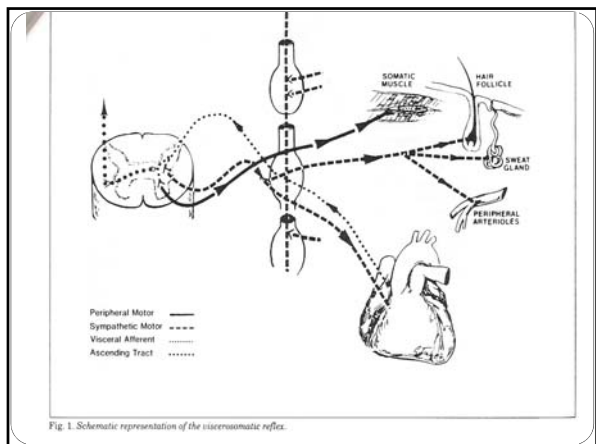
Etiology of Viscerosomatic Reflex

- Result of the effect of afferent stimuli arising from a visceral disorder on somatic tissues
- Initiated from afferent impulses coming from visceral receptors
- Impulses are transmitted to the dorsal horn of the spinal cord & synapse with interneurons
- Conveys the stimulus to sympathetic & peripheral motor efferents

Etiology Con't



- This results in sensory and motor changes in somatic tissues of skeletal muscles, viscera, blood vessels and skin



Concept of Facilitation

- May be due to a sustained increase of afferent input, or aberrant patterns of afferent input, or changes within the affected neurons themselves or their chemical environment

Facilitated Segment

- The central excitatory state of the cord is basic to the hypothesis of referred pain
- Visceral afferents initiate a central excitatory state. Their action may be facilitated by somatic efferents from skin, muscle, or supraspinal stimuli
- Once the excited state has been created, its activity may increase or be maintained by further visceral stimuli or by afferent stimuli from somatic structures

Research

- Eble:
 - Stimulation of renal pelvis/ureter/fallopian tube/small intestine/colon in rabbits
 - Noted increased contraction of paraspinal muscles
 - Region of response depended on organ stimulated.

Research Con't

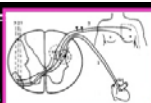
- Scheon & Finn:
 - Noted localized muscle response in the upper thoracic spine associated with acute periods of coronary ischemia in cats
- Korr: measured cutaneous changes produced by segmental facilitation via alterations in sweat/blood flow
 - Changes are palpable as moisture & increased skin drag in paraspinal tissues

| Heart | Lungs | Esophagus | Stomach | Small intestine | intestine (splenic flexure) | (splenic flexure to rectum) | Appendix |
|-------|---------|-----------|----------|-----------------|-----------------------------|-----------------------------|----------|
| 1-T5 | T2-T4 | T5-T6 | T6-T10 | T9-T10 | T11-L1 | L1-L2 | |
| 1-T5 | T2-T5 | | T6-T10 | T6-T10 | T6-T10 | T6-T10 | |
| 1-T5 | T3-T4 | T5-T6 | T7-T9 | T9-T12 | T9-T12 | | |
| 1-T5 | T2-T7 | T5-T6 | T6-T9 | T9-T10 | T11-L1 | L1-L2 | T10-T12 |
| 2-T8 | T4-T9 | | T7-T9 | T9-T12 | | | |
| 3,C4 | C3,C4 | | | | | | |
| 1-T4 | T2-T7 | | T6-T10 | T6-T10 | | L1-L2 | T10-T12 |
| T5) | (T2-T4) | | (T5-T11) | (T5-T11) | | | |
| 1-T3 | | | (T6) | T9,T10 | (T11) | S2-S4 | |
| | | | T7,T8 | (T11) | T12-L1 | | |
| | | | (T9) | | | | |
| 1-T4 | T2-T7 | Upper | T6-T9 | T6-T8 | T12-L1 | L1-L2 | T10-T12 |
| T5) | | T2-T7 | | (T10) | | | |
| | | (T8) | | duodenum | | | |
| | | | | T9-T11 | | | |
| | | | | jejunem | | | |
| | | | | ileum | | | |
| 1-T4 | T2-T7 | Upper | T6-T9 | T6-T11 | (T11) | L1-L2 | T10-T12 |
| T5) | | T2-T4 | (T10) | | T12-L1 | | |
| | | Lower | | | | | |
| | | T5-T7 | | | | | |

Referred Pain

- Visceral pain is usually referred to a somatic structure that is innervated by the same segments that receive input from the visceral organ
- Afferent fibers from the diseased visceral organ excite spinothalamic tract cells that receive convergent input from the related somatic structures

CONVERGENCE THEORY



- The number of peripheral pain exceed the number of lateral spinothalamic tract. So, Both the somatic and visceral afferents converge upon the same spinothalamic neurons at the spinal cord level.
- Hence when visceral pain impulses travel in the same pathway along which impulses from the skin travels, the individual gets the feeling that the pain originates in the skin itself.

Symptoms & Findings

- Muscle and referred pain are described as vague, dull, gnawing & aching in nature
 - Due to convergence of muscle and visceral input onto the many spinothalamic trace cells
 - Higher pain centers can not distinguish between viscera and muscle/skin

Acute Changes

- TART
 - Increased skin drag & moisture
 - Doughy/boggy tissue feel
 - May be unilateral or bilateral
 - Restricted motion
 - Tender to palpation
 - No firm end point to restriction

Chronic Change

- TART
 - Stiffness of joints
 - Trophic skin changes- thickening of skin & sub Q tissues
 - Localized muscle contraction with firm ropsey texture
 - Tender
- May exhibit acute on chronic changes

Validity of Physical Findings:

small study but it's a start

- Wilson et al: 12 patients hospitalized for cardiac dz
 - 3 independent D.O.'s without knowledge of patient's Hx or medical records
 - Osteopath's diagnosis based on SD in the area of T1-5 correlated with the cardiologist's diagnosis in 10/12 cases
- Palpatory diagnosis can add to the predictive value of diagnosing a visceral disease
- Visceral afferent activity thought to be responsible for Chapman's reflexes

Treatment

- Focused on decreasing SD and interrupting reflex arcs
- Influence the viscus through stimulation of somato-visceral effects
- Decrease potential preconditioning effect of SD to body stressors
- Decrease residual effects on somatic structures following a visceral disorder

Autonomic Innervation

- Sympathetic
 - T10-12/Superior Mesenteric Ganglion
 - Testes, ovaries, upper fallopian tube
 - T12-L2/Inferior Mesenteric Ganglion
 - Lower fallopian tubes, uterus, cervix, prostate
- Parasympathetic
 - Vagus
 - Testes, ovaries, upper fallopian tube
 - S2-4/Pelvic splanchnic
 - Lower fallopian tube, uterus, cervix, prostate

KISS Osteopathic Approach & Treatment

- Influence patient's physiology
- Move patient from allostasis toward homeostasis
- Sympathetics
 - Paraspinal inhibition, rib raising, any technique to treat SD.
- Parasympathetics
 - Suboccipital release
 - C2-3 SD
 - Sacrum SD
- Lymphatics
 - Thoracic outlet- terminal drainage sites
 - Abdominal diaphragm
 - Pelvic diaphragm

Sympathetic: Paraspinal Inhibition

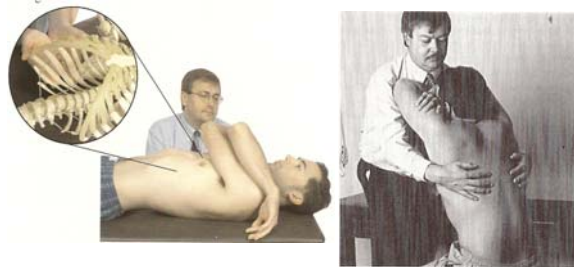
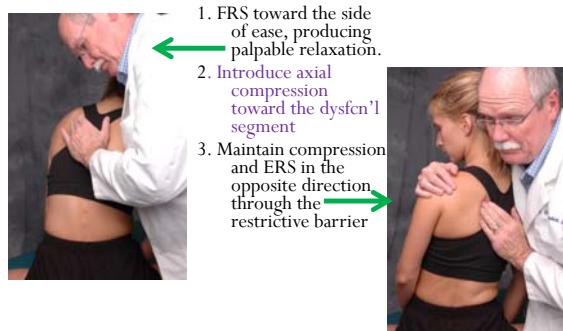


FIGURE 68.6. Rib raising: seated.

Still technique Thorax: Flexed Thoracic Type II Dysfunctions



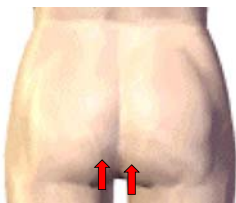
Parasympathetic: Suboccipital Release/Condylar Decompression



Facilitated Positional Release C2-3



Sacral Dysfunctions, Diagnosis




- With the patient seated, sweep your thumbs upward toward the inferior lateral angles (ILA) about 1 cm out from the midline.
- Note which thumb is inferior or posterior. That is the positive side for the **ILA** test.
- Then perform seated flexion test

Still Technique Sacrum: Diagnosis

- It is named for the side of the positive seated flexion test (sacral sulcus that rides up).
- If the seated flexion is positive on the opposite side to the positive ILA test the diagnosis is a **diagonal sacrum**.
 - Most of the time when a diagonal sacrum is diagnosed there is also a single segment lumbar neutral dysfunction.
- If the seated flexion is positive on the same side as the positive ILA test the diagnosis is a **unilateral sacrum**
- **Do not confuse this with the traditional sacral diagnosis of torsions and unilateral flexion/exension. This is a different model with different nomenclature.**

Diagonal sacrum
Left diagonal sacrum

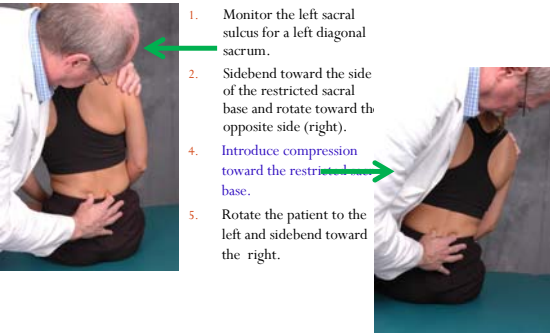
Rides up



Inferior & tight

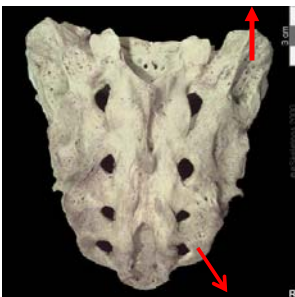
Still Technique Sacrum:
Left Diagonal sacrum

1. Monitor the left sacral sulcus for a left diagonal sacrum.
2. Sidebend toward the side of the restricted sacral base and rotate toward the opposite side (right).
3. Rotate the patient to the left and sidebend toward the right.
4. Introduce compression toward the restricted base.
5. Rotate the patient to the left and sidebend toward the right.



Unilateral sacrum diagnosis:
Right unilateral sacrum

Inferior ILA is on the same side as the positive seated flexion test



Sacral sulcus rides up

Inferior ILA

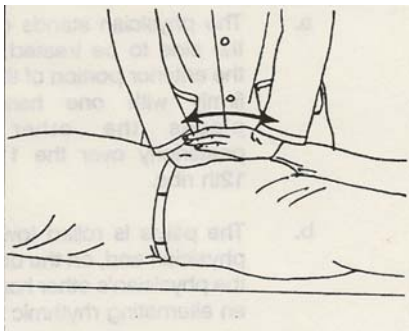
Unilateral sacrum: Right unilateral sacrum



1. Monitor the right sacroiliac joint for relaxation
2. Rotate the patient to the right for a unilateral right sacrum
3. Apply compression to the right sacral base
4. Maintaining compression rotate the patient toward the opposite side.



Sacral Rock



New Ideas

- Superior and Inferior Innominate Shear
 - Still Technique
 - Developed by Richard VanBuskirk
 - Imagine Innominate does not shear superior/inferior with the sacrum but will side bend medially and laterally (crest will medially/laterally deviate). This will appear to look like a superior/inferior shear.

Still Technique for Innominate Shear

- Superior Shear
 - Place monitoring hand under SI joint.
 - Abduct LE
 - Apply force vector until palpated by monitoring hand
 - Adduct LE across midline
- Inferior Shear
 - Place monitoring hand under SI joint
 - Adduct LE across midline
 - Apply force vector until palpated by monitoring hand
 - Abduct LE

Superior shear Starting Position



Ending Position for Inferior Shear

Inferior Shear Starting Position



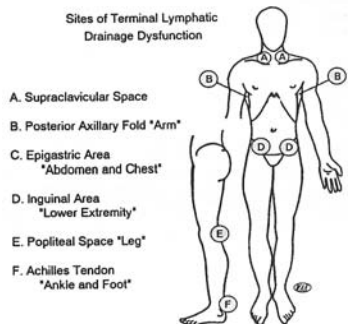
Ending Position for Superior Shear



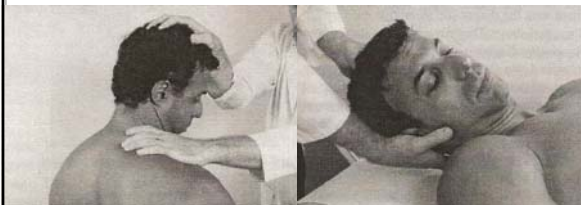
Lymphatics

- *Let the lymphatics always receive and discharge naturally, if so we have no substance detained long enough to produce fermentation, fever, sickness, and death.- A.T. Still*

Terminal Lymphatic Drainage Sites



Still Technique T1



- Start with the dysfunction in its position of ease.
- Add axial compression until you palpate under your monitoring hand.
- Maintaining the compression, slowly move the head in a gentle range of motion through the restrictive barrier.

Still Technique 1st Rib



Figure 4-12A: Superior first rib, treated supine, start.



Figure 4-12B: Superior first rib, intermediate position.



Figure 4-12C: Superior first rib, near release.

Thoracic Inlet Myofascial Release



Pectoral Traction



FIGURE 68.11. Pectoral traction.

Posterior Axillary Fold



Abdominal Diaphragm Myofascial Release



Figure 10.30 Subcostal visceral release and treatment of diaphragm.



Pelvic Diaphragm MFR/ME



Hamstring Spread

- Patient is supine with leg hanging off table.
- Support patient's leg by placing finger tips into popliteal space just medial to hamstring muscles/tendons.
- Gently spread hamstring muscles until release/reduction in congestion is felt.

Thoracic Pump

Pedal Pump



Chapman Reflexes

- “A system of reflex points that present as predictable anterior & posterior fascial tissue texture abnormalities” (plaque-like changes or stringiness of the involved tissues) assumed to be reflections of visceral dysfunction or pathology”
- Encompasses the lymphatic, neuroendocrine, & autonomic response to injury, illness, & disease as palpable and predictable viscerosomatic tissue reflexes found on the anterior and posterior body surface.

Mechanisms

- Lymphatic abnormalities
- Fibrositis deposits
- Inflamed lymph vessels passing over ribs and bones
- Inflamed nerve endings
- Inflamed sympathetic nerve filaments around terminal arterioles
 - Ketchm 1943
- Bottom line- lymphatic, neuroendocrine, & autonomic interactions identified and related to Chapman reflexes early on

Diagnostic Utility

- Can use CR as part of his screening or physical exam to aid in your differential diagnosis implying organ dysfunction.
 - A non tender CR, by itself, indicates nothing
 - Never should one trivialize a tender CR without a good explanation for the finding. This is especially true if it is persistent.
 - Useful in the hospital setting. Exam can be focused and performed in 30-45 seconds.

Utility of Osteopathic Structural Exam Findings- Including CR

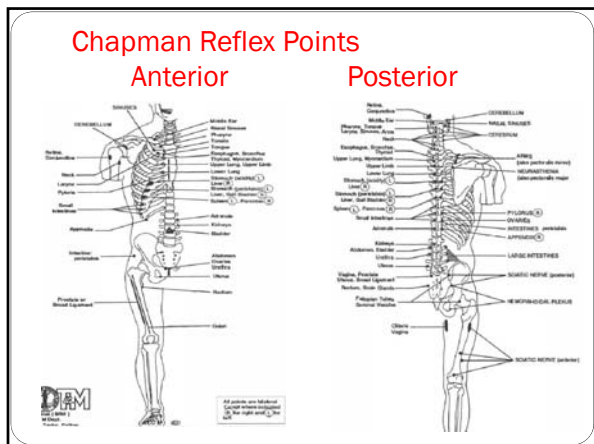
- Somatic Dysfunction in the Diagnosis of Uncommon Ectopic Pregnancies: Surgical Correlation and Comparison With Related Pathologic Findings.
- JAOA Feb 2017

Results

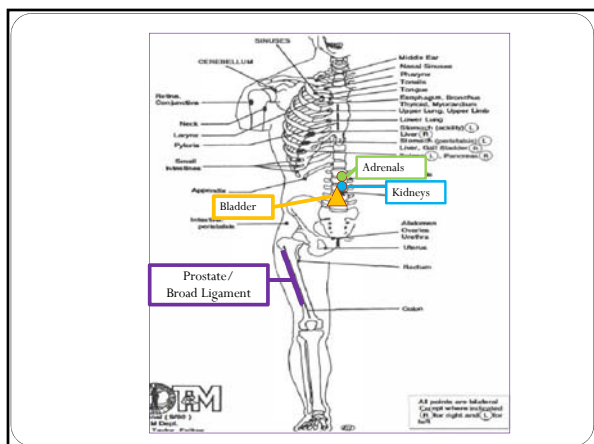
- Seven cases with ectopic pregnancies outside the fallopian tube were included.
- Two primary ovarian pregnancies and 1 heterotopic pregnancy (uterine and ovarian) had somatic dysfunction at the T10-T11 spinal levels and CRPs posterior for the ovary
- 1 primary omental pregnancy with somatic dysfunction at the T9-T12 spinal levels and CRPs anterior and posterior for the ileum and jejunum
- 1 tubal pregnancy with somatic dysfunction at the T10-L1 spinal levels and CRPs anterior and posterior for the fallopian tube.
- Two cornual ectopic pregnancies were not associated with unique findings.
- These somatic dysfunctions and CRP findings appear to be distinct from those of comparison cases, including first pregnancies at any trimester, simple ovarian cysts, and elective bilateral tubal ligation.

Conclusion

- The OSE findings demonstrated in these cases aided in the final diagnosis and thus can potentially prove helpful in cases of ovarian, tubal, and omental pregnancies to provide clues to abnormal ectopic pregnancy locations where diagnostic imaging results are insufficient or equivocal. Osteopathic structural examinations may allow osteopathic physicians to better prepare for treatment approaches, including surgery.

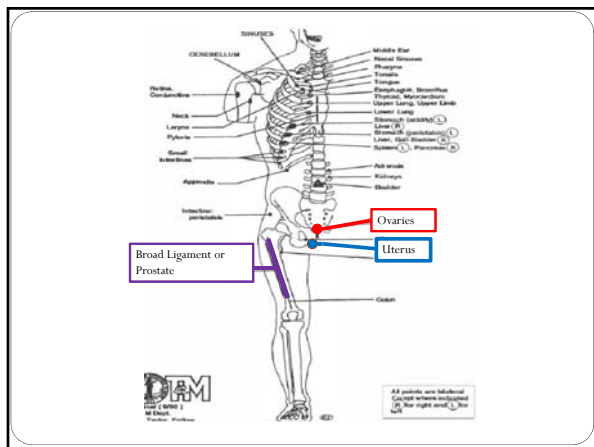


- ### Urinary
- Adrenals (anterior)
 - 1 in. lateral 2 in. superior to umbilicus
 - Adrenals (posterior)
 - T11 -T12 (could be unilateral)
 - Kidneys (anterior)
 - 1 in. lateral 1 in. superior to umbilicus
 - Kidneys (posterior)
 - T12 - L1 lamina of TP bilateral
 - Bladder (anterior)
 - Peri - umbilical area
 - Bladder (posterior)
 - L2 upper edge of TP bilateral
 - Urethra (anterior)
 - Superior pubic ramus, 2 cm lateral to symphysis
 - Urethra (posterior)
 - L2-3 TP bilateral



Reproductive

- Prostate (anterior) Outer femur (along posterior IT band) bilateral. Superior edge of inferior pubic ramus
- Prostate (posterior) Between PSIS and L5 SP
- Uterus (anterior) Junction of the pubic ramus & ischium
- Uterus (posterior) Between PSIS and L5 TP
- broad ligament (anterior) outer femur along posterior IT band
- broad ligament (posterior) Between PSIS and L5 TP
- vagina (posterior) inferior lateral sacral base bilateral & upper inner edge of thigh
- ovaries (anterior) superior pubic ramus, 2 cm lateral to symphysis
- ovaries (posterior) T9-T11 lamina of TP 'bilateral



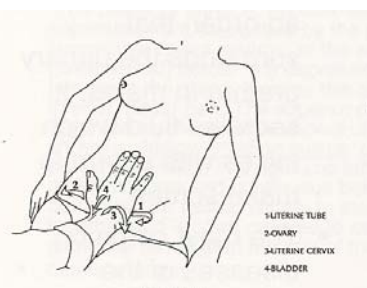
Visceral Manipulation

- Treatment of viscera important in homeostasis of internal organ systems
- Internal tx works great when external tx does not produce desired results
- Used for painful conditions (msk & visceral), incontinence, recurrent UTI's, PMS, menstrual irregularities, prolapse/ptosis, dyspareunia

Why Visceral OMT?

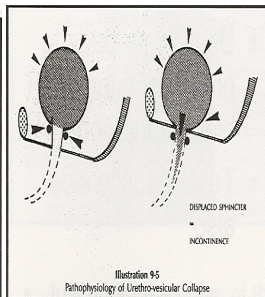
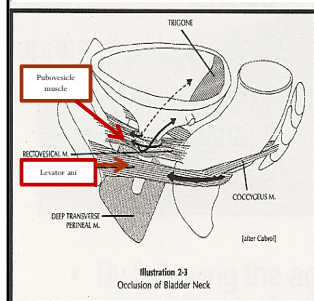
- Osteopaths commonly use fascial techniques when treating patients
- Viscera are enveloped in fascia which has the capacity to become strained
- Free/physiologic movement of the viscera from fascial drag/strains is essential for homeostasis (optimal visceral function)
 - Ie: surgical adhesions

Fascial Listening

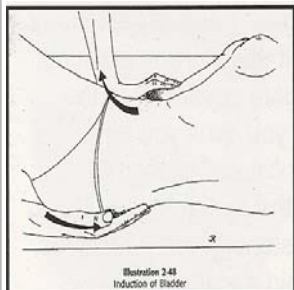


- Place hand on abdomen just above umbilicus and "listen" to the fascia
 - Note where fascia is pulling and move hand to that region
 - With layered palpation decide what organ you are palpating
- May treat directly or indirectly with visceral MFR.

Reasons for Incontinence & Bladder Irritation

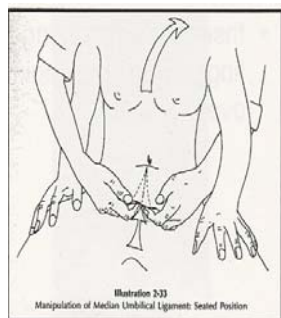


Bladder Tx: External



- Pt supine
- One hand under sacrum and the other just superior to pubes
- During inspir bladder moves anterior/inferior and sacrum moves posterior/superior

Medial Umbilical Ligament Tx



- Pt seated and operator behind patient
- Fingers over median umbilical ligament
- Draw ligament superiorly until you palpate release

Indications to Tx Uterus, Tubes and Ovaries

- General listening takes you there
- Menstrual irregularity
- PMS
- Hemorrhoids
- Pelvic Pain
- Post pelvic surgery
- Low back pain
- Dyspareunia
- Prolapse/ptosis

In Conclusion

- Structural exam findings can help with diagnosis
 - Viscerosomatic reflexes & Chapman reflex points
- OMT is a safe and effective treatment modality to help patients recover from a variety of conditions
 - Pregnancy/postpartum/post op/dysmenorrhea, pelvic pain, urinary incontinence
- Safe alternative for pain
 - Post op reduces Rx use, decrease need for opiates, reduce need for NSAIDS that may cause GERD/gastritis
 - Reduce amount of drugs to control medical conditions
 - GERD, Pain meds, migraines...
