Acknowledgements

- Laura Dreyer, DO
- Rachel Nixon, DO
- Molly DiMatteo, DO
Goals/Objectives

- **Review** evidence based **benefits** of OMT in pregnancy

- **Understand** the **implications** of pregnancy on the somatic system

- **Recognize** common somatic **dysfunctions** seen in pregnant women

- **Discuss and demonstrate** OMT **techniques** that can be used to treat the somatic dysfunctions associated with pregnancy
Why use OMT?

- Pain reduction during pregnancy and labor
- Eliminate somatic dysfunction and maintain proper structure
- Limit medication use
- Improve quality of life
- Return to homeostasis
- Decrease pregnancy and labor complications
- Patient satisfaction!!!
Background

- Been using OMT on pregnant patients since early 20th century

- 1911 - Whiting - 223 pregnant women
  - Prenatal OMT decreased labor time by over 50% for pregnancies

- 1918 - Hart - 100 pregnant women
  - Of 100 deliveries all receiving OMT - only 3 required use of forceps compared to 6-18% of women not receiving OMT, in addition to similar decreases in length of labor
1982 - Guthrie & Martin - 500 women

**Decreased** need for **analgesia** during labor in women receiving OMT

1992 - Gitlin & Wolf

**Stimulated** uterine **contractions** through craniosacral manipulation
Recent research

- 2003 - King et al
  - Retrospective case control study - **decreased** probability of **complications** in treated women

- 2010 - Licciardone et al - 144 patients
  - Randomized, placebo controlled trial revealed **decreased back pain** in OMT group
Structural changes

- Increased lumbar lordosis
- Increased thoracic kyphosis
- Increased pelvic tilt
- Elevation of diaphragm
Physiologic changes

- Progesterone: smooth muscle relaxation, fluid retention -> nausea/vomiting/reflux
- Relaxin: soft tissue remodeling, SI laxity, pubic symphysis mobility -> pelvic pain/ back pain
- Increased cardiac output, decreased total lung capacity -> shortness of breath
- Sodium retention, water retention, increased blood volume -> edema, congestion, CTS
- Pseudo-hypercoagulable state
Osteopathic Tenets

- The body is a unit in which structure, function, mind and spirit are mutually and reciprocally interdependent
- Body has its own self protecting, regulating and healing mechanisms
- Structure and function are reciprocally related
- Treatment considers the preceding three principles
Viscerosomatics

- **T10-L2**: Stimulate uterine contractions/cervical dilation → dilation induction of labor

- Inhibit uterine contractions/cervical dilation → reduced preterm labor

- **Atlas - C3**: treat overstimulation of the vagus on the heart

- **Thoracic spine/rib** raising: regulate SNS - improve CVS

- **Sacral treatment (S2-S4)**: treat pelvic splanchnic nerves → treat GI complaints, pelvic pain
Treatment Goals

- Correct articular and muscular dysfunction
- Restore autonomic balance
- Release fascial diaphragms
- Restore lymphatic and venous flow
Contraindications

- Undiagnosed bleeding
- Ruptured membranes
- Avoid CV4, HVLA, lymphatic pumps
Common Osteopathic findings in pregnancy

<table>
<thead>
<tr>
<th>Location</th>
<th>Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head/Occiput</td>
<td>Nasal/Sinus Congestion, TART (OA)</td>
</tr>
<tr>
<td>Neck</td>
<td>TART (C2-5)</td>
</tr>
<tr>
<td>Thoracics</td>
<td>TART (especially T1-6)</td>
</tr>
<tr>
<td>Lumbar</td>
<td>TART</td>
</tr>
<tr>
<td>Sacrum</td>
<td>B/L sacral flexion</td>
</tr>
<tr>
<td>Pelvis</td>
<td>Pelvic Diaphragm Restriction</td>
</tr>
<tr>
<td>Upper Extremity</td>
<td>Carpal Tunnel Syndrome</td>
</tr>
<tr>
<td>Lower Extremity</td>
<td>Edema</td>
</tr>
<tr>
<td>Ribs</td>
<td>TART, Inhalation of 11th and 12th ribs</td>
</tr>
<tr>
<td>Abdomen</td>
<td>Abd Diaphragm Restriction</td>
</tr>
<tr>
<td>Lymphatics</td>
<td>Edema in extremities may be present</td>
</tr>
</tbody>
</table>
Treatment considerations

- Treat in whatever position is most comfortable
- Avoid supine position for prolonged periods
- Avoid prone position!
- Utilize indirect techniques as much as possible
TREATMENTS
Purpose: reset parasympathetic nervous system
Cervical Soft Tissue

Purpose:
- Decrease muscle tension
- Increase ROM
- Promote relaxation
- Treat cervical viscerosomatic reflexes
Cervical Counterstrain

- Purpose:
  - Decrease tension of associated cervical muscles
Thoracic Inlet Release

Purpose:

- Release facial tension
- Decreases pain
- Improve lymphatic drainage
Purpose:

- Decrease nasal congestion
- Release tension
- Improve drainage
Sinus effleurage

- Purpose:
  - Decrease lymphatic congestion of sinuses
Rib raising

- Purpose:
  - Increase rib motion
  - Reset sympathetic nervous system
Abdominal Diaphragm Release

- **Purpose:**
  - Increase diaphragm mobility
  - Decrease SOB
Carpal Tunnel Release

Purpose:

- Increase lymphatic drainage
- Decrease pain
Ganglion Release

- Purpose:
  - Decrease sympathetic tone to stomach through direct inhibition
Chapman Points: Stomach

- Reset viscero-somatic reflex of stomach
Chapman points: IT band

- Purpose: Reset viscerosomatic reflex of the colon
Thoracic Springing

Purpose:
- Articulate thoracic spine
- Improve motion
- Decrease tension
- Improve SOB
Soft tissue spine

- Purpose:
  - Decrease tension
  - Increase laxity of muscles

Kimberly Manual
Modified Lumbar Roll

- Purpose:
  - Stretch lumbar spine
  - Improve ROM
  - Decrease pain
‘OB Roll’

- Purpose:
- Articulate & stretch lumbar/thoracic spine
Still technique

- Purpose: Articulate sacrum/hip/innominate
- Decrease tension & pain
- Improve motion
Pelvic Diaphragm

- **Purpose:**
  - Improves motion of the pelvic diaphragm
  - Increased venous and lymphatic drainage from pelvis
Direct Sacral Inhibition

Purpose:

- Increase mobility of sacrum, decrease pain
- Treat pelvic viscerosomatic reflex
Home exercises

- Lumbar Roll
- Cat/Cow
- Shoulder squares
OMT in pregnancy has been shown to decrease labor time, assisted delivery incidence, as well as decrease pain and complications associated with pregnancy.

Common regions to look for somatic dysfunctions in pregnancy are thoracic, lumbar, pelvic, and breathing apparatus.

There are a number of techniques identified which can assist in the management of the pregnant patient.
Questions
Laura Dreyer, D.O. OMM in pregnancy. 2009


Hollis H. King, D.O. et al. Osteopathic Manipulative Treatment in Prenatal Care: A Retrospective Case Control Design Study. JAOA • Vol 103 • No 12 • December 2003


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