UNIT 8: OSTEOPATHY AND WOMEN’S HEALTH CARE

Educational Topic 62: Osteopathic Diagnosis and Management Plan

Intended Learning Outcomes:
The student should be able to:
• Include somatic dysfunction as a part of the differential diagnosis when appropriate
• Incorporate OMT approaches as indicated
• Explain the indications and contraindications to osteopathic manipulative medicine (OMM) in pregnancy and women’s care

TEACHING CASE

CASE: A 28 year old female G3P3 postpartum day 2 following a spontaneous vaginal delivery at 39 3/7 weeks gestation complicated by a shoulder dystocia is now complaining of low back pain, pubic pain and difficulty with ambulation. The patient has had moderate lochia, normal bladder function, and good initiation of breast feeding. Her past obstetrical history is significant for two prior vaginal deliveries. The first two deliveries were uncomplicated and the largest neonate was 7lbs, 7 oz. This pregnancy was complicated by gestational diabetes mellitus and a 9lb, 2oz neonate. The remainder of her history is unremarkable. The physical exam reveals a nontender fundus 2cm below the umbilicus.

Structural examination reveals that the pubic symphysis was tender to palpation. She had pain when lifting one leg at a time or abducting her legs. She also has pain while walking or turning over in bed. She was experiencing significant right lower quadrant pain consistent with the round ligament area. Both lower extremities had limited range of motion but no edema, and negative Homan’s sign. Positive tissue tender points were noted over the sacroiliac joint and the pubic symphysis. No tissue tender points were found over either greater trochanter. The right iliac crest was more superior than the left. The right ASIS was inferior and the right PSIS superior-anterior with rotation of right innominate. The right pubic bone ramus was more superior than left. There was leg length discrepancy and the left side had positive ASIS compression with restricted range of motion, out-flaring of the right lower extremity, and distinct tenderness at the right sacroiliac joint.

Competency-Based Discussions & Key Teaching Points:
Competencies addressed:
• Patient Care
• Medical Knowledge
• Interpersonal and Communication Skills
• Systems-based Practice

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1. What is somatic dysfunction and what is its relevance in osteopathic medicine?

Somatic dysfunction is a uniquely osteopathic term to identify impaired or altered function of related components of the somatic (body framework) system to include skeletal, articular, myofascial structures, and all related vascular, lymphatic and neural elements. It is characterized by tissue texture changes, asymmetry of position, restriction of motion and tenderness (TART) and is an indication for treatment with Osteopathic Manipulative Techniques. The presence of somatic dysfunction is diagnosed by palpating the spine and surrounding related soft tissues to identify certain soft tissue changes and movement restrictions. Common risk factors for somatic dysfunction in women include: multiparity, increased BMI, macrosomic neonate pre-pregnancy joint problems, and prior trauma (including obstetric or gynecologic).

2. What should you consider when doing a structural examination?

It is important to understand the relevant interrelationship of anatomical structure and function of the pelvic floor.

- The anatomical structural components include:
  - Muscles – Levator Ani, deep genital muscles and sphincter muscles
  - Contents – Visceral pelvic fascia and pelvic diaphragm
  - Autonomic innervations of pelvic organs (ovaries, fallopian tubes, uterus, cervix and vagina) are: Sympathetic – T9-L2, Parasympathetic – S2-S4

- The main functions of the pelvic floor:
  - To support the pelvic organs (pregnant and non-pregnant)
  - To act as a sphincter for perineal openings
  - To maintain sexual function

- Normal pubic motion is:
  - Caliper motion (with flexion-extension of sacrum)
  - Torsional motion (with swing-tilt of swing leg)
  - Supero-inferior translatory motion (with one-legged weight-bearing)

3. What are the components of an osteopathic structural examination?

Osteopathic examination includes both the visual and palpatory discernment of somatic tissues. They include the evaluation of asymmetry, tissue texture changes, structural alterations, range of motion, TART and viscerosomatic relationships noted.

4. What are the viscerosomatic and somatovisceral reflexes?

Viscerosomatic Reflexes (VSR) - Segmentally predictable dermatomal and myotomal responses to inflammatory visceral pathology.

<table>
<thead>
<tr>
<th>Organ</th>
<th>Sympathetic</th>
<th>Parasympathetic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fallopian Tubes</td>
<td>T10-L2, ipsilateral</td>
<td>S2-S4 + CN X (Lateral Half)</td>
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Somatovisceral Reflex - Primary spinal somatic dysfunction results in facilitation that can affect segmentally related organs. Example: Chronic sacral somatic dysfunction secondary to inequality of leg length may be a prime factor causing pathophysiological changes affecting pelvic organs.

- Sympathetic activity results in uterine contraction
- Parasympathetic activity results in uterine relaxation

Key Teaching Point:
It is important to understand normal structure and function of the body before one can identify the abnormalities. Somatic dysfunction can be evaluated during pregnancy, as the maternal body adapts to the structural, hormonal and physiological changes. Somatic dysfunction can also be evaluated during the puerperium, after completion of the birthing process with transition into postpartum and lactation phase.

The female body has a unique capacity for structural alteration throughout the reproductive life. The physician’s development of refined palpatory skills is critical for accurate osteopathic structural examination and diagnosis of these maternal alterations and possible somatic dysfunction that can occur.

5. How does the structural examination assist in determining the differential diagnosis?

Before a treatment plan can be determined, a differential diagnosis must be determined. The diagnostic assessment of the patient begins from the focal point of her chief complaint. Focusing on the patient’s condition and past history allows for the prioritization of the physical examination and determination of which osteopathic treatment is engaged to affect improvement in the presenting condition.

- Examples of somatic dysfunction in the differential diagnosis of our patient are: pubic symphysis dysfunction, spasms of psoas major, sacropelvic dysfunction, torsion of the pelvis and sacroiliac articular dysfunction.

6. What techniques can be used to treat the specific structural findings that would help this patient’s postpartum pelvic and pubic pain with structural limitations?

OMT is the definitive treatment of somatic dysfunction. Somatic dysfunction must be considered when diagnosing and treating pain in women’s care. Treatment guidelines can be utilized to focus on the tender points of the muscular structures including the coccygeus, levator ani, obturator internus, adductor magnus, and piriformis. Osteopathic techniques can be very beneficial in treating the various somatic dysfunction found and restoring the patient to balance and relief of her pain. Pelvic dynamics in pregnancy and postpartum can be treated with several techniques:

<table>
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<tr>
<th>External Genitalia</th>
<th>T12, bilateral</th>
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</thead>
<tbody>
<tr>
<td>Ovaries</td>
<td>T10-T11, ipsilateral</td>
</tr>
<tr>
<td>Uterus</td>
<td>T9-L2, bilateral, S2-S4</td>
</tr>
</tbody>
</table>
Once a diagnosis is determined, utilization of a selection of osteopathic manipulative treatments of the somatic dysfunction will improve comfort, enhance homeostasis and increase the quality of life for the female patient.

7. What are the indications and contraindications of OMT in pregnancy and women’s care?

Treatment of somatic dysfunction and the physiologic, postural changes in pregnancy and postpartum are the indications for osteopathic manipulative treatment. Some of the benefits of OMT are:

- Decreased pain perception
- Improved mobility
- Decreased sick days by patients.
- Increased productivity
- Decreased narcotic use and hospitalization
- Restored wellbeing

Maternal and fetal health should always be evaluated before addressing somatic dysfunction. The selection of a particular technique used has always been up to the physician and their achieved skills. Some osteopathic physicians prefer to select soft tissue and balancing techniques in pregnant women primarily due to the hormonal milieu and increased laxity of the skeletal structure. Also, the pregnant patient, with the enlarged uterus, presents an interesting challenge with positioning the patient prone or supine without compromising the fetus. Therefore selection of both proper positioning of the patient and the particular osteopathic techniques to be utilized should be determined to successfully treat the underlying somatic dysfunction.

Due to the potential requirement for aggressive medical or surgical treatment, the below conditions represent contraindications to OMT in pregnant women with pain:

- Undiagnosed vaginal bleeding
- Ectopic pregnancy
- Preterm labor
- Placental abruption or placenta previa
- Untreated deep vein thrombosis
- Unstable maternal or fetal vital signs or status

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Key Teaching Points

The core of developing a management plan in the osteopathic approach is to not think of a set protocol to be followed but rather to focus on the specific region of the body and how it impacts the patient’s vitality. Pelvic floor and pubic symphysis dysfunction can be caused by pregnancy, labor trauma, weakness of muscular structures, previous sexual abuse, and musculoskeletal structural abnormalities.

A comprehensive approach to the patient’s condition should take into account accurate diagnosis, knowledge of the basic osteopathic principles, and adaptations to meet the particular needs of the patient and skills of the physician. The use of palpatory skills and selection of proper osteopathic manipulative treatments will restore health and well-being in the female patient.

Osteopathic Manipulative Medicine can be considered safe, effective and timely/cost saving, access to care. It can prevent the need for extensive use of medical therapies and surgical intervention.

REFERENCES

American Academy of Osteopathy Beal M, The Principles of Palpatory Diagnosis and Manipulative Techniques


