

Facilitator's Guide

Case Presentation

Chief Complain: Painful menstrual bleeding and abdominal fullness

History: Patient is a 39 year old female who complains of a dull cramping with her menses each month. Her symptoms have occurred since she began her period at age 13; however, they have been progressively getting worse since age 28 when she gave birth to her daughter. She admits her flow seems heavier, though she is not using more pads per day. She does admit that she now passes clots during the 2nd and 3rd days of her period, which she had not done previous to childbirth. Her menses typically lasts five days and comes regularly at 28 day intervals. She has pelvic pain throughout her menses. Every three to four months, she will miss a day of work due to the severe cramping pain. She notes that several days prior to her period, she has a feeling of fullness in her lower abdomen and is "achy uncomfortable". She has had one child, who was delivered vaginally at 39 weeks gestation without complications. She admits to having gonorrhea when she was 22 years old, which was treated with medication without complications that she knew of. She has had no other STDs. She is currently in a monogamous relationship with her husband of 7 years. When asked about birth control pills, she states that she used them in the past and that her cramping did decrease, but was still present. She has not used birth control since the birth of her first child, as she would like to have more children. She explained that she has not sought fertility treatment due to her strong faith and her belief that if God wants her to have more children, He will bless her with them.

Meds: Prednisone, 5 mg PO daily, azathioprine (Imuran), 75 mg PO daily, interferon beta-1A (Avonex), 30 mcg (6 million units) IM q wk., amlodipine + atorvastatin (Caduet) 5/20 PO daily, daily multivitamin, vitamin B complex, selenium

Past Medical History: Obesity, Metabolic Syndrome, Multiple Sclerosis (dx 5 years ago), Auto-immune Hepatitis (dx 2 years ago)

Past Surgical History: C-section, right knee arthroscopy for a plica, extraction of wisdom teeth, breast lump biopsy, benign (3 years ago), IUD placement (15 years ago), IUD removal (10 years ago)

Review of Systems:

Constitutional: pt admits to significant weight gain in the years after the birth of her daughter

Respiratory: pt denies asthma, bronchitis, dyspnea

Cardiovascular: pt admits to hypertension, dyslipidemia, in conjunction with her metabolic syndrome, denies chest pain/discomfort, palpitations, and murmurs

GI: pt denies gastritis, constipation, diarrhea, heartburn, nausea, vomiting

Musculoskeletal: pt denies joint pain and arthritis, admits to muscle pain and weakness associated with her multiple sclerosis,

Neurologic: admits to multiple sclerosis, diagnosed 5 years ago, denies paresthesias, seizures, loss of sensation, loss of consciousness

Eyes: admits to corrective lenses, admits to some ptosis and diplopia on days her multiple sclerosis is bad, denies changes in vision, blurry vision, seeing lights, dry eyes

ENT: denies tinnitus, pressure in ears, changes in hearing, denies rhinitis or allergies, denies hoarseness, sores in the throat

Psychiatric: denies bipolar disorder, obsessive compulsive disorder, schizophrenia, anxiety, nervousness. Admits to getting the "blues" when her multiple sclerosis flares, but otherwise states that she is generally healthy and content.

Blood/Lymph/Endocrine: admits to hypercoagulable state associated with her metabolic syndrome, denies bleeding diathesis, anemia, lymphoma, lymphadenopathy. Admits to metabolic syndrome and proinflammatory state (elevated CRP)

Skin: denies changes in texture, moisture, new skin tags, changes in freckles, appearances of new moles

GU: admits to painful menstruation, passing clots, denies changes in bladder habits, dysuria, polyuria, vaginal discharge or recent STD or symptoms of STDs.

Physical Exam:

Vital signs: Ht: 63", Wt. 190, BMI 35, HR 70, BP 135/85, RR 18

General: 39-year-old Caucasian female in no acute distress. Good hygiene, cooperative, and pleasant demeanor. Body habitus is overweight.

HEENT:

Head - Normal cephalic, atraumatic. No patchy or thinning hair. No lacerations, bruises, or other discoloration;

Eyes - red reflex intact, 2 cotton wool spots noted on the right retina in the right upper quadrant, no papilledema, PERRLA, EOMI;

Ears - are patent, tympanic membranes intact without erythema or fluid;

Nose/Throat - has mild septal deviation to the left, mucosa is moist and pink, good oral hygiene, no erythema, post nasal drip, or sores present in the throat

Cardio/Pulm: : heart rate and rhythm regular without murmurs, gallops, clicks, or rubs, no palpable thrills, no carotid bruits auscultated

Abd: abdomen obese, non-tender, no masses palpated, bowel sounds present X 4 quadrants, no masses or polyps palpated on rectal exam, Hemoccult negative

Lower Extremity: gait is normal, upper extremity strength 5/5 bilaterally, lower extremity strength 3/5 on the right, 5/5 on the left, anterior and posterior drawer, varus and valgus stress negative bilaterally at the knee, McMurray's negative on the left, McMurray's on the right elicits a small click on the medial meniscus, no tenderness or pain on provocative maneuvers or along the joint line

Neuro: CN II-XII intact, sensation intact to fine touch, temperature and vibration, sensation to vibration diminished on the right, sensation intact on the left. DTRs: C 5, 6, 7 2/4 bilaterally, L4, L5, 2/4 bilaterally, S1 2/4 on the left, 4/4 on the right

Osteopathic Structural Exam: Pt examined in the standing, seated, and supine positions. Gait was normal. Standing flexion test was positive on the left.

- Rotated lumbar lordosis was noted. Right shoulder was held in an elevated position, as compared to the left shoulder.
- Head had a right torsion strain pattern. The occipital condyles were compressed. The OA was extended, rotated right, sidebent left. AA rotated right.
- C3 was flexed, rotated and sidebent right. C4 was extended, rotated and sidebent left.
- T1-3 were neutral with flexion preference, rotated right, sidebent left. T4 was extended, rotated and sidebent left. There was marked paraspinal muscle tension at the thoracolumbar junction, extending to the lower thoracic and upper lumbar musculature.

- T10-L2 were neutral, rotated left, sidebent right. L3 was flexed, rotated and sidebent right.
- The sacrum showed left rotation on a left axis. ASIS compression test lateralized to the left and revealed a left superior innominate shear. Pubic compression, as well as tenderness in the suprapubic area was noted.
- Iliopsoas and hamstring muscles were hypertonic with marked reduction in flexibility. There was a mild preference for internal rotation with posterolateral glide at the right tibia.
- The right fibular head had a mild posteromedial glide preference. The right and left navicular bones were internally rotated

Assessment:

Be prepared to discuss this at the OMM session. Indicate the primary Medical Diagnosis based upon the international Classification of Diseases (ICD-9). This justifies the Evaluation and Management (E&M) coding portion of the visit. List all secondary comorbid and complicating factor diagnoses, in order of importance. Itemize somatic dysfunction diagnosis for each body region treated using OMT. This justifies reimbursement for OMT. Be prepared to discuss management of typical comorbid and complicating factors associated with the patient's diagnosis and how management and treatment would be modified with each comorbid and complicating factor.

Section II: Mini-Lecture/Discussion (approximate time 20–30 minutes)

Discussion Questions

Teaching Points

<p>1. Propose an appropriate differential diagnosis / assessment</p>	<p>Differential Diagnoses: Primary dysmenorrhea</p> <ol style="list-style-type: none"> 2. Adenomyosis 3. Endometriosis 4. Pelvic Inflammatory disease 5. Fibroids 6. Uterine polyps 7. Uterine carcinoma 8. Ovarian cancer 9. Pregnancy 10. Ectopic pregnancy <p>PCOS</p>
<p>2. How do you explain the current structural findings in the context of this case?</p> <ul style="list-style-type: none"> • Are any relevant structural findings missing? • What would you do differently? Why? 	<ul style="list-style-type: none"> • Evaluate for pelvic tenderpoints • Evaluate for Chapman's reflexes • Evaluate pelvic diaphragm • Mobility and motility testing of the uterus as detailed in Barral Visceral manipulation
<p>3. What pathophysiology & functional anatomy knowledge is pertinent for diagnosing/treating this patient</p>	<p>A. <u>Pathophysiology</u>—</p> <ul style="list-style-type: none"> • Physiology of the normal ovulatory menstrual cycle and knowledge of where it may be deranged and causing the patient's symptoms

	<ul style="list-style-type: none"> • Get a transvaginal U/S, or MRI in indeterminate cases, to diagnose adenomyosis (important to consider due to prior childbirth) • Understand ddx with respect to the patient's age • Implants may or may not be present and may or may not be palpable on exam in considering endometriosis • Consider any possible drug effects from patient's prescriptions • Consider evaluating the thyroid as a systemic cause of symptoms • Evaluate hormone levels of estrogen, progesterone, and androgen • <p>B. <u>Functional Anatomy-</u></p> <ul style="list-style-type: none"> • Pelvic bowl anatomy, such as uterus, ovaries, fallopian tubes, cardinal ligaments, round ligaments, uterosacral ligaments, pubovesical ligament, sagittal peritoneal fold, cervix, rectum, uterine arteries, ureters, etc. • Female reproductive system anatomy
<p>4. Which 1 or 2 of the aspects below has the greatest influence on the patient complaint?</p> <ul style="list-style-type: none"> • Pain • Fluid congestion • Hyper-sympathetic influence • Parasympathetic influence 	<ul style="list-style-type: none"> • Parasympathetic influence • Fluid congestion • Pain • Hyper-sympathetic influence <p>--Pain is affected by the patient's multiple sclerosis. --Sympathetic influence is affected by the patient's metabolic syndrome. --Treatment options may be affected by the patient's strong faith and what is allowed within her religious structure.</p>
<p>5. Devise an appropriate treatment plan based on musculoskeletal components involved in the patient complaint</p>	<p>Goals for osteopathic manipulative management—includes:</p> <ul style="list-style-type: none"> • Modify autonomic input • Treat somatic dysfunctions • Alleviate/reduce pain • Decrease congestion • Restore normal motion to visceral structures <p>The treatment plan could include:</p> <ul style="list-style-type: none"> • Cranial techniques • OA condylar decompression • HVLA to the cervical, thoracic, and lumbar spine. Alternatively, indirect techniques, muscle energy techniques, could be considered. • Muscle energy to sacrum and pelvis. • Articulatory techniques to the feet • Pelvic diaphragm release. • Pedal pump • Counterstrain to pelvic tenderpoints • Inhibition to Chapman's reflexes • Visceral manipulation of the uterus in order to release adhesions and effect a release • Exercise prescription

	Self-stretching and strengthening exercises to reduce lordosis and development of postural strain
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Section III: Workshop/Lab (approximate time 60–70 minutes)

1. Students/interns divide into groups at the tables.
2. At each table, discuss and practice the appropriate palpatory diagnosis for this patient.
11. Facilitator demonstrates the key treatment techniques.
 - HVLA to the cervical, thoracic, and lumbar spine. Alternatively, indirect techniques, muscle energy techniques
 - Cranial techniques
 - Muscle energy to sacrum and pelvis.
 - Articular techniques to the feet
 - Pelvic diaphragm release.
 - Pedal pump
 - Counterstrain to pelvic tenderpoints
 - Inhibition to Chapman’s reflexes
 - Visceral manipulation of the uterus in order to release adhesions and effect a release
4. Residents should practice the techniques on each other.
5. At each table, while the techniques are being practiced:
 - Identify and practice good body mechanics for the physician and patient in treatment.
 - Discuss the treatment plan.
 - Discuss what palpatory findings should change on the patient after OMM treatment.
6. Documentation

Demonstrate an appropriate documentation of this case including findings and treatment here...

Section IV: Final Wrap-up and Questions/Answers