

Facilitator's Guide

Section I: OMM Case Presentation. Prior to the next OMM session, Residents should read the case below and be prepared to discuss the questions in Section II.

Case Presentation

Chief Complaint: A 22 year old white female seen on surgical floor with constipation, four quadrant pain and low back pain since appendectomy 2 days ago.

Patient History: The patient underwent laparoscopic appendectomy 2 days ago with rupture, peritonitis. Has constipation (no stools for about 4-5 days). She used to stool daily without effort. Her abdominal pain (7/10, sharp) and low back pain (4/10, dull, bilateral) are increasing, worsened with activity. Her back pain is paraspinal, "In the pit of my back," and worse when she sits. No radiation of pain. She had a Fleet's enema today per her surgeon's order. She complains of some shortness of breath, mild pain with inhalation; complains of pain at right shoulder blade.

Family History: Adopted, unknown

Social History: Single full time office manager. No children. Occasional EtOH. Denies tobacco, illicit drug use, no STD history, recent travel. Immunizations are up to date. She drinks 5-8 full glasses of water per day. Her diet is "regular". She has no exercise program.

Trauma History: None known

Allergies:

Lab Tests & Results:

Meds: Percocet 1 or 2 every 4 hours as needed. Ibuprofen PRN. Ciprofloxin 500 BID.

PMH: Had infection mononucleosis in college.

PSH: Appendectomy 2 days after rupture, peritonitis.

Review of Systems

Constitutional: She denies vomit, and blood in stools, incontinence, urinary symptoms, gynecologic symptoms, depression or anxiety, has mild dull headache since surgery.

Skin:

Blood/Lymph/ Endocrine:

ENT:

Eyes:

Cardiovascular:

Pulmonary:

GI:

GU:

Musculoskeletal:

Neurologic:

Psychiatric:

Physical Exam

Vitals: Temp. 100.5° F. BP 119/62, Resp. 20 shallow, P 88.
Ht 5'6" WT 220 BMI 35.5

General: Appears distressed, Well nourished, well groomed, A&O X3

Head: No ant or post lymphadenopathy. Thyroid not enlarged. PERLA.

Eyes:

ENT:

Chest Wall:

CV: Nml. Heart regular rate and rhythm without murmur.

Respiratory: Lungs mild rales right upper lung.

Diaphragm:

GI: 1 cm cicatrix (pink) at the umbilicus and RLQ overlying McBurney's point. Distended. Scant tympanic bowel sounds throughout. No Hepato-splenomegaly. Palpation of left upper and lower quadrants painful. Light palpation of area of cicatrix elicits a jump from the supine patient. No bruits.

GU:

Musculoskeletal: Lower Ext. - Mild edema, negative Homan's, Moses signs

Neurologic: CN II-XII intact. Muscle strength 5/5 B/L. Sensation is grossly intact. Coordination is intact. DTR 2/4 B/L upper and lower ext.

Lymphatic:

OMM Focused Structural Exam

Bilateral paraspinal muscles from L5 to T6 tense, warm, boggy and tender to palpate. Paraspinal muscles at T10-12 are especially firm, ropy, and tighter on the right. T3,4,5 tight paraspinal muscles. C3,4,5 R_RS_R. Paraspinal muscles sore. Right shoulder with minimal somatic dysfunction.

Supine patient reveals right iliac crest, right ASIS, and a right pubic symphysis – all superior. Palpation of abdominal wall fascia is tight, uncomfortable and resists motion around RLQ cicatrix. Rib cage with generalized ease of inhalation on the right. Individual ribs are non-tender and symmetrical. Thoracic inlet is springy and symmetrical bilaterally. C2 is prominent on the left in extension and resists translation to the left N S_R R_R. Atlanto-occipital joint with tenderness N S_R R_L.

Prone patient reveals a superior right PSIS and right pubic tuberosity. Palpation of the sacrum reveals a deep right sulcus with a caudal left inferior lateral angle.

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: Focus of the Case (approximate time 20–30 minutes)

Discussion Questions

Teaching Points

<p>1. Propose an appropriate differential diagnosis / assessment</p>	<p>Differential Diagnoses:</p> <ol style="list-style-type: none"> Differential diagnoses: S/P laparoscopic appendectomy, Colitis, UTI, Ovarian cyst, Trauma, Intra-abdominal abscess, muscle strain. Current treatment regime: Patient was treated with osteopathic manipulation as follows: ME to C3,4,5, paraspinal inhibition, rib raising, pedal pump, 5 minutes tid. Myofascial release for myofascial restrictions around RLQ cicatrix. Modifiable Risk Factors – Liquid diet – progressive as patient improves. Ensure daily fiber intake meets recommended daily allowance (25 grams/day).
<p>2. What is your final diagnosis?</p>	<p>Primary Diagnosis: Constipation, post operative ileus, peritonitis, atelectasis, S/P laparoscopic appendectomy</p> <p>Secondary Diagnosis: Low back pain, abdominal wall pain, shoulder pain.</p> <p>Somatic dysfunction related to diagnosis: Somatic dysfunctions involving the cervical, thoracic, and lumbar spines, the sacrum, and innominates, and fascia.</p>
<p>3. 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? 	<p>OA, AA, C2 - Vagus Nerve dysfunction C3,4,5 compromised diaphragm function T3,4,5 – Viscerosomatic from possible upper lung atelectasis lung fields T, upper lumbar-lower thoracic – Viscerosomatic from abdominal contents, ileus, surgical site. Innominate- Right upslip secondary to right sided abdominal wall soft tissue restrictions. L5 - Compensatory to innominates Sacrum – Compensatory to innominates Myofascial – Reactive, post inflammation and adhesion, peritonitis Shoulder pain due to irritated diaphragm that reflexly affects somatic muscles with C3,4,5 innervation</p>

<p>4. What pathophysiology & functional anatomy knowledge is pertinent for diagnosing/treating this patient</p> <p>4. continued</p>	<p>A. Pathophysiology— The large bowel function is compromised. Consider: Thoracolumbar Sympathetic Chain with ?? effect somato somato visceral effects secondary to incision, inflamed muscle Cervicoaural Parasympathetic Chain. Lymphatic Diaphragm Restrictions, especially lower extremity Mechanical asymmetries</p> <p>B. Functional Anatomy-</p> <ol style="list-style-type: none"> 1) Cervical spine 2) Mobilize to affect diaphragm function OA, AA, C2 and the jugular foramen relative to the vagus nerve. 3) Thoracolumbar spine and costovertebral joints relative to the paraspinal sympathetic ganglia and viscerosomatic reflexes. 4) Rib cage relative to compliance and respiratory function; Rib cage function is compromised by shallow breathing, non-tender with symmetric excursion; Thoracoabdominal diaphragm 5) Dysfunction of lumbar spine affects lower diaphragm function 6) Lymphatics – flow through the cisterna chyle to the thoracic duct. Consider the effects from myofascial and diaphragmatic restrictions and intraabdominal edema. <ul style="list-style-type: none"> • Poor bowel function secondary to abdomen insufflation • Nociceptive effects of abscess contents from appendix and bowel flora • Rapid shallow breathing with pain leads to pulmonary complications
<p>5. What will be your highest yield regions?</p>	<p>Thoracic (6-12), Cervical (C3), Innominates, Lumbar (L1-2), Myofascial, and chest cage</p>
<p>6. How does previous trauma influence these regions?</p>	<p>None known. Previous illness and surgery may affect the myofascial relationship resulting in restrictions and lymphatic impedance. Viscerosomatic relationships may persist even though initial insult has been corrected. Chronic findings (cold, ropy, firm) may be perpetual secondary to persistent structural alignment.</p>
<p>7. 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 	<p>Hypersympathetic influence Thoracic and lumbar somatic and sympathetic innervations resulting in increased sympathetic tone to the large and small bowel. Cervical restrictions affect the travel of the Vagus Nerve resulting in potential for decreased parasympathetic tone to bowel and the proximal ½ of the colon. Hyper-responsive sensory nerves and dorsal root ganglia may create a hypersensitive dermatome and myotome. Decreased diaphragm function compromises the “somato” immune functions associated with proper diaphragm motion.</p>

8. What are the acute or chronic aspects?	<p>Acute: boggy, warm L5, tight paraspinal muscles thoracic and cervical</p> <p>Chronic: firm, ropy T10-12 with restricted ROM.</p> <p>Acute & Chronic:</p>
9. Devise an appropriate treatment plan based on musculoskeletal components involved in the patient complaint	<p>Goals for OMM Management:</p> <ul style="list-style-type: none"> • Normalize autonomic tone—Treat asymmetries within the cervicosacral and thoracolumbar chains. • Improve thoracic and lumbar lymphatic flow: Correct restrictions at the pelvic and thoracic diaphragms. • Increase Parasympathetic tone: sacral rocking, cervical correction. • Improve cervical dysfunction for better diaphragm function <p>The treatment plan could include:</p> <ol style="list-style-type: none"> 1. Muscle energy, Still techniques, or Strain/Counterstrain to Cervical, Thoracic, Lumbar regions. 2. When patient improves, prone leg tug or sacral rocking, Pubic Symphyseal Gapping, and Ischial Tuberosity Spread for superior innominate shear. 3. Myofascial release to skin and fascia around RLQ cicatrix.. 4. Sacral Rocking to increase sacral parasympathetics. <p>Transmitted vibration, rib raising or pedal pumps to stimulate cisterna chyle and thoracic duct.</p>
10. How soon would you see the patient for OMM follow-up?	
11. What are the outpatient, inpatient, and emergency room considerations?	Can be relatively aggressive in treating this young, otherwise healthy outpatient. Less aggressive in the acute inpatient setting
12. How are you going to talk to your patient about their complaint and your treatment?	Explain viscerosomatic relationships. Detail structure and function correlations. Discuss surgical healing difficulties and possibility of forming a hyper sensory response. Explain the goals of treatment and possible endpoints of treatment
13. How will you communicate your findings, diagnosis, and rationale for OMM treatment to your preceptor?	<p>Note the primary diagnosis.</p> <p>Describe the areas of somatic dysfunction and discuss possible deleterious effects on autonomics, lymphatics, and bowel function.</p> <ul style="list-style-type: none"> • Present OMT techniques that will positively affect the patient's chief complaints of constipation, superficial and structural pains.

<p>14. What coding and billing information for evaluation and management and procedural services will you generate?</p> <p>(See Procedure Services Chart below)</p>	<ul style="list-style-type: none"> - The diagnosis of somatic dysfunction in the assessment justifies the use of OMT - Somatic dysfunction diagnosis must be present in order to bill for the OMT that was performed. OMT is considered a procedure. - Documentation must reflect that the decision to perform OMT was made on that visit based on the physical findings and OMT was used for somatic dysfunction(s) identified - The procedure (OMT) and the E/M visit may both be billed with the same diagnosis code and during the same encounter if the decision to perform the procedure was made at the time of the encounter. Modifier -25 is used with the E/M code <p><u>You must have a non-somatic dysfunction diagnosis included for this case</u></p>
<p>15. How would you record your encounter and OMT on your patient care logs?</p>	<ul style="list-style-type: none"> - Enter patient data, diagnosis date, and any special comments.

Procedure Services: Osteopathic Manipulative Treatment					
		Code		Description	
		98925		Manipulation, 1-2 areas	
		98926		Manipulation, 3-4 areas	
		98927		Manipulation, 5-6 areas	
		98928		Manipulation, 7-8 areas	
		98929		Manipulation, 9-10 areas	
CPT Diagnostic Codes: Rank in order of Importance					
Diagnosis			Somatic Dysfunction		
Code	Description		Code	Description	
			739.0	Head	
			739.1	Cervical	
			739.2	Thoracic	
			739.3	Lumbar	
			739.4	Sacrum/Sacroiliac	
			739.5	Hip/Pelvis	
			739.6	Lower Extremity	
			739.7	Upper Extremity	
			739.8	Rib	
			739.9	Abdomen	

Section III: Workshop/Lab (approximate time 60 minutes)

1. Divide into groups at the tables.
2. At each table, discuss and practice the appropriate palpatory diagnosis for this patient.
3. Facilitator demonstrates the key treatment techniques.
 - Muscle energy, Still techniques, or Strain/Counterstrain to Cervical, Thoracic, Lumbar regions.
 - When patient improves, prone leg tug or sacral rocking, Pubic Symphyseal Gapping, and Ischial Tuberosity Spread for superior innominate shear.
 - Myofascial release to skin and fascia around RLQ cicatrix..
 - Sacral Rocking to increase sacral parasympathetics.
 - Transmitted vibration, rib raising or pedal pumps to stimulate cisterna chyle and thoracic duct.
4. 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**

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

Section IV: Final Wrap-up and Questions/Answers

