

Facilitator's Guide

Case Presentation

Chief Complaint: Abdominal pain and constipation

History: A 28-year-old white male presents to the Emergency Department and then admitted to the Progressive Care Unit with abdominal pain. Symptoms worsened two days prior to presentation. The abdominal pain is mostly diffuse, but seems to be more intense in the right lower quadrant. The pain is rated 8 on a scale of 10. He has had associated nausea, vomiting, diarrhea, and shortness of breath. The patient has had this type of pain before chronically, but never this severe. Also complains of dull upper lumbar pain.

Meds: None

Past Medical History: Depression and anxiety, requiring medication in the past. Cervical spine fracture in 1998, with associated Phrenic nerve damage and right hemi-diaphragm paralysis.

Past Surgical History: Patch graft on aorta following motor vehicle collision trauma in 1999.

Review of Systems: Weakness, fatigue, Dyspnea with exertion, recent melena X2 with bright red blood on stool, anorexia, abdominal pain, nausea, vomiting, diarrhea, knee pain, history of anxiety and depression.

Physical Exam:

Vital signs: T 98.6 R 20 BP 108/70 P 90 Wt 200 lbs.

General: 28-year-old male appearing appropriate for stated age, in mild distress, and fatigued. Pallor is present.

HEENT: Head is normocephalic, no masses or lacerations noted. EOMI. PERRLA. TMs clear bilaterally. Nasal mucous membrane is moist and pink. Teeth present in good repair.

Cardio/Pulm: RRR without murmur, gallops, or rubs. The chest is asymmetrical. Lungs CTA bilaterally. No wheezing. Respirations are slightly labored, but regular. Rate is rhythmical without the use of accessory muscles. Abdominal diaphragmatic excursion is markedly reduced on the right.

Abd: Abdomen is flat. Bowel sounds present x 4. Diffuse tenderness to palpation with greatest tenderness present in the right lower quadrant. No masses, organomegaly, or free fluid noted. Murphy's sign is absent. Lloyd's sign negative. No tenderness to palpation over McBurney's point.

OMM Focused Structural Exam

- Acute tissue texture changes consisting of hot erythematous skin, muscle spasm, and edematous tissues are present in the cervical, thoracic, lumbar, and sacral regions.
- C3-3 ESrRr with marked restriction in motion.
- OA FRISr
- T10-12 NSrRI. L1 FSIRI. L2-4 NSrRI.
- Sacrum right unilateral sacral flexion. Right posteriorly rotated innominate.
- Tissue texture changes at the superior and inferior mesenteric ganglia area.
- The root of the mesentery and the mesentery to the ascending colon is tight.
- Chapman's points present anterior iliotibial band R>L and intercostal spaces 9 and 10 bilaterally

Rectum: Sphincter tone is good. No fistulas, hemorrhoids, masses, or areas of tenderness noted. The prostate is firm and not enlarged. Hemocult is positive

Musculoskeletal: Muscle strength 5/5 bilaterally in all extremities.

Neuro:. Alert and oriented x3. No sensory deficits. CN II-XII grossly intact. DTR +2/4 bilaterally in all extremities

Lymphatic:

- Thoracic inlet rotated and sidebent right and flexed.
- Abdominal hemi-diaphragm restricted bilaterally, with right rotation preference. Right hemi-diaphragm has significantly less motion than the left.

Osteopathic Structural Exam:

- Acute tissue texture changes consisting of hot erythematous skin, muscle spasm, and edematous tissues are present in the cervical, thoracic, lumbar, and sacral regions.
- C3-3 ESrRr with marked restriction in motion.
- OA FRISr
- T10-12 NSrRI. L1 FSIRI. L2-4 NSrRI.
- Sacrum right unilateral sacral flexion. Right posteriorly rotated innominate.
- Tissue texture changes at the superior and inferior mesenteric ganglia area.
- The root of the mesentery and the mesentery to the ascending colon is tight.
- Chapman's points present anterior iliotibial band R>L and intercostal spaces 9 and 10 bilaterally

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, and primary diagnosis</p>	<p>Differential Diagnoses:</p> <ul style="list-style-type: none"> • Crohn's Colitis • Ulcerative Colitis • Diverticulitis • Acute Appendicitis • Infectious Gastroenteritis (Tuberculosis, <i>Giardia lamblia</i>, <i>Entamoeba histolytica</i>, <i>Salmonella</i>, <i>Campylobacter</i>, <i>Yersinia</i>, <i>Clostridium difficile</i>)
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<p>1. continued ...</p>	<ul style="list-style-type: none"> • Irritable Bowel Syndrome • Lactose intolerance • Adenocarcinoma of the colon • Mesenteric adenitis • Lower lobe pneumonia • Urinary Tract Infection Differential diagnoses <p>Primary Diagnosis: <i>Confirmed after bowel biopsy- Crohn's Disease</i></p> <p>Somatic dysfunction related to diagnosis: Abdomen, Thoracic, Lumbar, Sacrum, Pelvis, Cervical</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"> • Most findings are potentially participants in viscerosomatic or somatovisceral reflexes. • Viscero-somatic: referring back to the lower thoracics and upper lumbar; vagus and sacral splanchnics • Postural strain could possibly contribute to the clinical scenario. • Compensations from the 1998 MVA and from the hemidiaphragm paralysis – potential affect on lymphatic drainage
<p>3. What pathophysiology & functional anatomy knowledge is pertinent for diagnosing/treating this patient?</p>	<p>A. <u>Pathophysiology</u>— Crohn's disease is currently considered to be idiopathic, but considered multifactorial in origin including:</p> <ol style="list-style-type: none"> 1. Exaggerated immune response, T cell activation, Crohn's disease is specifically linked to Th1 type immune response (cell mediated immune response), increased cytokines and up-regulation of macrophages [Lymphatic clearing afforded by OMT and appropriate home exercises could assist this.] 2. Defects in epithelial barrier function 3. Genetic susceptibility 4. Environmental trigger—especially microbial flora [increased sympathetic tone & lymph stasis=> relative hypoxia=> promote microbial flora] 5. Stress related to finances, lack of insurance, young child, and pregnant wife may contribute to changes in autonomic function. <p>B. <u>Functional Anatomy</u>- Viscerosomatic and somatovisceral reflexes. Co-morbid factors including past cervical spine fracture, phrenic nerve damage, and past surgical interventions might augment or mask somatic dysfunction findings traditionally found with GI dysfunction.</p>

<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 	<ul style="list-style-type: none"> • Sympathetic influence • Parasympathetic influence
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<ul style="list-style-type: none"> • Fluid congestion • Hyper-sympathetic influence • Parasympathetic influence 	
<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"> • Normalize sympathetic/parasympathetic tone • Improve lymphatic drainage of congested tissues • Address acute somatic dysfunction 1st, then underlying chronic somatic dysfunction that may be setting up a subtler level of facilitation • Decrease Pain <p>The treatment plan could include:</p> <ul style="list-style-type: none"> • Sacral techniques (parasympathetic tone): HVLA, ME, sacral rocking • Thoracic techniques: HVLA, ME • Lumbar techniques: HVLA, ME • Suboccipital Release (parasympathetic up to splenic flexure) • Rib raising, especially lower half of rib cage • Mesenteric lift • Inferior mesenteric ganglion inhibition • Diaphragm release • Pelvic diaphragm release • Psoas release (Counterstrain & indirect fascial release for acute; muscle energy for chronic aspects) • Lymphatic pump technique: Cysterna chili & mesenteries

Procedure Services: Osteopathic Manipulative Treatment							
Code		Description					
	98925	Manipulation, 1-2 areas					
X or	98926	Manipulation, 3-4 areas					
X or	98927	Manipulation, 5-6 areas					
X	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		Code	Description
			739.0	Head		739.5	Hip/Pelvis
		X	739.1	Cervical	X	739.6	Lower Extremity
		X	739.2	Thoracic		739.7	Upper Extremity
		X	739.3	Lumbar	X	739.8	Rib
		X	739.4	Sacrum/Sacroiliac	X	739.9	Abdomen

Section III: Final Wrap-up and Questions/Answers