

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: Right hip pain.

Patient History: Patient is a 30-year-old Caucasian female paramedic was hit by a car, which was traveling approximately 40 miles per hour, when stepping out of the ambulance. She was struck on the right hip, rolled up on the hood of the car and then rolled to the pavement. She had multiple injuries of which the most significant was her right femoral head, which was anteriorly dislocated causing a non-displaced anterior acetabular fracture.

Three months after this incident, having been treated by orthopedics, pain management and physical therapy, she was referred for Osteopathic manipulation for pain management and somatic dysfunction. Previous inpatient osteopathic pain management employed trigger point injections of the right lateral gluteus musculature and of the sacroiliac joint using bupivacaine and triamcinolone, with improvement of her discomfort. Physical therapy had been able to increase the muscle strength in her right hip and lower extremity, but there had been no relief of her pain. She reports some difficulty with balance and spinning sensation to the right with rapid head motions. At the time of her outpatient osteopathic evaluation in the clinic, she had been ambulating with crutches for almost three months. She described her pain improving with occasional radiation to the anterior portion of the right pelvis and thigh. Pain radiated down her right leg with MRI negative for ruptured disc, compression fracture or foraminal stenosis. She has lost 22 pounds since the accident due to poor appetite and gastritis. She rated her pain as 9 to 10 out of 10.

Family History: Mother had 10 cm teratoma removed, age 27. Also, mild to moderate COPD secondary to cigarette smoking. Father smokes and has angina. Paternal grandfather – deceased lung cancer.

Social History: She is single, denies usage of alcohol, drugs and tobacco. She uses Ensure to boost protein/calorie intake. She has two children, ages 3 and 6

Allergies: Morphine and iodinated contrast.

Meds: Celebrex 400, Nexium 40 mg daily with occasional Roloids for heartburn.

PMH: Dysmenorrhea. Two children. No history of pelvic infections or STDs.

PSH: Diagnostic laparoscopy with normal ovaries, no endometriosis or adhesions.

Review of Systems

Constitutional: Complains of occasional headaches, occasional difficulty sleeping. Denies allergic reactions. Denies illness or infections.

ENT: Denies hearing changes.

Eyes: Denies vision changes.

Cardiovascular: Denies unusual symptoms, chest pain or irregular heart rhythm,

Pulmonary: Denies trouble breathing,

GI: Constipation, Heartburn especially at night and after naps.

GU: Dysmenorrhea, Denies difficult urination.

Musculoskeletal: Morning stiffness. Denies joint swelling.

Neurologic: Denies numbness and tingling.

Psychiatric: Denies depression/anxiety.

Physical Exam

General: She appears to be mildly uncomfortable and reports pain is best controlled when she shifts her pelvis regularly. She is otherwise healthy and alert and oriented.

Head: Normal cephalic, no evidence of trauma.

Eyes: PERRLA, EOMI.

ENT: TM's are normal. No mucosal engorgement.

CV: Regular rate and rhythm without any murmurs. Good pulses were present.

Musculoskeletal: Strength testing and range of motion testing was limited in the right lower extremity secondary to pain. In testing the left lower extremity with Fabre's test, flexion as well as internal and external rotation did exacerbate her pain in the right SI joint. She was able to move both upper extremities well without difficulties. Gait was observed with no foot drop, has mild ataxic gait.

Neurologic: Screening neurological exam was normal.

Lymphatic: No peripheral edema

OMM Focused Structural Exam

Patient was examined in a seated, supine and prone position:

- Her right lower extremity measured 1.0 cm shorter than her left at the ASIS, medial malleolus and knee levels. A superior innominate shear is present on the right. A superior pubic shear was present on the right with a measured difference of 5mm at the pubic ramus. Her leg pain could be reproduced by direct pressure on the right sacroiliac joint. There was mild muscle spasm of the gluteus, piriformis, quadratus lumborum muscles and pressure on the iliolumbar ligament on the right reproduced her buttock and thigh pain. T₉-L₁ were NS_RRL and painful to palpation.
- Cervical spine with hypertonic musculature, suboccipital tenderness on the left OA ES_LRL, C₅₆₇-NR_LSL.
- Cranial compression with pain at left lambdoidal suture and left zygoma.
- A left lateral strain was present at the sphenobasilar synchondrosis.

Assessment:

1. Right hip pain
2. Iliolumbar ligament syndrome
3. Somatic Dysfunctions of pelvis, lumbar Thoracic spine, and right lower extremity.
4. Right sacroiliitis
5. Vertigo secondary to cranial dysfunction
6. Benign positional vertigo
7. Ruptured nucleus pulposus

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

Discussion Questions

Teaching Points

<ol style="list-style-type: none"> 1. Propose an appropriate differential diagnosis / assessment 	<p>Differential Diagnoses:</p> <ol style="list-style-type: none"> 1. Right hip pain 2. Iliolumbar ligament syndrome 3. Somatic Dysfunctions of pelvis, lumbar Thoracic spine, and right lower extremity. 4. Right sacroiliitis 5. Vertigo secondary to cranial dysfunction 6. Benign positional vertigo 7. Ruptured nucleus pulposus
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<p>2. What is your final diagnosis?</p>	<p>Primary Diagnosis: E814.7 Motor vehicle accident (pedestrian).</p> <p>Secondary Diagnosis: 720.2 Sacroiliitis and 720.1 Iliolumbar ligament syndromes.</p> <p>Somatic dysfunction related to diagnosis: 739.0 head, 739.1 cervical, 739.2 thoracic, 739.3 lumbar, 739.4 sacral/sacroiliac, 739.5 hip/pelvic, and 739.6 lower extremities.</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>Traumatically induced dysfunction is often difficult to treat due to lack of physiologic motion, and complicated by myofascial shortening and fibrosis.</p>
<p>4. What pathophysiology & functional anatomy knowledge is pertinent for diagnosing/treating this patient</p>	<p>A. Pathophysiology— Referred pain pattern from over-stretched iliolumbar ligament.</p> <p>B. Functional Anatomy- Referred pain pattern from sacroiliac joint commonly found. Relationships of sacrum, innominate, pubes, and lower extremity. Vertigo secondary to cranial strain pattern and displacement of otoliths.</p>
<p>5. What will be your highest yield regions?</p>	<p>Sacroiliac joint, Innominate, Lumbar Spine, and cranial mechanism</p>
<p>6. How does previous trauma influence these regions?</p>	<p>Likely exacerbates symptoms. Likely influences establishment of GERD. Otoliths are displaced commonly after trauma.</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>Pain Hypersympathetic effect</p>
<p>8. What are the acute or chronic aspects?</p>	<p>Acute: Fracture and rehabilitation, potential for drug dependence, altered lifestyle due to pain Chronic: Long-term disability potential, Anxiety, Depression, Employment potential, and Health insurance denial.</p>
<p>9. Devise an appropriate treatment plan based on musculoskeletal components involved in the patient complaint</p>	<p>Goals for OMM Management</p> <p><i>The treatment plan could include: Muscle energy to treat the superior pubic shear. Still's technique, indirect myofascial release, sacroiliac joint gapping to treat the SI joint(s). High velocity, low amplitude (HVLA) manipulation for the thoracic spine and L₁. Reduce the leg length discrepancy, both at the knee level as well as medial malleolus level.</i></p>

10. How soon would you see the patient for OMM follow-up?	After MVA – treat weekly, tapering treatments as patient stabilizes and progresses
11. What are the outpatient, inpatient, and emergency room considerations?	Monitor pain medications and decrease dosages as patient progresses
12. How are you going to talk to your patient about their complaint and your treatment?	. Potential benefits for biomechanical integrity to improve gait and function of lower extremity. Likely to improve constipation, dysmenorrhea and Vertigo.

13. How will you communicate your findings, diagnosis, and rationale for OMM treatment to your preceptor?	The pertinent positive and negative findings from the history and physical will be presented. Treatment options will be discussed. Long term management and consultation requirements will be discussed. Address any questions at that time.
14. What coding and billing information for evaluation and management and procedural services will you generate?	E/M- 99244 Comprehensive – Mod. Diagnosis- E814.7 Motor vehicle accident (pedestrian), 720.2 Sacroiliitis, 720.1 lliolumbar ligament syndrome, 739.0 head, 739.1 cervical, 739.2 thoracic, 739.3 Lumbar, 739.4 sacral/sacroiliac, 739.5 hip/pelvic, 739.6 lower extremity. Procedure codes- 98928 Manipulation 7-8 areas
15. How would you record your encounter and OMT on your patient care logs?	- 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				
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
720.2	Sacroiliitis	X	739.0	Head	X	739.5	Hip/Pelvis
720.1	lliolumbar ligament syndrome	X	739.1	Cervical	X	739.6	Lower Extremity
		X	739.2	Thoracic		739.7	Upper Extremity
		X	739.3	Lumbar		739.8	Rib
		X	739.4	Sacrum/Sacroiliac		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's technique,
 - Indirect myofascial release
 - High velocity, low amplitude (HVLA) manipulation for the thoracic spine and L₁.
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