

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:

Inability to ambulate greater than 5 feet.

Patient History:

67 year old female hospitalized 2 weeks ago for elective abdominal aortic aneurysm (AAA) repair with multiple comorbidities including pneumonia, deep venous thrombosis (DVT), acute renal failure (ARF), superficial wound infection and decubitus ulcers on her sacrum & buttocks. The patient is now globally weak and has bilateral hip flexion contractures. She is struggling with urinary urgency, frequency and nocturia as well as constipation. Weakness exhibited with transition from sit to stand and gait is wobbly, although narrow based.

Meds:

Cozaar (losartan potassium), Celebrex (celecoxib), Lipitor (atorvastatin calcium), ASA (aspirin), multivitamin, calcium with vitamin D, Fosamax (alendronate calcium), coumadin (warfarin), Lovenox (enoxaparin sodium), Colace (docusate), Detrol LA (tolterodine tartrate).

Past Medical History:

Osteoporosis (see figures 1,2), constipation, osteoarthritis of the left hip and knee, lumbar spinal stenosis, spondylosis and degenerative disc disease (DDD), depression, Coronary artery disease (CAD), Myocardial infarction (MI) 2 years ago

Past Surgical History:

AA repair 2 weeks, cholecystectomy, appendectomy, hysterectomy, cardiac stent placement x 2 (s/p MI 2 years ago)

Social History:

Widowed, lives alone in ranch-style home with 3 steps to enter, college level education, retired schoolteacher, drives for short distances within community. Pt denies prior tobacco, alcohol, caffeine or street drug use.

Family History:

Father deceased: heart disease at 75, Mother deceased: old age at 90. Two brothers with heart disease, one daughter: thyroidism age 35, one son: hypertension age 40.

Allergies:

NKDA

Review of Systems

Constitutional: Height: 5'3", Weight: 120 lbs. BMI 20

Skin: Abdominal surgical site, skin breakdown on sacrum & buttocks

Blood/Lymph/ Endocrine: Denies

ENT: presbycusis, and soft cerumen in left ear canal.

Eyes: Reading glasses

Cardiovascular: Denies

Pulmonary: Shortness of breath with exertion, productive cough of pale yellow secretions.

GI: Constipation

GU: Denies

Musculoskeletal: Left hip pain, low back pain, osteoporosis, weak.

Neurologic: Denies

Psychiatric: Denies anxiety, depression, difficulty sleeping

Physical Exam

Vitals: BP 130/82, HR 80, RR 16, O2 Sat 96% on room air

General: Frail appearing female in no acute distress appearing older than stated age.

Head: Head atraumatic, normocephalic

Eyes: Pupils equal round and reactive to light and Accommodation

ENT: No cervical lymphadenopathy, no jugular venous distension, trachea midline, no paratracheal masses or thyromegaly palpated

CV: RRR w/o murmurs, click, gallop or rub. No carotid bruits Auscultated

Respiratory: Mild expiratory wheezing and decreased breath sound on right >left

Diaphragm: see Osteopathic exam

GI: Abdomen slightly distended, high-pitched bowel sounds, light palpation performed due to recent abdominal surgery

GU: Deferred

Circulation: Strong upper & lower extremity pulses. Negative Homan's sign in calves bilaterally.

OMM Focused Structural Exam

- Supine & seated exam
- Anterior head carriage with neck extension
- OA SRRL, C3 ERSL.
- Tightness in Pectoralis Major, Anterior Scalene, and Sternocleidomastoid muscles bilaterally.
- Chest wall fascia glide preference: right rotation, inferior, anterior.
- T3-6 NSLRR, T12-L1 NSRRL
- Bilateral sacral extension
- Chapman's reflex points: right intercostal spaces of ribs 3-5, left anterolateral thigh.
- Left innominate is rotated anterior and left tibia has an anterior glide preference.
- Abdominal diaphragm restriction in all planes; sagittal, A-P, Sup-Inf.
- Right sacral margin posterior

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.

Skin: Abdominal surgical site is erythematous, with slight induration and serous drainage, tender to palpation. Initial Stage of decubitus ulcerations: Stage II decubitus ulcer on left inferior pole of sacrum measuring 2cm x 2.3cm x 1cm, and stage I decubitus ulcer over left ischial tuberosity, now both are well-healed.

Musculoskeletal: Left hip flexion contracture with passive range of motion –15. Positive Patrick’s test for left hip pain, crepitus with knee range of motion, genu valgus deformity bilaterally. Manual muscle testing: 4-/5 in all major muscle groups of the upper extremities, hip extension 2+/5, hip abduction 3+/5, knee extension 3/5, dorsiflexion 4/5, plantarflexion. 4/5. Thoracic kyphosis present with apex of curve at T6.

Neurologic: A&O x 3, conversive, appropriate affect, Cranial nerves II-XII intact. Deep tendon reflexes intact in all 4 extremities 1+/4+ symmetrically

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"> 1. Debility 2. Deconditioning 3. Hip contracture (spasticity, Heterotopic ossification, DJD, dislocation, meniscal tear, psychogenic) 4. Hip fracture
<p>2. What is your final diagnosis?</p>	<ul style="list-style-type: none"> • Primary Diagnosis: Bilateral hip contractures • Secondary Diagnoses: Generalized weakness, S/P AAA repair, pneumonia, deep venous thrombosis (DVT), acute renal failure (ARF), superficial wound infection and decubitus ulcers on sacrum & buttocks. • Somatic dysfunction related to diagnosis: C/T/L/S-P/Ribs/LE
<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? 	<ul style="list-style-type: none"> • She has probably been a household ambulator prior to her admission for elective AAA since she has moderate to severe OA of the bilateral hips. • Hip contractures will contribute to abnormal postural and gait mechanics. • Sacral motion may be impaired due to abnormal hip motion. • Increased low back pain due to postural strain and weak core muscles.
<p>4. What pathophysiology & functional anatomy knowledge is pertinent for diagnosing/treating this patient</p>	<p><u>Pathophysiology</u>- Innervation of bladder</p> <p><u>Functional Anatomy</u>- Hip girdle anatomy and muscles used for extension</p>
<p>5. What will be your highest yield regions?</p>	<ul style="list-style-type: none"> • Assess Lumbar, sacral, pelvic regions for shears, rotations, torsions, tenderpoints and treat with FPR, ME, Still technique, and Counter-strain. • Assess rib function since patient has COPD which impairs CO2 exchange, and diaphragmatic excursion.
<p>6. How does previous trauma influence these regions?</p>	<p>If she has had a prior undetected hip fracture, this could be the cause of hip contracture.</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><u>Pain</u></p> <ul style="list-style-type: none"> • Biomechanical due to hip contractures, deconditioning. • Psychological factors such as depression which may be due to prolonged hospital course, decreased quality of life, social isolation may also contribute to primary complaint.
<p>8. What are the acute or chronic aspects?</p>	<p>Acute:</p> <ul style="list-style-type: none"> • Wound healing/nutritional status • Debility due to hip and gait abnormalities <p>Chronic:</p> <ul style="list-style-type: none"> • Urinary urgency, frequency and nocturia as well as constipation
<p>9. Devise an appropriate treatment plan based on musculoskeletal components involved in the patient complaint.</p>	<p><u>Goals for Osteopathic Manipulative Management:</u></p> <ul style="list-style-type: none"> • Improve functional mobility regarding recumbent to sit, sit to stand with safety in mind. • Improve balance and proprioception during ambulation. • Improve core stabilization. • Optimize pulmonary clearance to improve O₂/CO₂ exchange and optimize diaphragmatic excursion. • Decrease pain generators that may slow participation in rehab, delay strengthening because of reciprocal inhibition, and decrease risk of lower extremity give-out. • Increase ability to strengthen hip stabilizers and lower extremity strength. • Decrease risk of falls, decrease risk of recurrent DVTs, decrease nocturia <p><u>The treatment plan could include:</u></p> <ul style="list-style-type: none"> • Heat/cold modalities for pain and improved ROM • Isometric strengthening in/at bedside, passive/active-assisted ROM, • Home safety evaluation to decrease risk of falls • Energy conservation techniques, non-sedating pain meds (topical NSAIDS, Lidoderm patches)
<p>10. How soon would you see the patient for OMM follow-up?</p>	<ul style="list-style-type: none"> • Find worst somatic dysfunction and work outward taking into consideration motion mechanics of the lumbar, sacrum and pelvis in ambulation. • The patient wouldn't be able to tolerate more than a few manipulations per session and her body will need time to adjust to each treatment. Gentle treatment every other day if inpatient, possible weekly to twice monthly treatments as outpatient. • Avoid HVLA.
<p>11. What are the outpatient, inpatient, and emergency room considerations?</p>	<ul style="list-style-type: none"> • Home safety evaluation, home PT for continued strengthening program, medical alert system since she lives alone, Inpatient rehab would be a good choice for her if she could tolerate 3 hours/day of rehab with PT/OT with goal of modified independent living status. • Emergency department evaluation if patient falls and has intense immediate pain &/or loss of consciousness.

<p>12. How are you going to talk to your patient about their complaint and your treatment?</p>	<ul style="list-style-type: none"> • Educate patient on chronic conditions such as hip flexion contracture, deconditioning, • Short-term goals are best achieved in an Acute rehab setting since patient lives alone and wishes to return to home. These may include modified independent transfers from bed to commode then from bed to bathroom, independent dressing of upper & lower body, independent feeding and bathing and medication management. • Education in energy conservation. • Long-term goals could include warm water exercise class to maintain/improve ROM and pulmonary function, Tai-chi for balance and strengthening, purse-lip breathing exercise to improve exhalation.
<p>13. How will you communicate your findings, diagnosis, and rationale for OMM treatment to your preceptor?</p>	<ul style="list-style-type: none"> • Clearly, concisely, with emphasis on pertinent positives and negatives from medical, family, and social histories. Considerations for treatment options, management goals, and long-term outcomes/prognosis. • Any questions or concerns I have will also be addressed with my attending at that time.
<p>14. What coding and billing information for evaluation and management and procedural services will you generate?</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 style="text-align: center;">(See Chart below)</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

**Section III:
(approximate
minutes)**

*Facilitator
the key
techniques.*

1.

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
	Debility		739.0	Head	X	739.5	Hip/Pelvis
	Deconditioning	X	739.1	Cervical	X	739.6	Lower Extremity
	Incontinence	X	739.2	Thoracic		739.7	Upper Extremity
	Joint contracture	X	739.3	Lumbar	X	739.8	Rib
	Renal Insuff	X	739.4	Sacrum/Sacroiliac		739.9	Abdomen

**Workshop/Lab
time 60**

*demonstrates
treatment*

16. What is the Evidence Base?

Halar EM, Bell KR: Contracture and other deleterious effects of immobility. DeLisa JA (ed): Rehabilitation Medicine Principles & Practice. Philadelphia, JB Lippincott, 1988 pp448-462.

Wilson CH: Exercise for arthritis. In Basmajian JV (ed): Therapeutic Exercise, 4th ed. Baltimore, Williams & Wilkins, 1984, pp 529-545.

National Osteoporosis Foundation, et al: Physician's Guide to Prevention & Treatment of Osteoporosis. Excerpta Medica 1998.

Cervo FA, Cruz AC, Posilco JA: Pressure Ulcers: Analysis of guidelines for treatment & management. Geriatrics 2000; 55:55-60.

D'Alonzo FE, Krachman SL: Pulmonology. Foundations of Osteopathic Medicine. JB Lippincott, 2003 pp500-515. Images.MD.com for radiographic examples (used with permission through ATSU library).

Search for the best evidence references:

An appraisal of the osteopathic literature is critical to ensure the osteopathic paradigm is foremost in the philosophical application of information to patient care. Search of relevant and associated data from the osteopathic literature:

OstMed-Dr (<http://www.ostmed-dr.com:8080/vital/access/manager/Index>)

Other literature bases (systems or synopsis engines):

- Poems (www.info poems.com)
- Family Practice Inquiry Network (www.fpin.org)
- PubMed
- Ovid
- Google Scholar

Participants divide into groups at the table

2. At each table, discuss and practice the appropriate palpatory diagnosis for this patient
3. Facilitator demonstrates the key treatment techniques:
 - Improve functional mobility regarding recumbent to sit, sit to stand with safety in mind.
 - Improve balance and proprioception during ambulation.
 - Improve core stabilization.
 - Optimize pulmonary clearance to improve O₂/CO₂ exchange and optimize diaphragmatic excursion
 - Increase ability to strengthen hip stabilizers and lower extremity strength
4. Participants should practice the following techniques on each other:
5. At each table, while the techniques are being practiced:
 - a. Identify and practice good body mechanics for the physician and patient in treatment
 - b. Discuss the treatment plan
 - c. 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