

Facilitator's Guide

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)

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.

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, plantar flexion. 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

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.*

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

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

Discussion Questions

Teaching Points

<p>1. A) Propose an appropriate differential diagnosis / assessment. B) Primary Diagnosis? C) Secondary Diagnosis? D) Somatic Dysfunction?</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>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>
<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"> • 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>3. What pathophysiology & functional anatomy knowledge is pertinent for diagnosing/treating this patient</p>	<p>A. Pathophysiology- Innervation of bladder - T12-L2 (sympathetic) - Pelvic Splanchnics (S2-4, parasympathetic)</p> <p>B. Functional Anatomy- Hip girdle anatomy and muscles used for extension</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 • Fluid congestion • Hyper-sympathetic influence • Parasympathetic influence 	<p>Pain</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, and social isolation may also contribute to primary complaint.

<p>5. 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)
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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

Section III: Final Wrap-up and Questions/Answers