

Integration of the Osteopathic Structural Exam into a Physical Diagnosis Course: Past, Present and Future

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Objectives

- Explore the importance of incorporating the Osteopathic structural exam into the general physical exam.
- Describe the present implementation of the Osteopathic structural exam into the general physical exam during lectures, labs and testing through standardized patients.
- Discuss the future curriculum planning, where both physical diagnosis and Osteopathic Manipulative Medicine will be combined into one harmonious course.
- Examine the relevance for integrating the Osteopathic structural exam into the physical exam with regard to COMLEX PE and ACGME's Osteopathic Neuromuscular Medicine Milestone Project in the unified pathway.

Background

- The Osteopathic structural exam and physical diagnosis skills are typically not taught together, but in separate courses.
- Students often struggle to incorporate both exams into patient care because they have learned them as two separate entities
- Incorporation is critical for success in the COMLEX PE, where Osteopathic Principles and Practices are integrated into the care of the patient and the management plan in order to pass this national standardized exam

Importance: AACOM

- As per AACOM's *Osteopathic Core Competencies for Medical Students*, a medical student must:
 - Perform a clinically appropriate standard physical examination, including evaluation of each of the body areas and organ systems. (Patient Care 3a)
 - Perform an osteopathic structural examination and osteopathic manipulative therapy as appropriate. (Patient Care 3b).

Importance: NBOME

- NBOME- *Fundamental Osteopathic Medical Competency Domains: Guidelines for Osteopathic Medical Licensure and the Practice of Osteopathic Medicine* echoes the AACOM's requirements with Competency Domains 1.2, 1.3 & 2.1
 - Competency 1.2: The osteopathic physician must be able to apply osteopathic principles, including the use of OMT, to an appropriate patient care plan.
 - Competency 1.3 The osteopathic physician must demonstrate sufficient design of knowledge and skills to recognize, diagnose and treat patients who have somatic dysfunctions using OMT in the clinical setting.
 - Competency 2.1: The osteopathic physician must effectively gather accurate, essential data from all sources, including the patient, secondary sources, medical records and physical examination (including osteopathic structural examination) regardless of patient age or clinical setting.

Importance: Student Success



Importance: ACGME Unified Pathway

- Based on the ACGME unified pathway Osteopathic Neuromuscular Medicine Milestone Project, all residents will be evaluated on certain competencies and ranked level 1-5
- Level 4 description for Patient Care 3 milestone:
 - Independently integrates history, examination, diagnostic testing, and medication management into osteopathic patient care plan in complex patients
 - Mentors others to incorporate osteopathic principles in patient care.
 - Independently performs accurate and complete osteopathic structural examination and diagnoses somatic dysfunction appropriate to complex patients

Patient Care 3: Patient Management				
Level 1	Level 2	Level 3	Level 4	Level 5
<p>Inconsistently incorporates osteopathic principles to promote health and wellness in patients with common conditions</p> <p>Inconsistently integrates history, examination, diagnostic testing, and medication management into osteopathic patient care plan</p> <p>Inconsistently performs osteopathic structural examination and diagnoses somatic dysfunction appropriate to patient condition</p>	<p>Incorporates osteopathic principles to promote health and wellness in patients with acute and chronic conditions</p> <p>Integrates history, examination, diagnostic testing, and medication management into osteopathic patient care plan, with supervision</p> <p>Performs osteopathic structural examination and diagnoses somatic dysfunction appropriate to patient condition, with supervision</p>	<p>Incorporates osteopathic principles to promote health and wellness in patients with complex conditions</p> <p>Independently integrates history, examination, diagnostic testing, and medication management into osteopathic patient care plan</p> <p>Independently performs accurate and complete osteopathic structural examination and diagnoses somatic dysfunction appropriate to patient condition</p>	<p>Mentors others to incorporate osteopathic principles in patient care</p> <p>Independently integrates history, examination, diagnostic testing, and medication management into osteopathic patient care plan in complex patients</p> <p>Independently performs accurate and complete osteopathic structural examination and diagnoses somatic dysfunction appropriate to complex patients</p>	<p>Role models and teaches the effective integration of osteopathic principles to optimize patient health</p> <p>Serves as role model and teaches the effective use of osteopathic focused history, examination, diagnostic testing, and medication management to minimize the need for further diagnostic testing or intervention</p> <p>Role models and teaches accurate and complete osteopathic structural examination and diagnoses somatic dysfunction appropriate to complex patients</p>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:				Not Yet Achieved level 1 <input type="checkbox"/>

Timeline: RowanSOM Physical Diagnosis Course



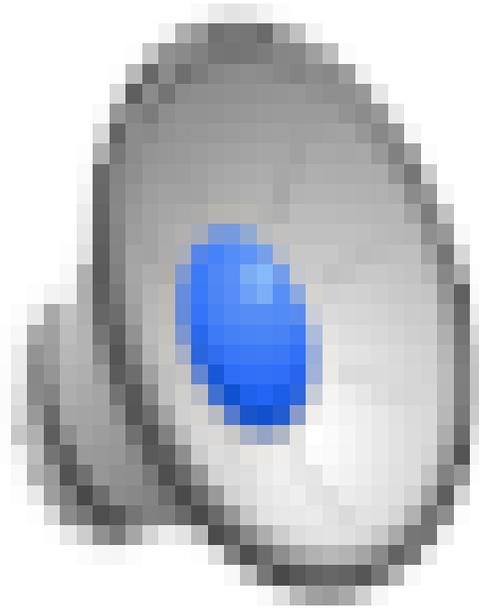
Present Goals

- Interdisciplinary approach to teach the incorporated examination in both courses
 - Physical Diagnosis course incorporates osteopathic structural exam into didactics, labs and assessment
 - Osteopathic Manipulative Medicine course emphasizes where the structural exam fits into the patient encounter & adds professionalism/interpersonal skills into assessment
- Utilize educators from both the Osteopathic Manipulative Medicine Department and the Family Medicine Departments to teach the course
- Parallel teaching in both courses to help with student facilitation and understanding

Physical Diagnosis Lab

- Video of integrated exam reviewed before class
- ROS, documentation and related structural components reviewed in class with an example case
- Exam demonstrated with structural components incorporated seamlessly
- Exam practiced in small groups with facilitator guidance
- Sample documentation submitted at the end of class
- Skills formally assessed with a standardized patient encounter or practical exam

Cardiac Exam Video



Example Slide for Cardiology Exam

- **Common ROS for the cardiac system**

- Chest pain
- Palpitations
- Dyspnea on Exertion
- Orthopnea
- Shortness of Breath
- Lower Extremity Edema
- Syncope/Lightheadedness
- Color Changes in Hands or Feet
- Abdominal Pain (epigastric)
- Back Pain (mid upper back)

- **Documentation for the cardiac exam**

- Normal: +S1, S2 RRR, no M/R/G
- Abnormal: +tachycardia, irregularly irregular rhythm, +3/6 SEM best heard at left 2nd ICS

Example Slide for Cardiology Exam

- **Osteopathic Considerations/Exam:**
 - Palpate anterior chest wall-pec major/minor and sternum; ask about tenderness
 - Assess OA for restriction and tenderness
 - Palpate cervical & thoracic spine; ask about tenderness
 - Check active and passive ROM for thoracic spine
 - Assess motion of the thoracic inlet/outlet
 - Rib motion assessment (upper, middle and lower ribs)
 - Assess respiratory diaphragm for passive motion
 - Chapman's Point Anterior for Heart: ICS between rib 2 and 3 at the sternocostal junction
 - Chapman's Point Posterior for Heart: Between T2 and T3; midway between SP and tip of TP

Assessment Checklist: Cardiology

- Inspection of the chest
- Palpate the PMI
- Auscultation of the heart with the diaphragm at the four points (Aortic, Pulmonic, Tricuspid, Mitral Areas) & the bell at the Tricuspid and Mitral Areas
- Auscultate the carotid arteries
- Check for JVD with measurements (head of table at 30 degrees)
- Palpate anterior chest wall-pec major/minor and sternum; ask about tenderness
- Assess OA for restriction and tenderness
- Palpate cervical & thoracic spine; ask about tenderness
- Check active and passive ROM for thoracic spine
- Assess motion of the thoracic inlet/outlet
- Rib motion assessment (upper, middle ribs and lower ribs)
- Assess respiratory diaphragm for passive motion

Example Slide for Pulmonary Exam

- **Common ROS for the pulmonary system**
 - Chest pain
 - Shortness of Breath
 - Dyspnea on Exertion
 - Orthopnea
 - Cough
 - Sputum Production
 - Wheezing
 - Lower Extremity Edema
 - Calf Pain
 - Weight Gain
- **Documentation for the pulmonary exam**
 - Normal: CTA B/L no wheezing, rales or rhonchi
 - Abnormal: +rhonchi RLL, abnormal bronchophony RLL, dullness to percussion RLL

Example Slide for Pulmonary Exam

- **Osteopathic Considerations/Exam**
 - Assessment of OA for restriction and tenderness
 - Palpate cervical and thoracic spine; ask for tenderness
 - Assess active and passive range of motion of the thoracic spine
 - Palpate and check passive ROM of sternum
 - Assess passive range of motion of the clavicle
 - Rib assessment (upper, middle and lower ribs)
 - Assess respiratory diaphragm for passive motion and tenderness
 - Chapman's Point Anterior for the Upper Lung: ICS between 3rd and 4th rib at the sternocostal junction
 - Chapman's Point Posterior for the Upper Lung: Between TPs of T3 & T4; midway between SP & tip of the TP

Assessment Checklist: Pulmonary

- Inspection of the chest: anterior and posterior
- Palpation of inspiration: anterior and posterior
- Percussion posterior (8-10 points)
- Tactile Fremitus posterior (8 points)
- Auscultation anterior (8 points) & posterior (10 points)
- Bronchophony OR Egophony OR Whispered pectoriloquy; posterior (8-10 points)
- Assessment of OA for restriction and tenderness
- Palpate cervical and thoracic spine; ask for tenderness
- Assess active and passive range of motion of the thoracic spine
- Palpate and check passive ROM of sternum
- Assess passive range of motion of the clavicle
- Rib assessment (upper, middle and lower ribs)
- Assess respiratory diaphragm for passive motion and tenderness

Example Slide for Abdominal Exam

- **Common ROS for the abdominal system**
 - Abdominal Pain
 - Nausea
 - Vomiting
 - Diarrhea
 - Constipation
 - Change in Bowel Habits
 - Decreased appetite
 - Blood in Stool
 - Dysphagia
 - Heartburn/Acid Reflux
- **Documentation for the abdominal exam**
 - Normal: +BS soft, NT/ND; no rebound, rigidity or guarding
 - Abnormal: +TTP RLQ, +rebound tenderness at McBurney's Point, +psoas sign and +obturator sign

Example Slide for Abdominal Exam

- **Osteopathic Considerations/Exam:**
 - Assess respiratory diaphragm for passive motion
 - Palpate thoracic and lumbar spine; ask for tenderness
 - Check active and passive ROM of thoracic and lumbar spine
 - Perform seated flexion test
 - Assess sacral sulci and ILAs
 - Assess abdominal ganglia (cervical, superior and inferior mesenteric) for tenderness and restriction
 - Chapman's Point Anterior for Appendix: tip of the 12th rib, superior edge
 - Chapman's Point Posterior for Appendix: Between TPs of T11 and T12 on the right

Assessment Checklist: Abdomen

- Inspect
- Auscultate all four quadrants with diaphragm
- Auscultate abdominal aorta
- Percuss all four quadrants
- Palpate all four quadrants
- Palpate abdominal aorta
- Check for ascites: Either shifting dullness OR fluid wave
- Rebound tenderness at McBurney's point
- Lloyd's sign
- Psoas sign OR Rosvings sign OR Obturator sign
- Palpate thoracic and lumbar spine; ask for tenderness
- Check active and passive ROM of thoracic and lumbar spine
- Perform seated flexion test
- Assess sacral sulci and ILAs
- Assess abdominal ganglia (cervical, superior and inferior mesenteric) for tenderness and restriction

Interpersonal & Communication Skills



"The doctor will see you now —
I can't promise that he'll talk
to you, but he'll see you."

Future Goals

- Combine courses into one seamless course that includes both physical diagnosis skills and osteopathic structural skills
- Continue to revamp our curriculum and in the new curriculum this integrated course will be called OCS: Osteopathic Clinical Skills
- Avoid teaching the Osteopathic structural exam and physical diagnosis skills as separate entities in the future
- Complete all assessments together in one SP encounter rather than one for exam skills and one for OMT techniques
- 100% pass rate on the COMLEX PE

Our Challenges



Questions



References

- AACOM. *Osteopathic Core Competencies for Medical Students*. American Association of Colleges of Osteopathic Medicine. August, 2012. Accessed via the internet at: https://www.aacom.org/docs/default-source/core-competencies/corecompetencyreport2012.pdf?sfvrsn=179c6097_4
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