

Osteopathic Management of the Hospitalized Patient

Developed for OUCOM CORE
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CORE Osteopathic Principles and Practices Committee

Series B - Session #11: Sympathetic Considerations



1. List the indications for OMT in hospitalized patients
2. Describe appropriate history and physical exam in hospitalized patients
3. Modify treatment for acutely ill patients
4. Define order of treatment for systemic problems
5. Diagnose & treat fascial diaphragms with MFR



- Atelectasis
- Pneumonia
- Paralytic Ileus
- Edema
- Pancreatitis
- Musculoskeletal pain
- Chest wall pain
- Neonatal feeding disorder/colic
- Cephalgia



The following elements are important to remember when taking the hospital history:

- Head Trauma
- Motor vehicle accidents
- Fractures
- Episodes of loss of consciousness
- Presence of known short leg
- Scoliosis



The following elements are important to remember when taking the hospital history:

- Previous experience with OMT
- Previous experience with other manual medicine modalities
- Response to previous treatments



- Based on the Respiratory-Circulatory-Neurologic Model
- Major diaphragms of the body
 - Bony & Fascial attachments
- Rib function
 - Fluid movement within the body
 - Reflexed mediated by the SNS (chain ganglia)
- Paraspinal myofascial elements
 - Suboccipital, sacral, thoracolumbar areas



A: Loosen draw-sheet from under the mattress.

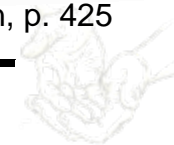
B: Roll draw-sheet parallel to the patient.

C: Place hands between draw-sheet and mattress to contact lumbar areas.

This approach protects the patient's modesty, and the physician is less likely to come in contact with any discharge, drainage, urine, or feces in bed.



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Assess tissue texture changes and motion restriction of the lumbar spine.

If patient is not in the immediate postoperative period after abdominal or pelvic surgery:

- Palpate the abdomen for visceral dysfunction

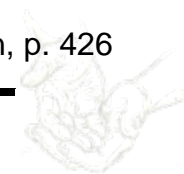
Assess restrictions of thoracoabdominal diaphragm

- Place one hand under the patient at T10-L2 area posteriorly.
- Other hand anteriorly, just inferior to the xiphoid process
- Perform motion testing

The abdominal diaphragm dysfunction is named according to the direction of preferred fascial movement sensed by the abdominal hand.



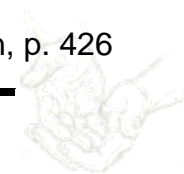
- Place the fingertips of one hand at the inferolateral angle of the sacrum and fingertips of the other hand at the ipsilateral sacral base.
- Exert alternate pressure in the anterior direction with the fingertips, ascertaining the ability of the sacrum to “rock” on it’s L-shaped articulation.



- Assess rib excursion by having the patient breathe deeply.
- Palpate rib cage at the midaxillary line lateral to the sternum (upper ribs).
- If chest tube is present or patient on ventilator, follow the motion present by lightly resting hands on the rib cage.



- Gently rest the palpating hand on the sternum and follow it's motion, noting any fascial pulls and any costosternal articular restrictions.



Place patient in Fowler's position:

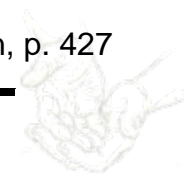
- Standing and leaning over the head of the bed from behind, slide fingers under draw sheet down to the T12 - L2 area of the patient's back.
- Push anteriorly with fingertips of both hands, assessing the tissue texture changes then rotatory motion of the paraspinal elements.



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- Place the fingertips of the anterior hand against the costochondral junction, and those of the posterior hand at the rib head of the same rib.
- Palpate along the region for tissue texture changes and somatic dysfunction in the individual ribs based on respiratory motion.



- Assess the suboccipital area for condylar compression and OA and AA somatic dysfunction.
- Gently cradle the head and upper cervical area with the fingertips and hands.



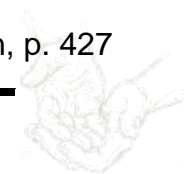
- **Sympathetic Nervous System**
 - SD indicated by palpation of the thoracic and upper lumbar area for viscerosomatic and articular restrictions, and of rib cage for restrictions affecting the sympathetic chain ganglia.
- **Parasympathetic Nervous System**
 - SD indicated by palpation of the sacral, suboccipital, and cranial areas.
- **Lymphatic System**
 - SD indicated by assessing the four major diaphragms of the body and rib motion.
 - Pelvic diaphragm
 - Thoracoabdominal diaphragm
 - Superior thoracic aperture
 - Tentorium cerebelli



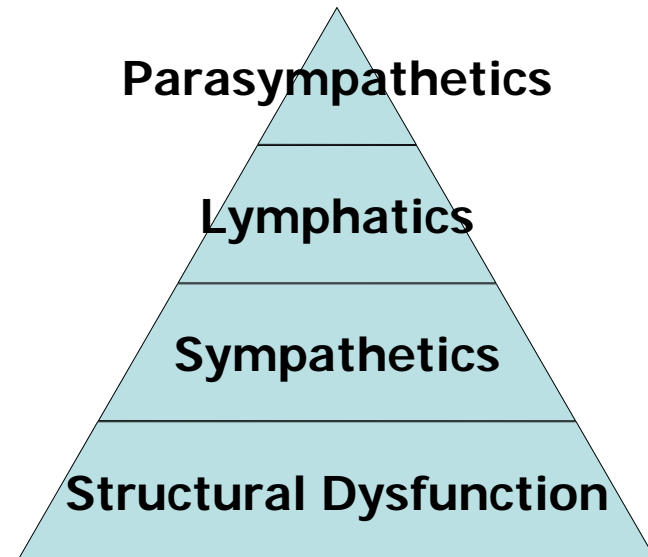
- Alter visceral and somatic function
- Normalize neurologic control
- Improve arterial circulation
- Improve venous and lymphatic drainage



- Minimum number of techniques
- Less forceful techniques
- More frequent treatments
- Adapt techniques to supine position
- Attention to tubes/lines
- Nosocomial precautions



1. Treat related structural dysfunction
 - Indirect if possible
2. Normalize sympathetics
 - Rib raising
 - Thoracolumbar inhibition
3. Enhance drainage
 - Fascial diaphragms
 - Lymphatic pumps
4. Normalize parasympathetics
5. Suboccipital release



Cephalgia

- Cranial Osteopathy
- Cervical

Cardiovascular

- Thoracic
- Ribs

Respiratory

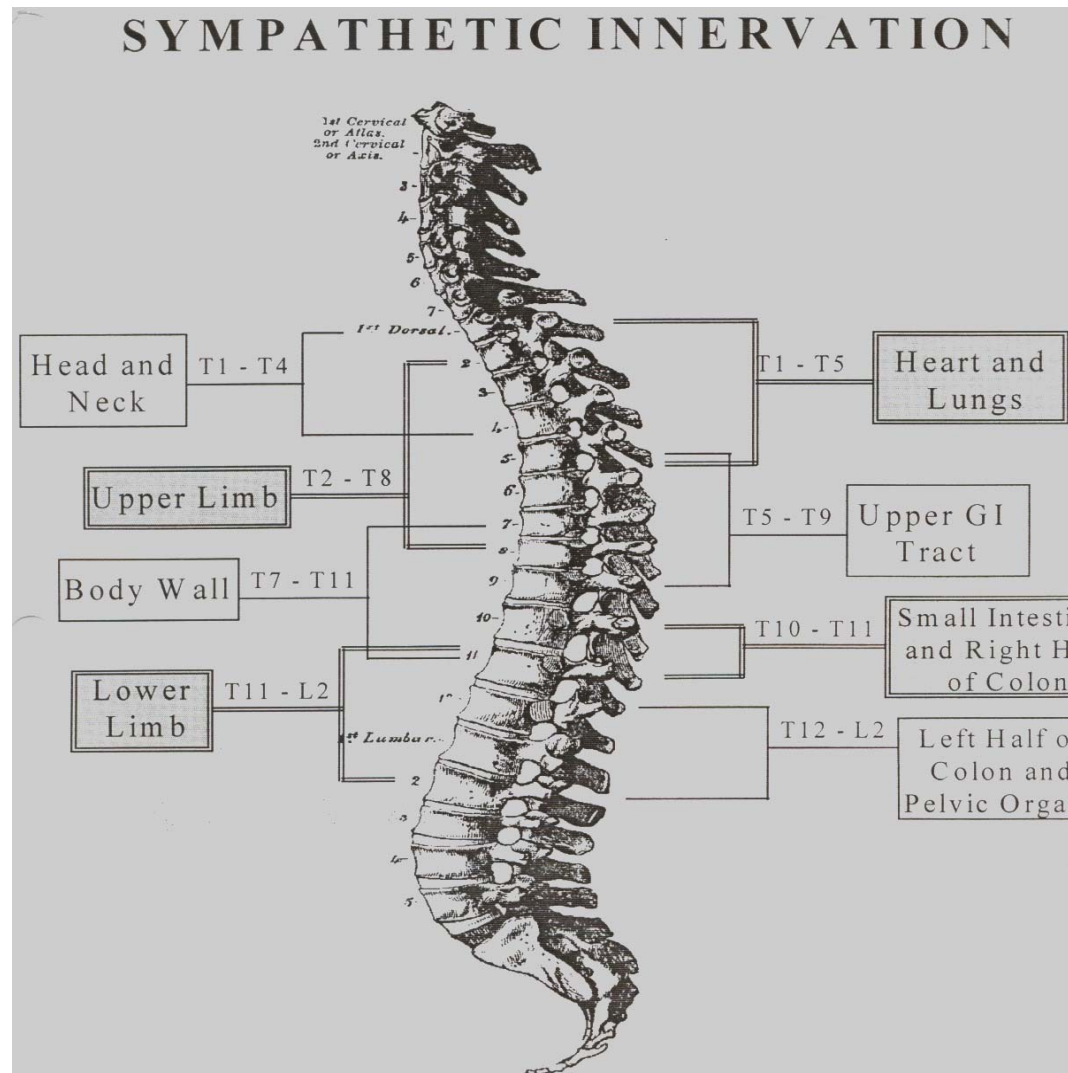
- Thoracic
- Ribs

GI/GU

- Lumbosacral



- Heart & Lungs
T1 – T5
- Upper GI Tract
T5 – T9
- Small bowel & Right Colon
T10 – T11
(appendix-T12)
- Left Colon & Pelvic Organs
T12 – L2



Rib Raising

- Temporary stimulation with subsequent rebound normalization

Abdominal plexus release

- Collateral ganglion inhibition

Chapman's point stimulation

- Treat vertebral & rib S/D before doing rib raising



Pelvic Diaphragm

- Lumbosacral fascia

Abdominal Diaphragm

- Thoracolumbar fascia

Thoracic Inlet

- Sibson's fascia
- Cervicothoracic diaphragm
- Occipitoatlantal diaphragm



- Identify directions of ease and restriction
 - Rotation
 - Sidebending
 - Flexion/Extension
- Move to indirect barrier
- Add compression
- Allow tissue release
- Slow return to neutral
- Follow with lymphatic treatment



- MFR for thoracic outlet
- Inhibition T1-4
- Suboccipital Inhibition
- Counterstrain for rib (ME/HVLA for C7, T1)

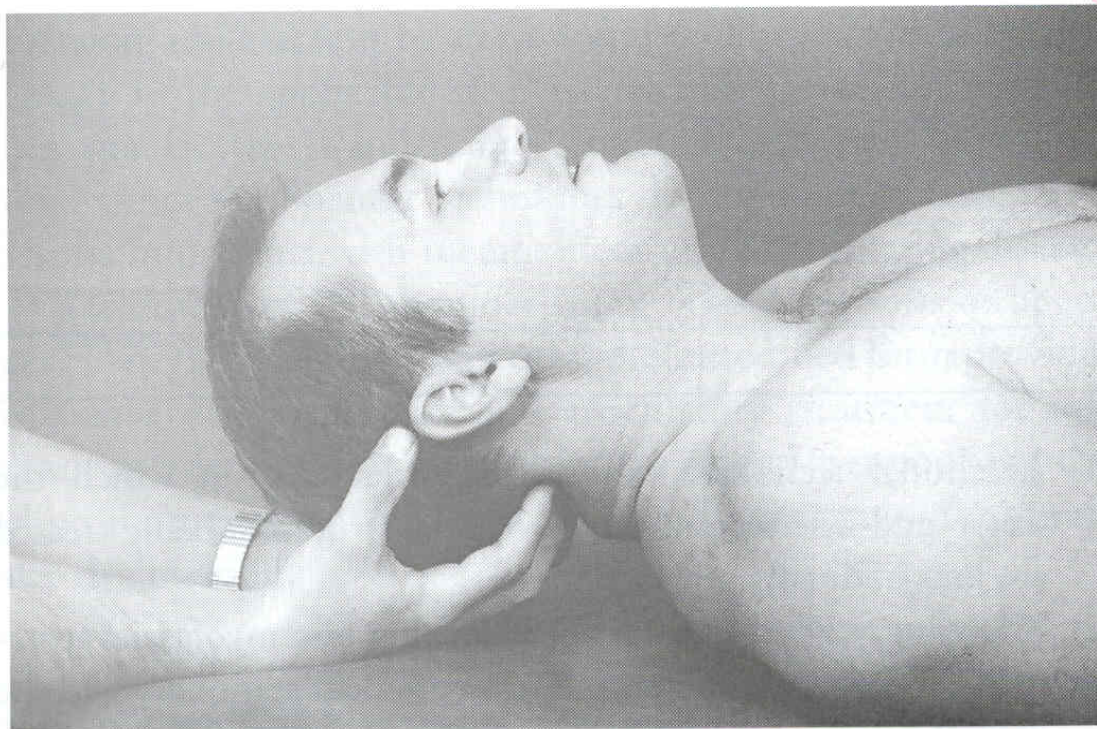


Figure 56.1. Suboccipital inhibition.



OA, C1, and C2 (Vagus nerve)

- Suboccipital release
- Counterstrain
- MFR/FPR
- ME
- HVLA/articulatory

S2-4 (Pelvic Splanchnics)

- Sacral Rocking



These situations require special consideration:

- Drug and Alcohol Rehabilitation
- Intensive Care Unit/Ventilated Patient
- Patients in Isolation
- Pediatric Patients
- Post-operative/Trauma Patients



- These patients are not usually responsive to OMT
- Try to treat these patients after detoxification has been completed.
- This does aid in the recovery process.
- Treat one or two times the first week then weekly.
- Adjust treatment plan according to any medical situations that may arise



Request assistance when moving a patient in bed or changing position

- Avoid the danger of extubating the patient or pulling central/arterial lines out.

Patients on the ventilator can and should be treated with manipulation

Avoid techniques that interfere with respiratory rate

- Pedal pump
- Classic lymphatic pump



- Universal precautions must be followed
 - **Gloves, Gown, Mask**
- Palpation through gloves can be tricky, but it is possible with practice
- Position yourself to avoid contamination and infection



- Newborns occasionally need treatment in the nursery for cranial entrapment neuropathies resulting in colic and feeding disorders.
- Utilize the same process used for treating adults
- Gentle techniques that emphasize connective tissue relationships are emphasized
- It may be beneficial to have the parents participate in the treatment session
- Be aware that OMT performed on pediatric patients with acute infections may result in a temporary elevation in body temperature due to an increased immune response. This is often short lived, but should be monitored closely.



- Address corresponding Sympathetic, Parasympathetic, and Lymphatic systems
- Avoid excessive jiggling and overhead arm techniques
 - Techniques such as lymphatic pump with arms overhead or vigorous pedal pump may endanger the stability of the operative site or injury
- Utilize indirect techniques
- These patients can and should receive OMT



Conclusion

1. Always do a thorough osteopathic history.
 - May need to obtain this from others
2. Incorporate the osteopathic exam into the physical examination.
3. Develop your own routine and stick with it
4. Ancillary tests such as radiographs, CT scans, etc., should be reviewed prior to evaluating the patient.



5. Hospitalized patients require less duration and increased frequency of treatment.
6. Indirect techniques are favored over direct techniques.
7. Everything that is assessed or treated must be placed in the patients chart.



The following should be included in the chart:

- Position(s) in which the patient was examined
- Notation of asymmetries of the spine, ribs, head, pelvis, and extremities noted by visual examination or palpation
- Location of tissue texture changes
- Any other relevant positive or negative findings from the neuromusculoskeletal examination
- Correlation of the examination with the chief complaint
- Diagnosis of Somatic Dysfunction and its location
- Treatment plan, OMT performed, results of treatment, and future treatments anticipated



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Images were scanned from the second edition of the Foundations for Osteopathic Medicine. Lippincott Williams & Wilkins: Philadelphia. 2003

