Palpating and Treating Kidneys with Somatic Dysfunctions (SD)

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Kidneys- Topography in vivo

- the kidneys are located
  - on the upper part of the posterior abdominal wall
  - dorsal to the posterior peritoneum
  - in front of the 11th and 12th rib
Kidneys- Topography in vivo

- were to find the kidneys dorsally?
  - T11 – L2
- kidneys move caudally with inspiration
Triangle of Grynfelt

- Iliac crest is inferior
- 12th rib is superior
- Erector spinae is medial
- Palpate through quadratus muscle in this area to reach dorsal region of kidney
How to screen a Kidney for SD?

- patient is sitting or standing
- test with contact on vertex
- fascial pull to the kidney is lateral and slightly dorsal in front of 12th rip
- fascial pull should subside with touching the kidney
The Kidneys - Fascias

- transversal fascia
- dorsal and ventral layer of renal fascia
- cranial adherence to diaphragm
- layers of renal fascia are filled with brown adipose tissue (capsula adiposa)
Right Kidneys Sonographic Mobility - Sagittal Plane

Contusion of Right Kidney
Kidney - Neighbors

- **Ventral Neighbors:**
  liver, pancreas, stomach, duodenum, colonic flexures, intestines, peritoneum

- **Superior Neighbors:**
  adrenals, spleen, liver, diaphragm

- **Medial Neighbors:**
  crus of diaphragm, psoas muscle

- **Dorsal Neighbors:**
  nerves, transversal fascia, quadratus lumborum muscle, triangle of Grynfelt
The Kidney – Fulcrum of the Central Myofascial Web?
OMT in Somatic Dysfunction of the Kidney

- The therapeutic aim of osteopathic manipulative treatment (OMT) is to reintegrate the kidney into the organism as a whole in terms of
- visceral, myofascial, spinal, lymphatic and fluidal aspects
OMT in Somatic Dysfunction of the Kidney – visceral approach

• treat kidney with patient in supine position
  ◦ sandwich technique

• treat kidney with patient sitting
  ◦ sandwich technique
  ◦ bimanual approach with doubled hands
Kidneys - Topography in vivo

were to find the lower poles from ventrally?

- **Left** kidney: 3 fingers left of umbilicus
- **Right** kidney: 3 fingers left of umbilicus and 1 finger caudally
Palpation of the right Kidney

- ventral hand below rips is palpating between ascending colon laterally and duodenum medially
- palpate layers until you hit the kidney dorsally
- dorsal hand finds kidney in the region of the triangle of Grynfelt and lifts it anteriorly
Mobility of the right Kidney with Respiration

- in this position assess the caudal and cranial motion of the kidney with respiration
- right hand contacts the kidney, left hand lifts
- both hands compress for better handling
Manipulation of right Kidney

- move the kidney caudally or cranially to hit barrier
- with inferior barrier take up the slack in expiration
- with superior barrier take up the slack in inspiration
- Work repetitively until movement of the kidney feels free
OMT in Somatic Dysfunction of the Kidney – myofascial approach

- treat respiratory diaphragm
- treat restrictions of the fascial containers around the kidney (ventral and dorsal renal fascia)
- treat myofascial chains to thorax, head, pelvis and leg
Stretching the Renal Fascia (stage 1)

- The myofascial pathways descend from the kidney to the knee via Psoasmuscle, Iliacusmuscle, Adductorgroup and Gracilismuscle.
- Since their function is mainly hipflexion and exorotation.
- This has to be addressed in treatment approaches.
Stretching the Renal Fascia (stage 1)

- pt. is supine, so that lower leg is dangling
- bring hip into internal rotation to barrier with your knee lateral and your foot medial to pt.´s knee and foot
- pt. contracts into exorotation for 7 sec
- stretch about 30 sec into internal rotation

Do not use these techniques in pts. with endoprosthesis, with acute trauma, with acute joint pain or with disc herniations
Stretching the Renal Fascia (stage 2)

- purpose of stage 2 is to improve diaphragm and mediastinum
- body position is the same as in stage 1, the arm on the treatment side is elevated, hold leg at the barrier in internal rotation
- instruct pt. to inhale very deeply and to exhale slowly with pursed lips a few times
- Do not use these techniques in pts. with endoprosthesis, with acute trauma, with acute joint pain or with disc herniations
Stretching the Renal Fascia (stage 3)

- stage 3 shall improve restrictions in mediastinum, cervical muscles, throat, lateral thorax and arm
- with pursed exhalation (after maximal inhalation) instruct pt. to outstretch his arm and follow the hand with the eyes (extension/rotation of cervical spine)
- at same time the kidney may be mobilized (up or down)
- Do not use these techniques in pts. with endoprosthesis, with acute trauma, with acute joint pain or with disc herniations
Do you ever suspect renal or bladder trouble without first receiving knowledge from your patient, that there is soreness and tenderness in the region of the kidneys at some point along the spine?

By this knowledge you are invited to explore the spine........
OMT in Somatic Dysfunction of the Kidney – spinal approach

- treat lower thoracic segments with SD, use MET, HVLA or Functional Methods
- especially look for facilitated segments in T7 and T11
Lymphatics of the Kidney

„We must ever remember the demands of nature on the lymphatics, liver and kidneys. They must work all the time or a confusion for lack in their duties will mark a cripple in some function of life over which they preside.“

A.T. Still: Philosophy of Osteopathy (1897)
How to Screen the Lymphatics of Kidneys

- If the kidney lymph drainage nodes are blocked you may find a
- 1) general edema over the kidneys in the back, or it may be reflected on the
- 2) abdomen over the beginning of the thoracic duct.

Applied Anatomy of the Lymphatics
F. P. Millard, D.O. 1922
How to Screen the Lymphatics of Kidneys?

3) Next go above the clavicles and note any edema

- compare both sides
- look for puffiness
- look for stasis

Applied Anatomy of the Lymphatics
F. P. Millard, D.O. 1922
OMT in Somatic Dysfunction of the Kidney – lymphatic approach

- treatment sequence is opposite:
  - treat thoracic duct and chylic cistern
  - treat renal lymph nodes
  - treat kidney lymphatics
Bibliography

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- Primal Pictures: Complete Human Anatomy (2001)
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