Scientific Osteopathic Approach To Patients With Abdominal Complaints

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Scientific Osteopathic Approach to Patients with Abdominal Complaints

1. Introduction

Patients with abdominal complaints have difficulties to give the exact location of the pain.

This is because the sensory brain area is less precise than musculoskeletal sensory pain.

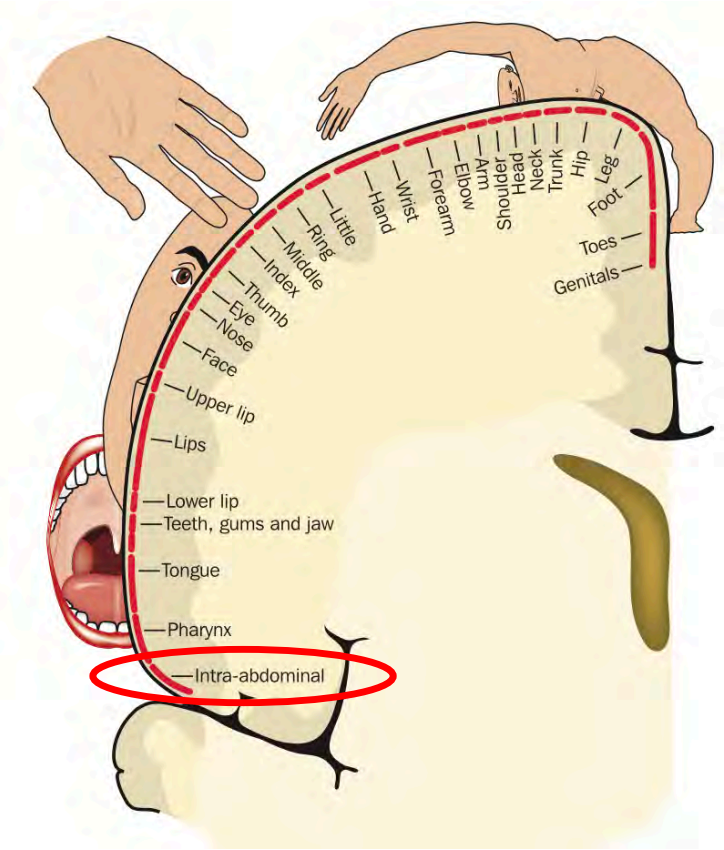

Figure 1 - Sensory cortex

It is therefore of the outmost importance for osteopaths to know the anatomy, basic physiology, pathophysiology and symptomatology of the different visceral systems in order to:

- Be able to recognize real disease.
- Be able to refer properly.
- Provide an efficient treatment strategy in the case of functional disorders, eventually related to musculoskeletal complaints.

Figure 6 - Grey Turner sign

Figure 7 - Abdominal wall herniation

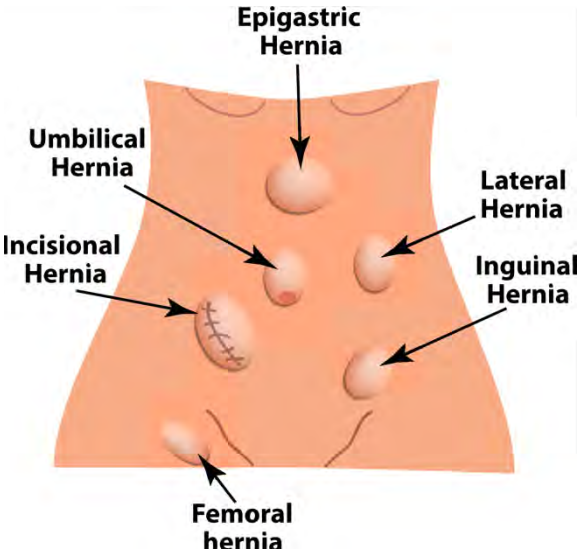

Figure 8 - Possible herniations

- Is there typical fat tissue?

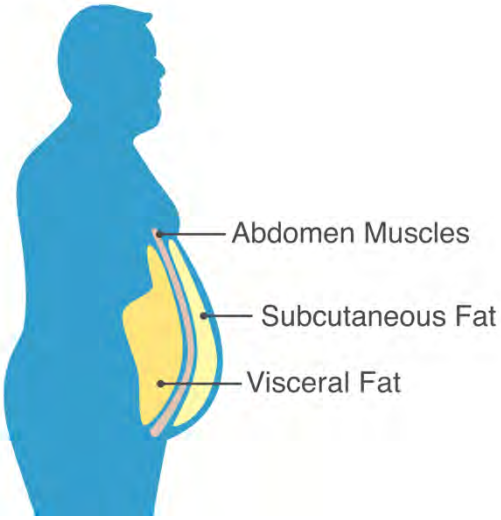

Figure 9 - Abdominal fat

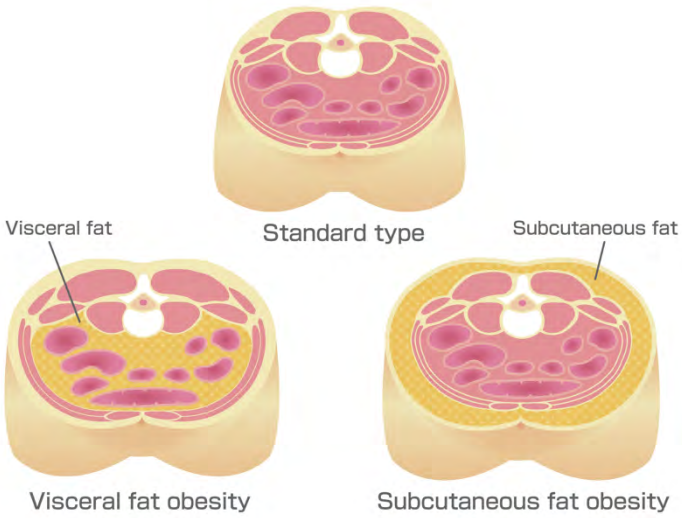

Figure 10 - Possible fat distribution on the abdomen

Figure 11 - Subcutaneous and visceral fat

Osteopathic approach:

- Treat the segmental relation of the stomach:
    - Somatic dysfunctions with relation to the parasympathetic innervation of the stomach: Occiput – Atlas – Axis.
    - Somatic dysfunctions with relation to the sympathetic innervation of the stomach: T_{4-9}.
- Treat the mobility of the stomach and related structures:
    - Mobilize the diaphragm and the lower ribs.
    - Mobilize the lesser omentum.
    - Mobilize the greater omentum.
    - Drain the subdiaphragmal organs.

General mobilization of the lower ribs in the frontal plane

The patient is sitting on the table with the thorax and spine straight.

The osteopath stands behind the patient and contacts around the lower ribs with both hands.

During inhalation he/she lifts the lower ribs in cranial direction and in caudal direction during exhalation around an anteroposterior axis.

During inhalation the thoracic spine must be brought in extension and during exhalation in flexion.

Video 14 - Mobilization of the lower ribs in the frontal plane

This indicates that sensory input via the ophthalmic division of the trigeminal nerve increases this phenomenon.

The technique

The patient inhales deeply and holds his/her breath as long as possible.

A rest phase of 2 minutes is given.

The apnea is repeated 3 times.

The patient is advised to repeat this several times per day.

This technique provides a training effect upon the contractility of the spleen and increases the oxygen saturation of the blood.

Manual stimulation of the spleen

The patient is sitting on the table.

The osteopath stands behind the patient.

He/she palpated the spleen under the left diaphragm dome and stimulates the organ without provoking pain.

Video 49 - Stimulating palpation of the spleen

- It’s common to experience periodic disease flare-ups.
- There are also periods of remission, meaning without symptoms.

Risk factors:

- Younger people, late teens and 20s or early 30s.

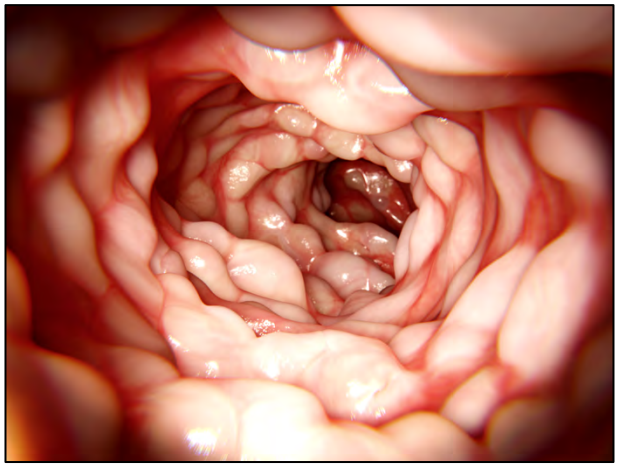

Figure 91 - Crohn's disease - internal view

Possible complications:

- Anemia is common in this type of patients.
- Anal fissures.
- Bowel obstruction.
- Malnutrition.
- Ulcers.

3.6.1.3. Assessment

- Blood tests (white blood cell count).
- Stool test (for bacteria or parasites).
- Coloscopy.
- CT-scan.
- Endoscopy.

Mobilization of the small intestine

The patient is supine on the table.

The osteopath stands next to the table.

He/she contacts the intestines with both hands and mobilizes the small intestine in different directions.

Video 51 - Mobilization of the small intestine

Prevention:

- After abdominal surgery (minimal 6 weeks) or after intestinal infection of inflammation, an osteopathic treatment of the abdomen can be useful. The aim is then to stretch adhesions and provide a good intestinal mobility.
- When there are hernias: surgery in necessary:
    - Inguinal hernia.
    - Abdominal hernia.

3.6.4. Intestinal Ptosis

3.6.4.1. Pathophysiology/Anatomy/Causes

This is a combined problem of:

- Weak abdominal muscle tone.
- Weak stomach muscle tone (gastroparesis).
- Asthenia.
- Diaphragm weakness (the caudal pressure of the diaphragm doesn't reach the pelvic region anymore).
- Pelvic congestion because of the diaphragm dysfunction.
- Often increased lumbar and cervical lordosis and compression of the lumbar and cervical facet joints.
- Often increased thoracic kyphosis.

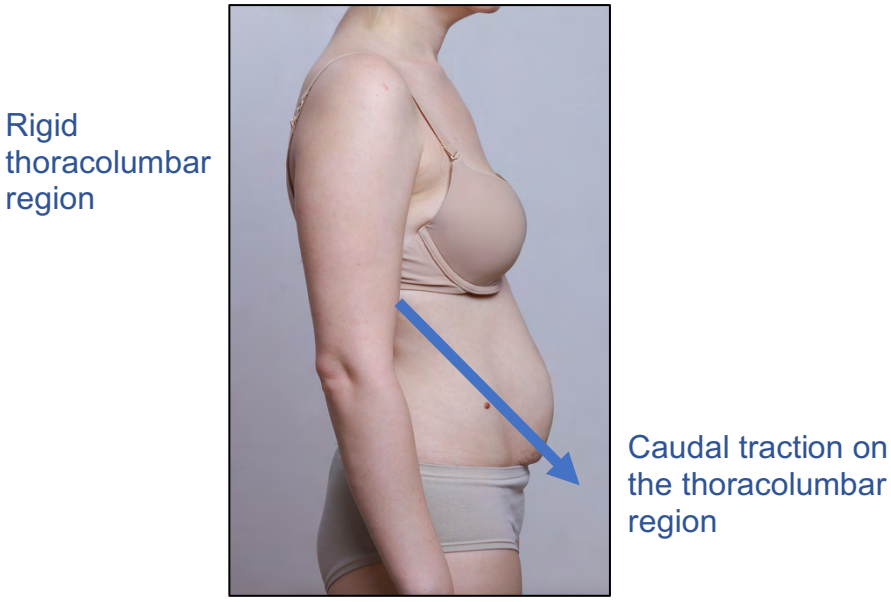

Figure 92 - Intestinal ptosis

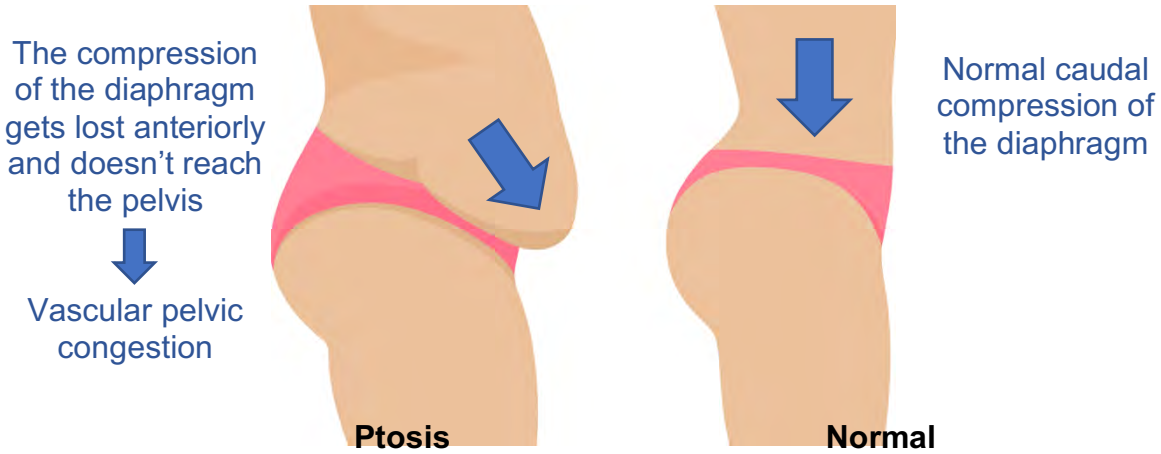

Figure 93 - Influence on diaphragm function and pelvic congestion

Visceral test for an adhesion rectum – piriformis

The patient is supine, the legs in flexion.

The osteopath stands next to the patient and test for pain and resistance on the lateral sides of the rectum.

The test direction is caudal.

The adhesion between rectum and the myofascia of the piriformis muscle goes together with:

- External rotation of the hip.
- Pain when palpating the piriformis muscle.
- Pain when palpating in the infrapiriforme fossa.

Video 61 - Visceral test for an adhesion between rectum and piriformis

The best treatment therefore is to treat the microbiota with:

- Pro- and prebiotics.
- Healthy diet.
- Healthy lifestyle.

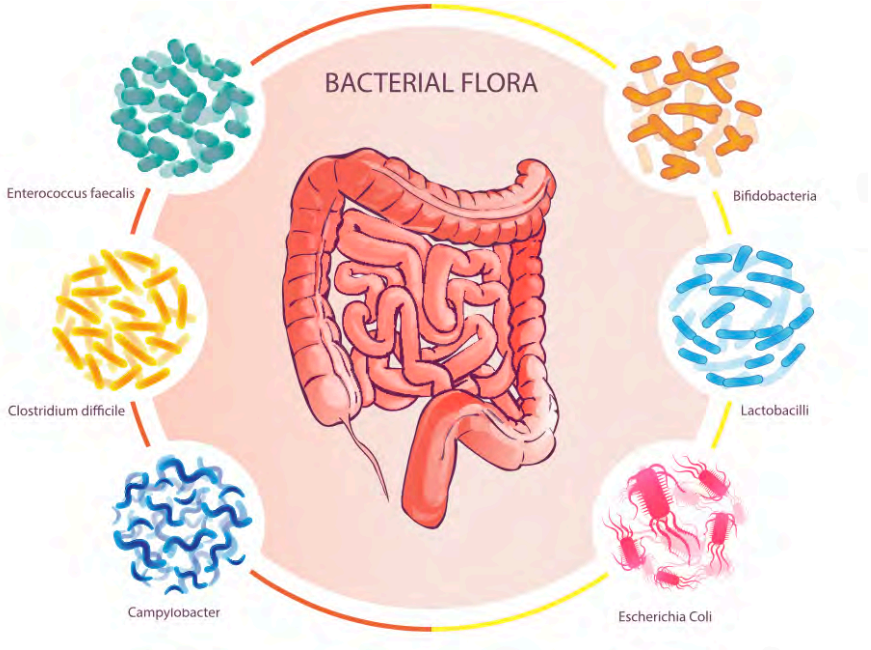

Figure 117 - Colon bacteria

Mobilization of the kidney

The patient is supine on the table, best in Trendelenburg and the legs in flexion.

The osteopath stands next the patient.

He/she contacts the inferior side of the kidney and mobilizes in a cranio – medial direction.

Video 66 - Mobilization of the kidney

3.6.12. Ischemic Small Intestine or Colon

Intestinal ischemia occurs when the blood flow through the major arteries that supply blood to your intestines slows or stops.

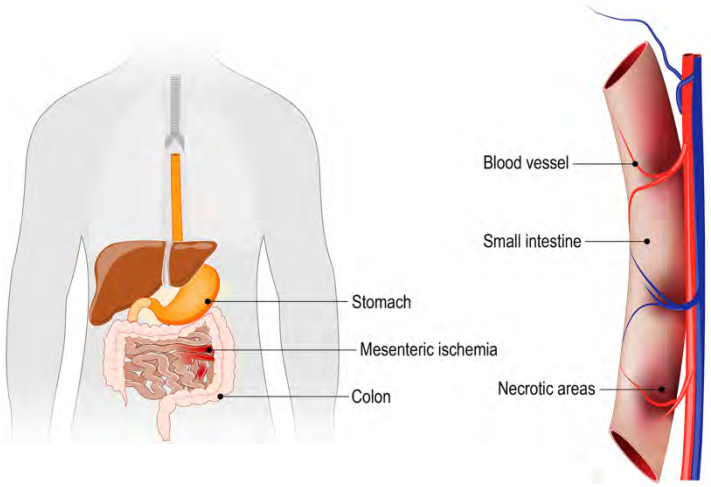

Figure 119 - Mesenteric ischemia

Ischemia because of bad venous flow from the intestine

A blood cloth can also develop in the veins that drain deoxygenated blood from the intestine.

This is called mesenteric venous thrombosis.

Possible causes are:

- Pancreatitis.
- Abdominal infections.
- Cancers of the digestive system.
- Bowel diseases, such as ulcerative colitis, Crohn's disease or diverticulitis.
- Hypercoagulation disorders.
- Medications such as estrogen that can increase clotting risk.
- Abdominal injuries.

Risk factors are:

- Age.
- Smoking.
- Heart disease.
- Obstructive pulmonary disease.
- Blood clothing disease.
- Drug use.

Possible complications:

- Necrosis of intestinal tissue (gangrene).
- Perforations.
- Scarring or narrowing off the gastrointestinal lumen.
- Can be fatal.

These conditions are no osteopathic indication.

- Rectum.
- Lower part ureters.

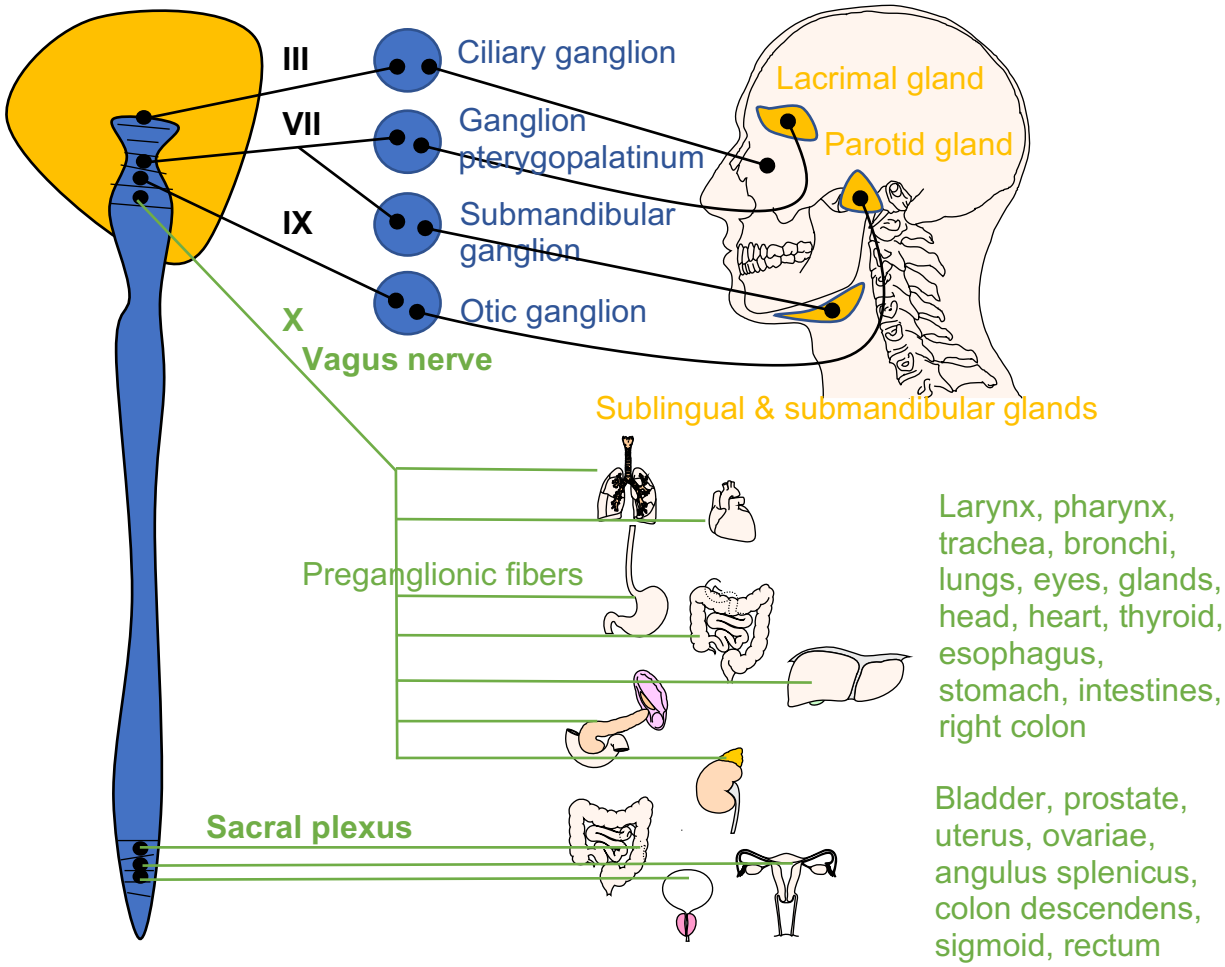

Figure 124 - Parasympathetic system

- Influence the sympathetic system for the gastrointestinal tract:
  - T_{2-6}: esophagus.
  - T_{5-9}: stomach, duodenum.
  - T_{10-12}: small intestine and right colon.
  - L_{1-2}: left colon, sigmoid and rectum.

3.7. The Kidneys, Ureters and Adrenals

The kidneys lie in the retroperitoneal space.

The right kidney lies a little bit lower that the left because of the position of the liver.

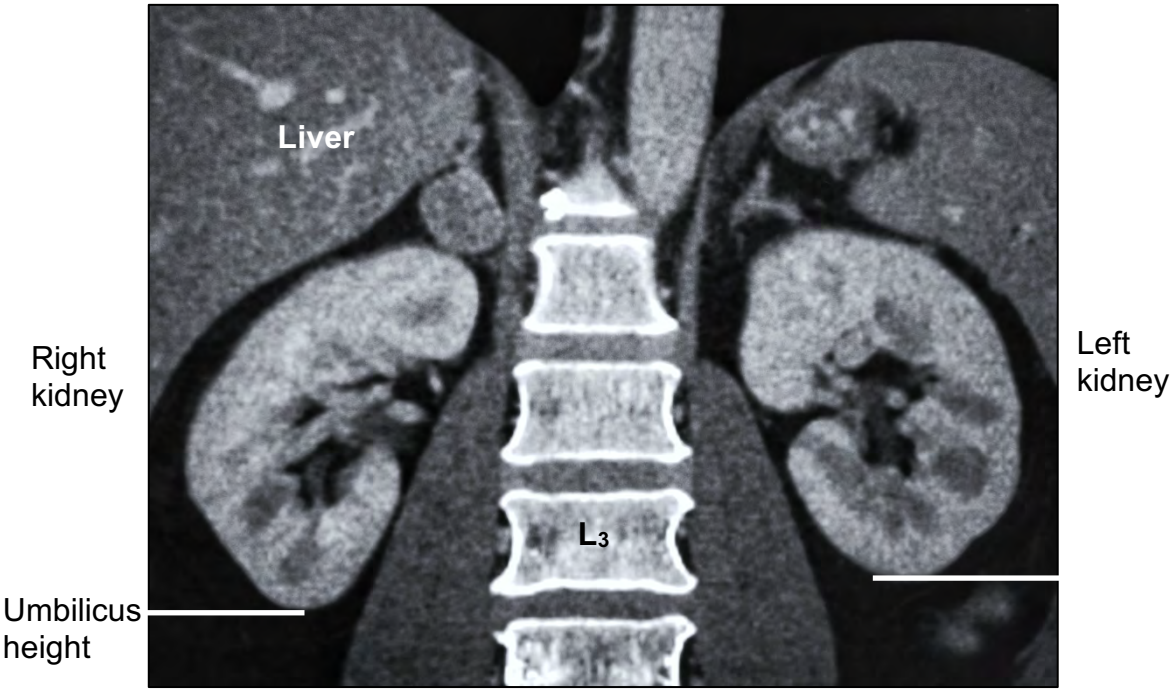

Figure 126 - Position of the kidneys

The adrenal glands lie on the supero-medial surface of the kidneys.

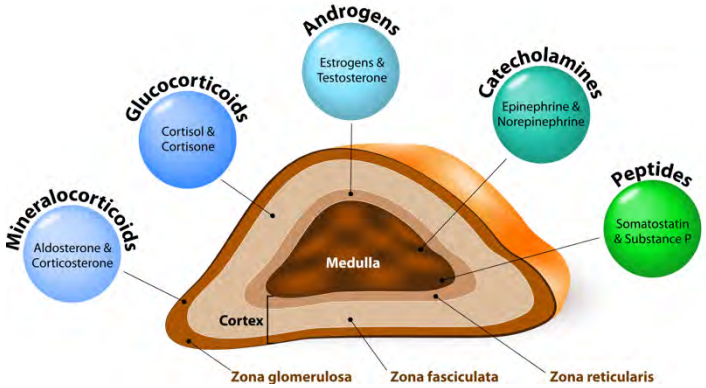

Figure 127 - Hormone production of the adrenal gland

Esophagus and cardia

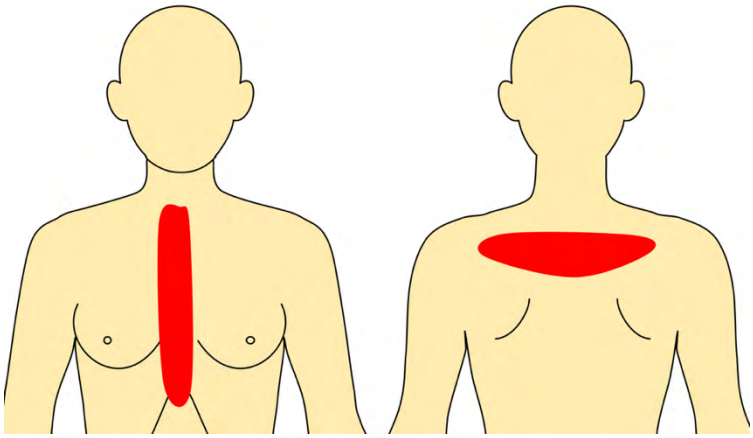

Figure 148 - Referred pain area from the esophagus

Stomach

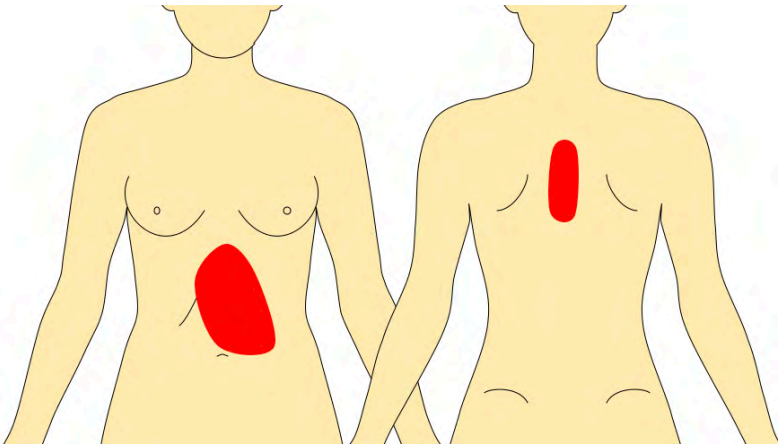

Figure 149 - Referred pain area from the stomach

Liver and gallbladder

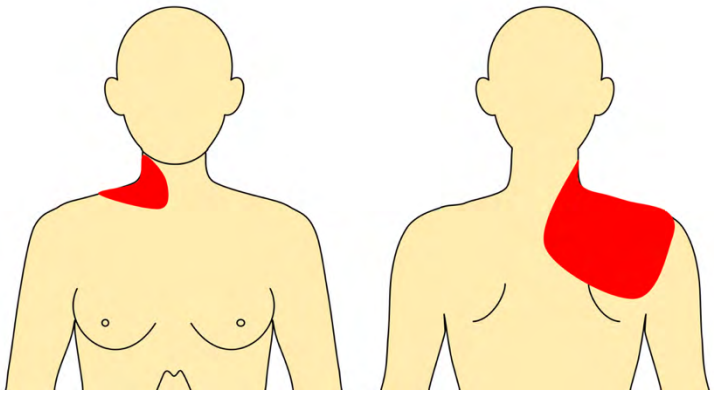

Figure 150 - Referred pain area from the liver, gallbladder or duodenum through the phrenic nerve

3.9. Somatovisceral Relation

The nerve supply to the spinal segments follows a specific pattern.

Inflammation of a vertebral structure can cause visceral pain through the relation with the sinuvertebral nerves and the autonomic nervous system.

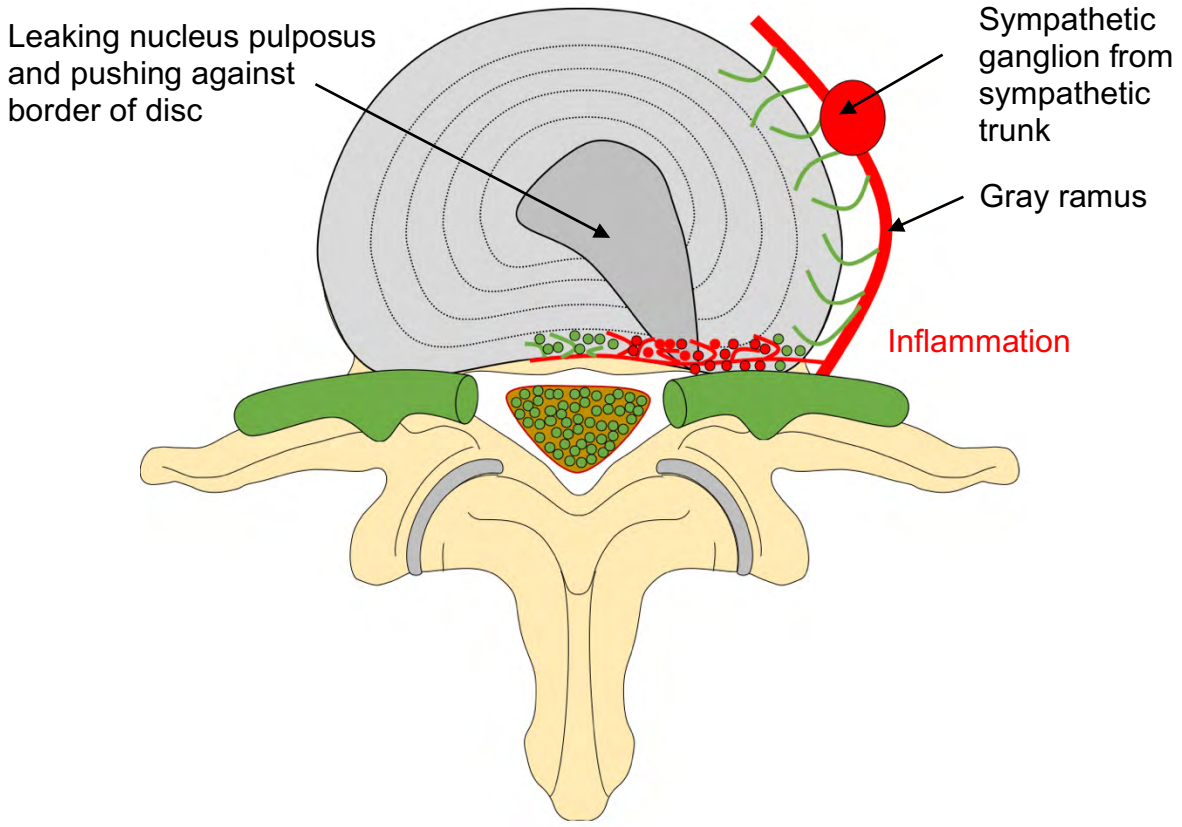

Figure 159 - Discitis for example can irritate the sympathetic trunk and cause visceral complaints

- The sinuvertebral (recurrent) nerve is for example involved in diffuse low back pain because of its pathway and its sympathetic component. This nerve cannot directly reach a somatic element at each level of the lumbar spine but must first reach the L_2 spinal ganglion. The pain therefore takes another route through the sympathetic system.
- Discogenic pain is mediated by the sinuvertebral nerves, and through the rami communicantes reaches the L_2 spinal ganglion.
- The lumbar sinuvertebral nerves had up to three segmental levels of overlap, which might explain the poor localization of low back pain.
- The posterior part of the human disc is supplied not only from the sinuvertebral nerve but also receives direct branches in its postero-lateral aspect from the ramus communicans or the ventral ramus.

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Master of Science in Osteopathy (MSc.Ost) - UAS

Luc Peeters is an osteopath since 1985. He was the Joint-Principal of the largest Academy of Osteopathy in Europe from 1987 till 2020. He provided curricula, syllabuses and academic recognition from several universities.

This book gives a practical overview of the abdominal organs, their basic anatomy, their basic physiology, their mobility and their osteopathic approach in observation, palpation, tests, techniques and treatment strategies.

The theory and procedures in this book are checked on their scientific background and esotericism is avoided.

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