Surgery – Post-Operative Ileus

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Intro: Post-operative ileus refers to the difficulty of oral intake and non-mechanical bowel obstruction that occurs after surgery. It usually lasts approximately 1-3 days after surgery with some variation along the length of the bowel. The development of post-operative ileus involves the activation of neural inhibitory reflexes involving enteric \( \mu \) opioid receptors and inflammation that reduces smooth muscle contractility. In the gut, vagal afferents are thought to be important in the coordinated integration of motility, secretion, and absorption while spinal afferents are thought to be responsible for the transmission of noxious stimuli and inflammation. Visceral motor efferent outflow consists of the sympathetic thoracolumbar and parasympathetic craniosacral arms of the ANS. There are also independent mechanisms through neurohumoral peptides, such as substance P, vasoactive intestinal peptide (VIP), and nitric oxide (NO).

The condition is exacerbated by opioids, which are commonly used by clinicians for post-operative pain relief. Prolonged post-operative ileus is hard to treat, and therefore considerable efforts are made to prevent its occurrence, including use of epidural anesthetics, minimally invasive surgeries, and reduced narcotic administration. However, all of those listed also carry their own risks.

Patient presentations:

- Abdominal distention, bloating
- Diffuse, persistent abdominal pain
- Nausea and/or vomiting
- Delayed passage of or inability to pass flatus
- Inability to tolerate an oral diet

Differential Diagnoses

- Mechanical small bowel obstruction
- Acute colonic pseudo-obstruction (Ogilvie’s syndrome)
Clinical Pearls/Caveats

• Identify reversible contributing factors (i.e. hypokalemia)

• Rule-out other serious conditions that require surgery such as mechanical bowel obstruction or bowel perforation, to avoid further morbidity

OOMM Integration: In a chart review, Crow and Gorodinsky demonstrated that the length of hospital stay for post-operative ileus patients receiving OMT (11.8 days) was significantly shorter compared to post-operative ileus patients not receiving OMT (14.6 days). The regions of examination and treatment focused on removing balancing autonomies of the gastrointestinal system, removing structural restriction to lymph flow, and promoting lymphatic flow. Another study conducted by Baltazar et al. showed that patients receiving OMT had a mean time to flatus of 3.1 (SD = 0.6) days compared to 4.7 (SD = 0.4) days in the non-OMT group (p = 0.035). The mean length of stay for patients receiving OMT was 6.1 (SD = 1.7) days compared to 11.5 (SD = 1.0) days in the non-OMT group (p = 0.006).

Osteopathic Structural Examination: The following areas were addressed in patients with post-operative ileus which contributed to a shorter hospital stay:

- Occipitomastoid (OM) suture
- Cervical spine
- Thoracic spine
- Ribs
- Diaphragm
- Mesentery
- Celiac, superior mesenteric and inferior mesenteric ganglia
- Lumbar spine
- Sacrum
- Pelvis
- Thoracic inlet

Possible treatments options:

- Occipitomastoid (OM) spread
- Mesenteric lift
- Ganglion release (celiac, superior mesenteric, inferior mesenteric)
- Myofascial to the cervical, thoracic and lumbar region
- Rib raising
- Sacral rock
- Thoracic outlet release
- Siphoning techniques
- Diaphragm doming
- Pelvic diaphragm release

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