Prolonged Paralytic Ileus Following An Incarcerated Inguinal Hernia Repair

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Case Background

Postoperative Ileus is a very common problem patientS face following abdominal surgery. In the U.S. alone postoperative ileus accounts for approximately 750 million to 1 billion dollars in hospital stays. The hallmark of a postoperative ileus is decreased gastrointestinal motility following a surgical procedure. Historically, it was believed that intraoperative manipulation of the intestines were to be the cause. However, the mechanism is not well understood. Some mechanisms believed to play a role are: neurogenic, inflammatory, or pharmacologic. Increased sympathetic tone postoperatively is believed to also play a significant role. Once other causes have been ruled out, supportive management of an ileus is the next step. Supportive care can include: electrolyte replacement, intravenous fluids, ambulation with physical therapy, pain control, and limiting opioid exposure. However, we wanted to explore if osteopathic treatment could play a role aiding in the resolution of an ileus.

Discussion

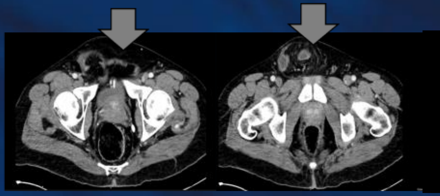
In our patient's case this postoperative ileus took 12 days to resolve. He was uncomfortable and unable to eat or drink. While his bowel function did return with standard of care supportive medicine, is it possible that the addition of osteopathic treatment could have hastened his return of bowel function? Not all hospital models may provide an osteopathic trained surgeon the time to provide osteopathic treatment to their patients. It may be appropriate for hospitals to consider employing an osteopathic treating physician for this purpose. Research suggests that patients and hospital systems will benefit from the application of osteopathic treatment in these patients. Future research on this subject could include comparing a hospital system that employs an osteopathic trained physician to perform osteopathic therapy on these patients, and one that does not.

Case Report

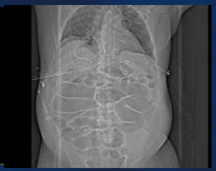
67-year-old male with a distant history of right inguinal hernia. Hernia was repaired via herniorrhaphy approximately 45 years ago. Patient experienced acute onset pain during a bowel movement. Patient reported 10/10, nonradiating pain in the right hemiscrotum, not relieved by over-the-counter pain medications. At that time he was denying nausea or vomiting. On physical examination, abdomen was soft and nondistended. A large firm lump was appreciated in the right groin and extending into the right hemiscrotum. Hernia is tender to palpation, and nonreducible. No overlying skin changes were appreciated. Of note, patient was bradycardic and deaf.

Decision was made to take patient to the operating room where his hernia was repaired with mesh. Patient had a direct and indirect hernia with small bowel incarcerated in the defect. Small bowel appeared viable at that time.

Following repair patient was unable to advance diet and was not demonstrating and return of bowel function. After several days decision was made to take patient back to the operating room for a diagnostic laparoscopy. During the operation it was noted patient had a stricture in the segment of bowel that was incarcerated. This segment was resected and a nasogastric tube was placed. Patient took 12 additional days before he demonstrated return of bowel function. His diet was slowly advanced, and he was able to be discharged.



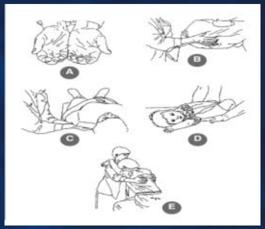
CT abdomen pelvis: demonstrating right inguinal hernia containing multiple loops of small bowel. No evidence of obstruction.



CT Chest Abdomen Pelvis: demonstrating right lower lobe atelectasis. Dilated fluid-filled loops of small bowel with multiple angulated bowel loops in the midabdomen deep to a midline incision site. Concerning for small bowel obstruction.

Osteopathic Treatment

While the mechanism for an ileus is not well understood, some of the proposed mechanisms include inflammation and increased sympathetic tone. An osteopathic technique, rib raising, has the potential to help address both of these problems. Research has demonstrated that rib raising may decrease alpha-amylase activity after a 10-minute session. This suggests that rib raising may decrease overall sympathetic tone. Rib raising also has the potential to promote lymphatic drainage which can decrease the presence of inflammatory mediators and immune cells. Some studies have suggested that patients who undergo osteopathic treatment while suffering from an ileus have an approximately 3 day shorter stay in the hospital. These studies demonstrated a faster return of bowel function, as well as significant reduction in pain.



This image demonstrates: hand position, hand placement, lifting rib angles, rib raising in infants, and rib raising when patient is in a seated position

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