

Protocol for Water Soluble Contrast for Conservative Management of Adhesive Small Bowel Obstruction

Patient group: Children with clinical signs of adhesive small bowel obstruction (aSBO) – no age limit

Goal: Use water soluble contrast to prognosticate aSBO resolution with conservative management

Exclusion criteria: High risk of aspiration, known active abdominal malignancy or clinical indications for urgent surgical intervention such as: peritonitis, perforation, or clinical suspicion for bowel strangulation, volvulus or ischemia.

Contrast agent and dosing: Gastroview (diatrizoate meglumine sodium, osmolality 2000mOsm/kg H₂O, 370mg Iodine/ml, packaged in 30ml bottles).

- Less than 2 years old: administer 45 ml dilute Gastroview (15 ml Gastroview, 30 ml water)
- 2 to 4 years old: administer 30 ml full strength Gastroview
- 5-10 years old: administer 60 ml full strength Gastroview
- Greater than 10 years old: administer 90 ml full strength Gastroview

Order set in Epic: “Adhesive Small Bowel Obstruction Conservative Management”

Protocol:

1. ED/Inpatient evaluated by surgical team, identified as clinical concern for aSBO appropriate for conservative management.
2. The surgery resident, fellow or attending physician places the order set in EPIC and calls 51-RADS to speak with the fluoroscopy radiologist or technologist.
3. The patient is brought to Fluoroscopy during day shift (between 8am and 3pm). Under fluoroscopy, the NG tube position is confirmed with a scout image and then contrast is injected into the stomach. If the patient has a G tube, contrast can be injected through the G tube. If the patient has a GJ tube, contrast can be injected through the J port. Scout and contrast images (2 images total) are saved and sent to PACS. Nursing supervision of the patient is maintained at the same level required on the inpatient unit.
4. After contrast administration, the patient returns to the ED/inpatient unit. The NG tube is clamped for 1 hour by the nursing staff, then placed back to suction. Surgery will manage NG tube orders as needed after this point.
5. The fluoroscopy radiologist will sign out the follow-up imaging to the appropriate radiologist with help from the reading room assistant at 51-RADS.
6. At 8 hours after contrast administration, a supine AXR is taken in the Medical Imaging department. Image is checked by the radiologist, and need for decubitus imaging is assessed. If the patient is in the ICU, imaging can be obtained portably.
7. If contrast has reached the cecum by 8 hours, there is no small bowel obstruction and the protocol is terminated. The surgery team discontinues the NG tube and advances the patient’s diet. The radiology technologist cancels the 24 hour AXR order.

8. If contrast has not yet reached the cecum by 8 hours, a follow-up supine AXR is acquired in the Medical Imaging department 24 hours after contrast administration. Image is checked by the radiologist, and need for decubitus imaging is assessed. If the patient is in the ICU, imaging can be obtained portably.
9. If contrast reaches the cecum by 24 hours, there is no bowel obstruction. The surgery team discontinues the NG tube and advances the patient's diet.
10. If contrast does not reach the cecum by 24 hours, the patient is considered positive for aSBO and additional management is directed by the surgery team.
11. Images from each time point (immediate, 8 hours, 24 hours) are dictated separately and finalized in Powerscribe in a timely fashion. The radiologist documents communication with the surgical team. The 8 and 24 hours x-ray orders are for 1 or more images. An additional order is not needed for multiple views.