SMALL BOWEL FOLLOW-THROUGH .

is study that use to examination the small bowel morphology and disease by using barium contrast media .

Methods

1. Single contrast
2. With the addition of an effervescent agent
3. With the addition of a pneumocolon technique.

Indications

1. Pain
2. Diarrhoea
3. Anaemia/gastrointestinal bleeding unexplained by colonic or gastric investigation
4. To assess small bowel Crohn's disease status
5. Partial obstruction
6. Malabsorption.

Contraindications

1. Complete or high-grade obstruction. This is usually better evaluated by CT examination (without oral contrast) using the intraluminal fluid caused by the obstruction as a natural contrast agent.
2. Suspected perforation (unless a water-soluble contrast medium is used).

Contrast medium

E-Z Paque 100% w/v 300 ml usually given divided in 10–15-min increments, although some radiologists give the full 300 ml at once. The transit time through the small bowel has been shown to be reduced by the addition of 10 ml of Gastrografin to the barium. In children, 3–4 ml kg−1 is a suitable volume.
In general water-soluble small bowel contrast studies are avoided as contrast becomes diluted in small bowel fluid resulting in poor mucosal detail compared with barium. An exception is in adhesional small bowel obstruction where conservative investigation and 'treatment' with water-soluble contrast agents, frequently Gastrografin, may reduce the need for surgical

intervention.1 In this case limited images are usually acquired at 1, 4 and 24 h, stopping once contrast is seen in the colon.
Patient preparation
Metoclopramide 20 mg orally may be given before or during the examination.

Preliminary image

Plain abdominal film is used if high-grade small bowel obstruction is thought possible.

Technique

The aim is to deliver a single continuous column of barium into the small bowel. This is achieved by the patient lying on their right side after the barium has been drunk. Metoclopramide enhances the rate of gastric emptying. If the transit time through the small bowel is found to be slow, the addition of Gastrografin may help to speed it up. If a follow-through examination is combined with a barium meal, glucagon can be used for the duodenal cap views rather than Buscopan because it has a short length of action and does not interfere with the small-bowel transit time.

Images

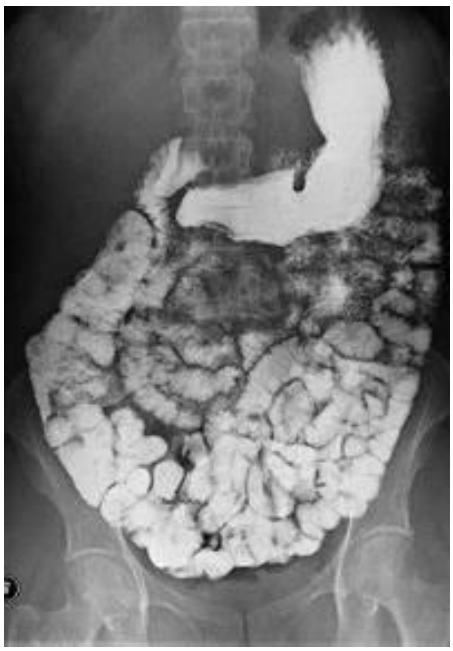
1. Prone PA images of the abdomen are taken every 15–20 min during the first hour, and subsequently every 20–30 min until the colon is reached. The prone position is used because the pressure on the abdomen helps to separate the loops of small bowel.
2. Each image should be reviewed and spot supine fluoroscopic views, using a compression device or pad if appropriate, may be considered.
3. Dedicated spot views of the terminal ileum are routinely acquired.

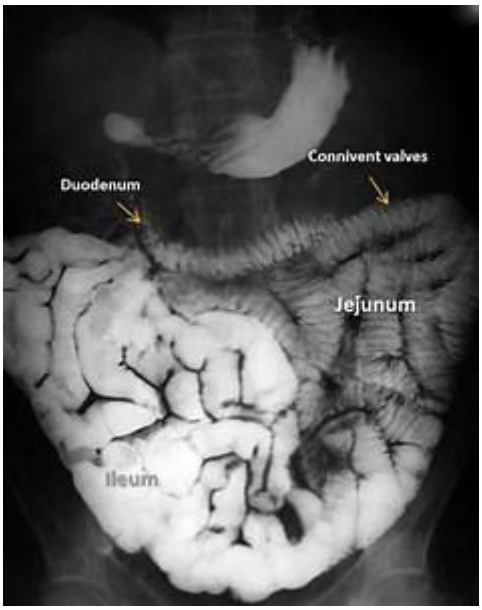
Additional images

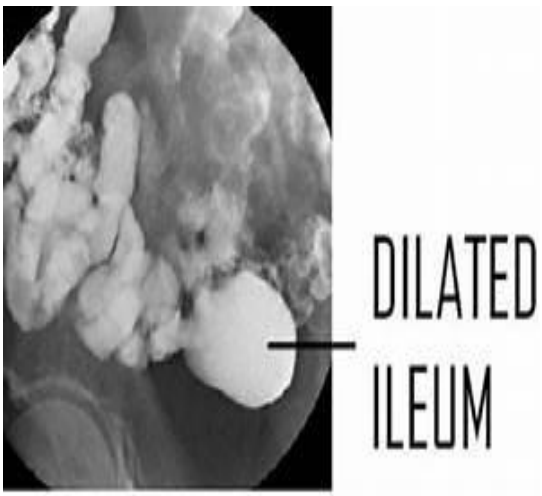
1. To separate loops of small bowel:
(a) compression with fluoroscopy
(b) with X-ray tube angled into the pelvis
(c) obliques – in particular with the right side raised for terminal ileum views, or
(d) occasionally with the patient tilted head down.
(e) pneumocolon.2 Gaseous insufflation of the colon via a rectal

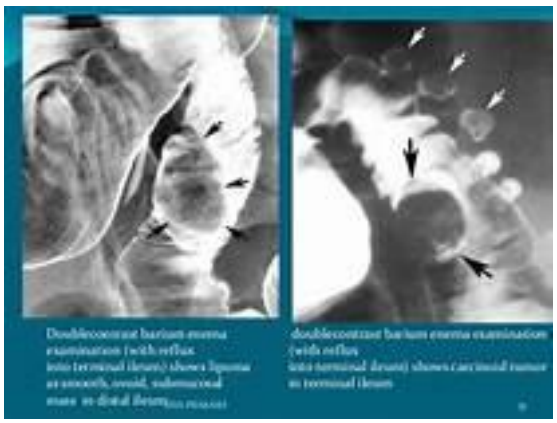
tube after barium arrives in the caecum often results in good-quality double-contrast views of the terminal ileum.
2. Erect image – occasionally used to reveal any fluid levels caused by contrast medium retained within diverticula.

Aftercare
As for barium meal.
Complications
As for barium meal.




Duodenum
Connivent valves
Jejunum
Ileum


DILATED
ILEUM




Stricture at terminal ileum