



SNS COLLEGE OF ALLIED HEALTH SCIENCES
SNS Kalvi Nagar, Coimbatore - 35
Affiliated to Dr MGR Medical University, Chennai



DEPARTMENT OF RADIOGRAPHY AND IMAGING TECHNOLOGY

COURSE NAME : CONTRAST AND SPECIAL RADIOGRAPHY PROCEDURES

II YEAR

UNIT : 2

TOPIC : SMALL BOWEL ENEMA/ENTEROCLYSIS



INTRODUCTION



It is a radiographic study of the small bowel from the jejunum to the ileocecal junction. It is performed to diagnose structural and functional abnormalities of the small bowel through duodenum intubation followed by barium sulphate administration. The enteroclysis gives an accurate diagnosis of the small bowel disease. The examination may be performed by two methods-

A. Single Contrast Study – Single Contrast study is performed for the evaluation of small intestine disorders and abnormality.

B. Double –Contrast Study – Double –Contrast study is performed for the evaluation of the mucosal details.

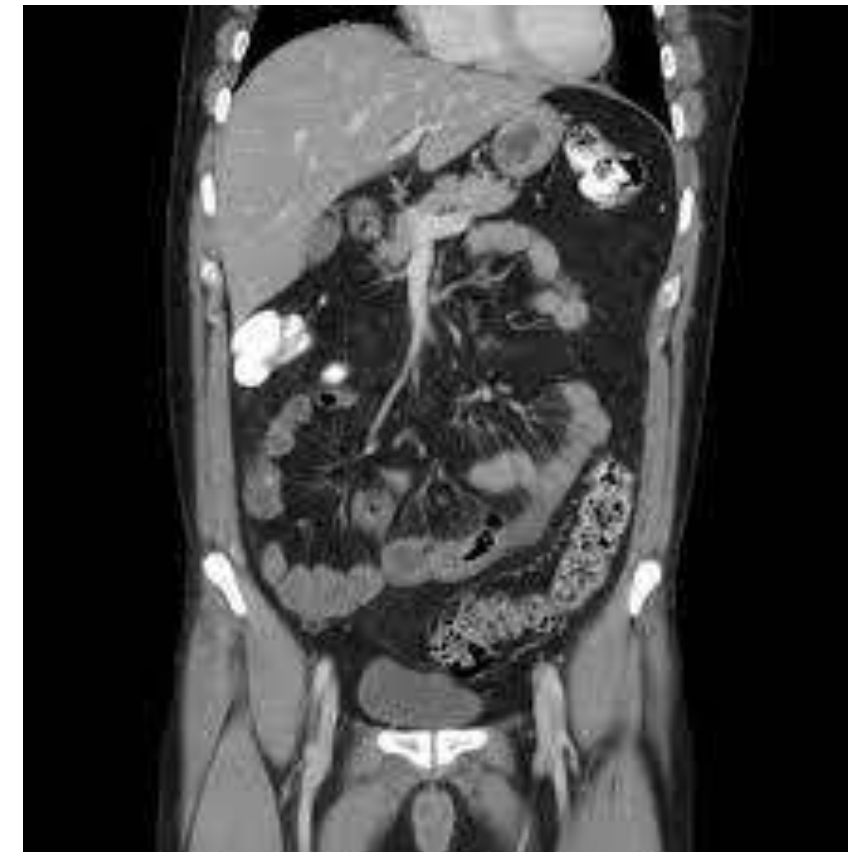




INDICATION



- Crohn's disease (Inflammatory bowel disease).
- Altered bowel habit.
- Anemia (gastrointestinal bleeding due to the intestinal ulcer).
- Chronic pain in the abdomen.
- Weight loss and malnutrition.
- Suspected mass and lesion in the small intestine.

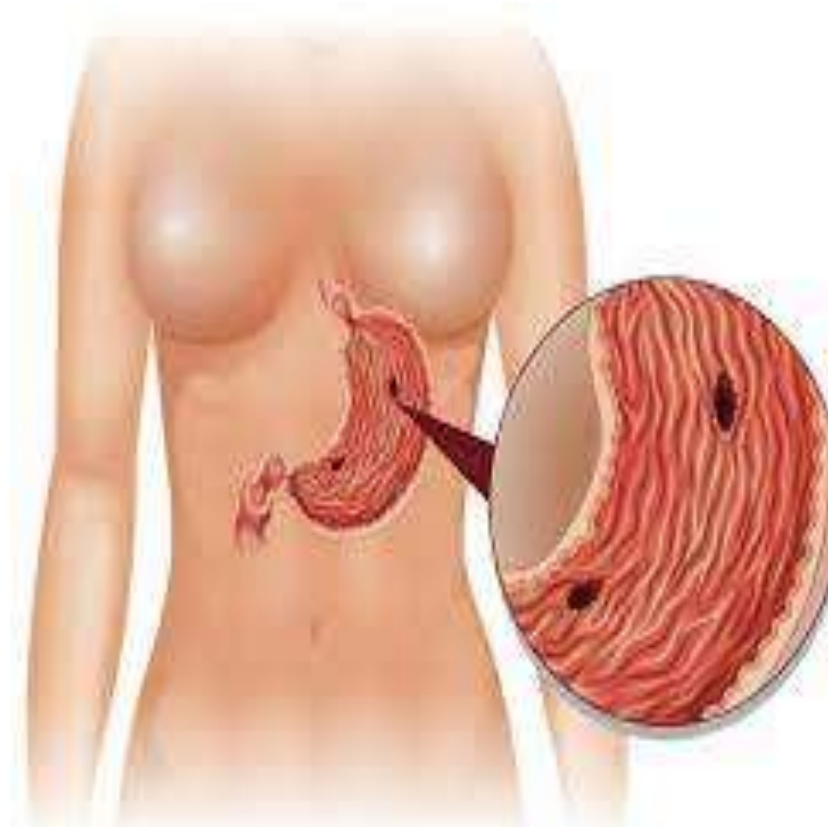




CONTRAINDICATION



- Suspected perforation.
- Suspected pregnancy.
- Paralytic ileus.
- Suspected duodenal obstruction.
- Allergy to barium sulfate.





PATIENT PREPARATION



- The patient is asked to take a low residue diet for two days prior to the examination and drink clear liquids the day before the examination.
- A laxative may be given to the patient, the night before the examination. A laxative is given for bowel preparation and cleansing prior to the examination because residue (feces) and gas can obscure the image.
- Fasting may be employed for 4-6 hours. Ask the patient not to eat or drink after midnight.
- Women should inform about any possibility of pregnancy. Pregnant women should not have a radiologic examination because of the risk of radiation exposure to the unborn baby.
- The patient is instructed not to smoke or eat chew gum because it prevents the proper coating of barium sulphate on the mucosa.
- The patient is instructed to remove all the metallic objects and metallic jewelry from the body.
- The radiologist must check the previous investigation reports.





EQUIPMENT



- Fluoroscopic unit with spot film device.
- Bilbao dotter tube with side holes and guide wire.
- Barium sulphate suspension thin density for single contrast and high density for double-contrast study.
- Local anesthetic spray and jelly.
- Carboxymethyl cellulose.





PROCEDURE



- On the day of the examination, the technologist should describe the whole procedure to the patient and obtain written consent from the patient for permission of procedure.
- The patient is asked to remove clothing and wear a hospital gown.
- The patient is placed in the erect position, and then a scout film of the abdomen is taken to see the bowel preparation. If the residual fecal matter or gas is present in the bowel, then the examination should be postponed for the next day.
- After a scout film evaluation, the patient is placed in a sitting position at the edge of the table with the neck hyperextended position. Then the topical anesthetic spray is given to the patient mouth.
- Later than the radiologist or gastroenterologist apply the anesthetic gel on the bilbaodottor tube and insert it with the guidewire, through the nose and advance into the pylorus of the stomach under the fluoroscopy guidance.



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- Then the patient is placed in the supine position, and the tube is advanced along with the duodenum at the level of the ligament of Treitz (muscles of the duodenum and jejunum junction) by maintaining the guidewire tip at the pylorus of the stomach.
- After placement of the tube, the guidewire is then removed.

➤ **Single Contrast Study -**

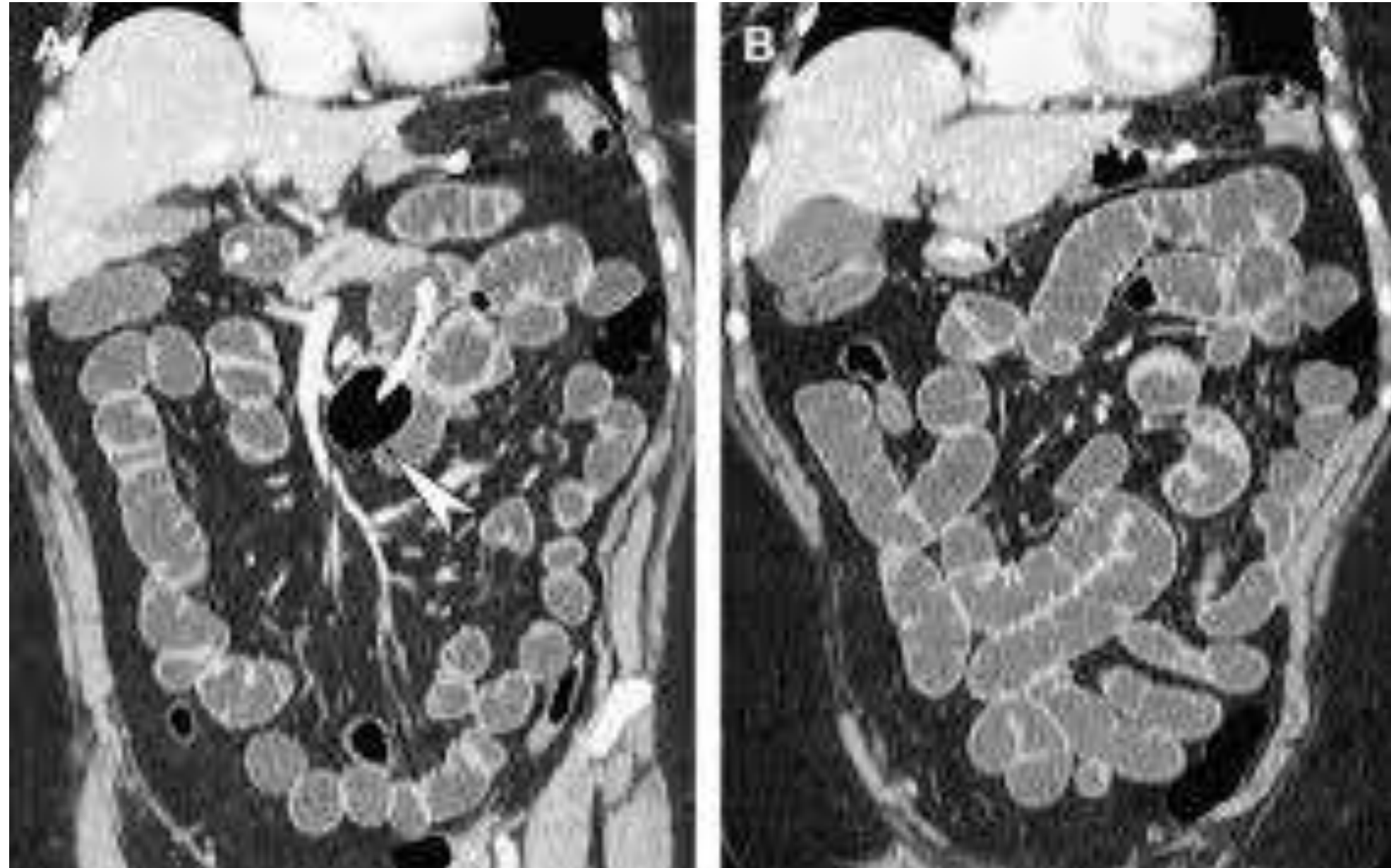
For the single contrast study, the thin density barium sulfate suspension is infused continuously through the tube under fluoroscopic guidance. Whenever the intestinal loops and the ileocecal junction are filled, the spot films are taken at frequent intervals under fluoroscopic control.

➤ **Double-Contrast Study -**

For double contrast study, approx 500 ml high – density low viscosity barium sulfate suspension is infused continuously through the tube under the fluoroscopy guidance. Whenever barium sulfate is reached at the proximal ileum, the methylcellulose is infused at the rate of 100 ml per minute until the barium sulfate reaches the ileocecal junction. The spot films are taken in prone and supine positions.

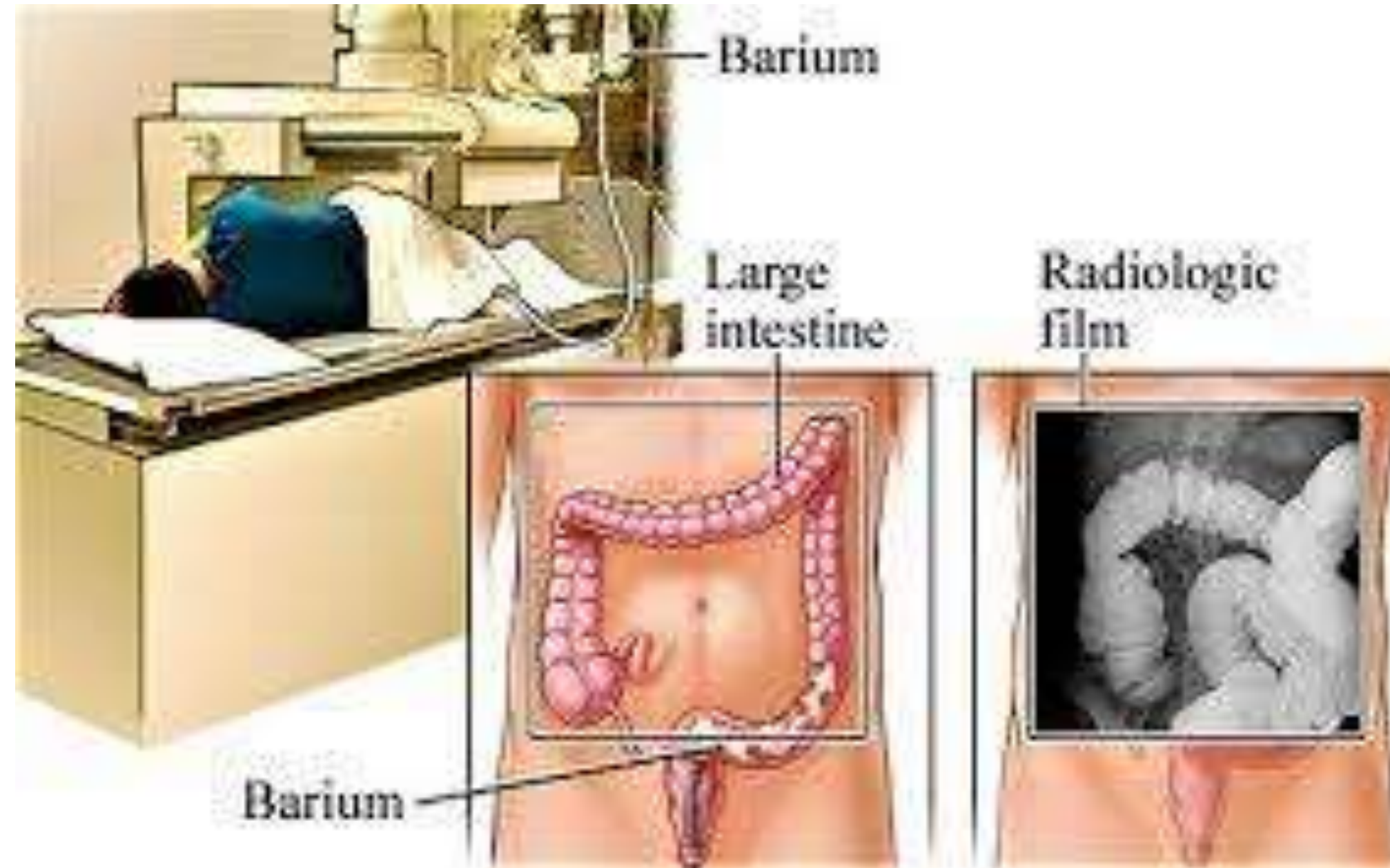


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AFTERCARE



- The patient is advised to increase the fluid intake to avoid constipation.
- Inform the patient about the feces will be whitish for two days.
- The patient will be allowed to leave the examination room after completion of the examination.







THANK YOU