



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 : BARIUM MEAL FOLLOW THROUGH (BMFT)



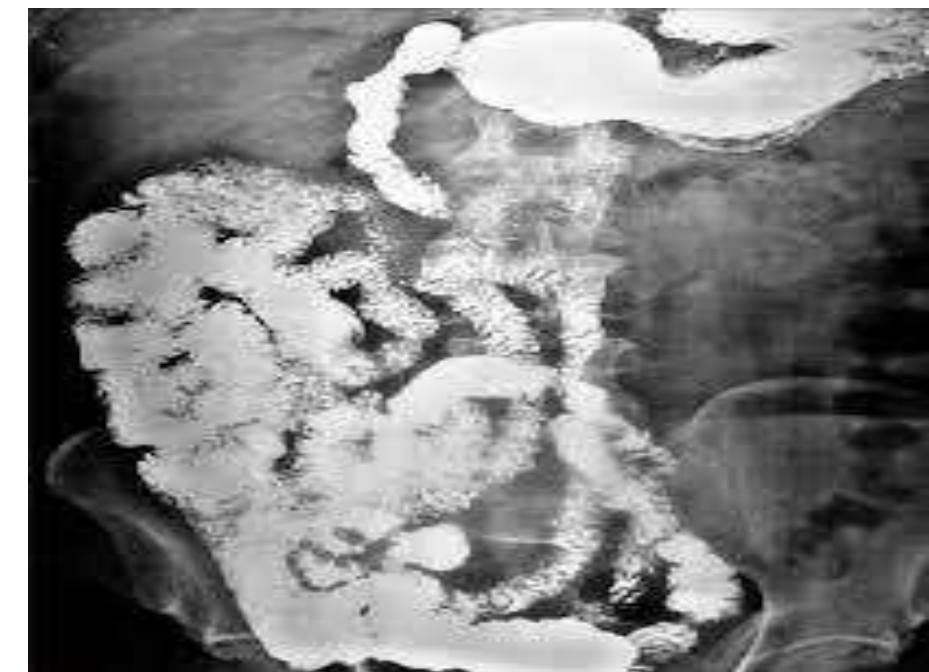
INTRODUCTION



It is a radiographic examination of the small bowel till the ileoceccal junction. Barium meal follow-through is performed to diagnose structural or functional abnormalities of the small intestine by using the barium sulfate contrast media. It may be performed as a separate or continuous with the upper gastrointestinal study (barium meal).

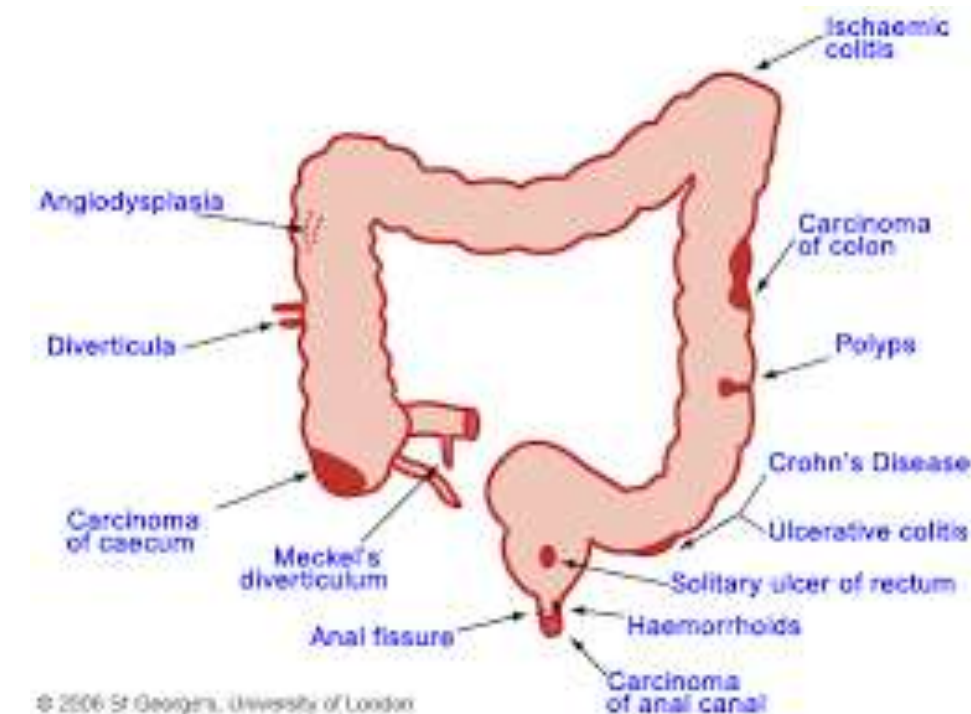
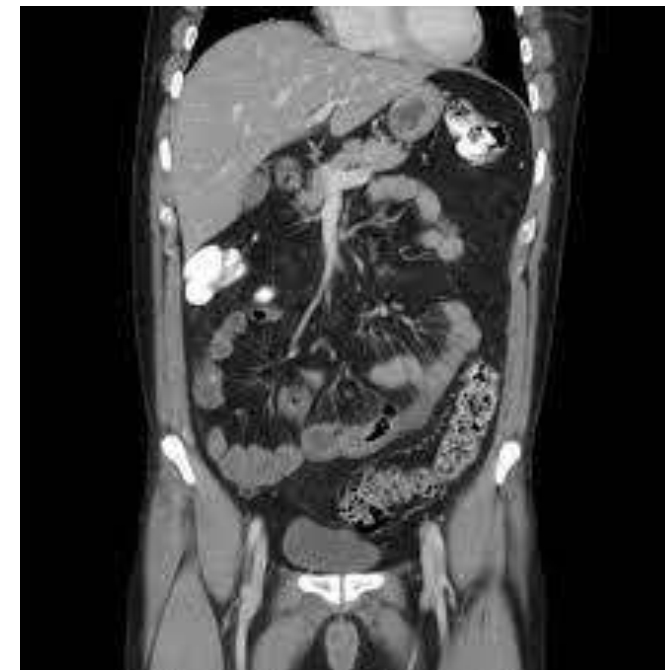
A. Single Contrast Study – Single Contrast study is performed for the evaluation of small intestine disorders and abnormality.

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



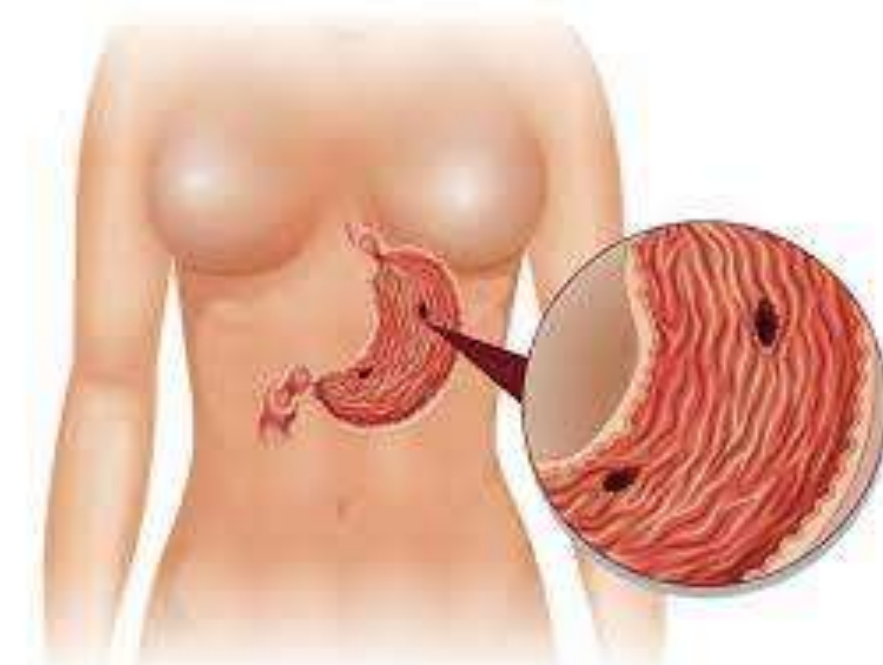
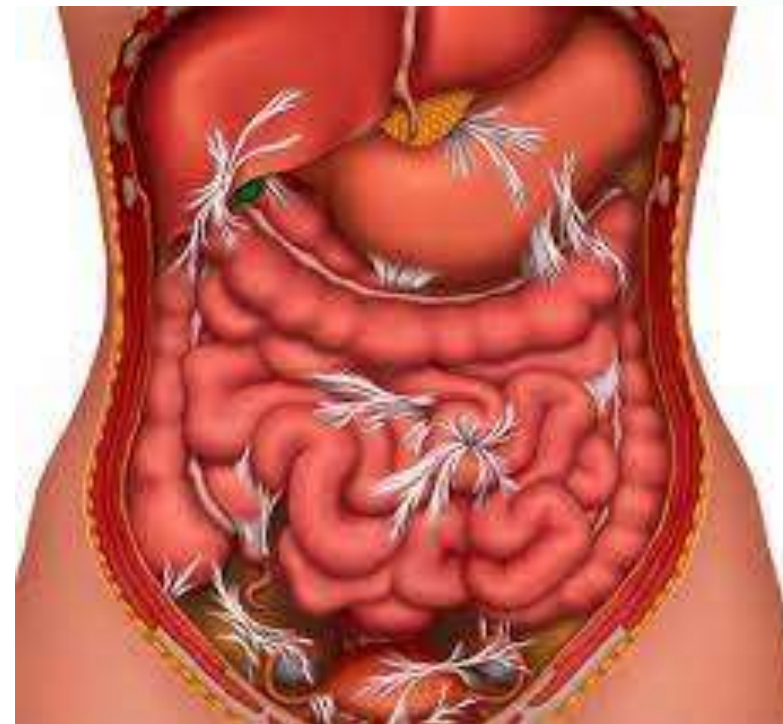
INDICATION

- Crohn's disease (Inflammatory bowel disease)
- Abdominal pain.
- Diarrhea.
- Loss of weight.
- Gastrointestinal bleeding.
- Partial obstruction.
- Diverticulosis (Pockets in the wall of GIT).
- Malabsorption (Unable to absorb nutrients).
- Suspected mass and lesions.



CONTRAINDICATION

- Paralytic ileus (Paralysis of the intestinal muscles).
- Recent G.I. surgery.
- Tracheo-oesophageal fistula (the connection between the esophagus and the trachea).
- Suspected perforation.
- Suspected pregnancy.
- Complete bowel obstruction.





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.





EQUIPMENT



- Fluoroscopic unit with Tilting table attached image intensifier or spot film device/high – speed cassettes.
- Medium density of barium sulfate suspension.
- Effervescent powder (gas – producing agent) for double-contrast study.





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.
- **Single Contrast Study –**
- The patient is placed in the supine position on the fluoroscopic table, and then a scout film of the abdomen is taken to see the bowel preparation. If the residual fecal matter is present in the bowel, then the examination should be postponed for the next day.
 - The patient is placed in an upright position. Then the head is turned behind at the fluoroscopic screen then the patient is instructed to take 10 to 15 ml barium sulfate (one mouthful) and swallow it. The passage of barium is examined by the radiologist under the fluoroscopy machine.



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- After the fluoroscopic examination of the esophagus, the patient is placed in the supine position on the fluoroscopic table then 150 ml thin density barium sulfate is given.
- After then rotate the patient in clockwise to make a coating of barium on the stomach mucosa.
- Afterward, the patient is placed in the prone position; in this position, the barium enters in the duodenum through the pylorus of the stomach.
- The radiologist observes the flow of barium sulfate in the stomach under the fluoroscopy.
- After the evaluation of the stomach, the patient is asked to drink medium density 400 ml barium sulfate rapidly.
- Afterward, turn the patient in the right side down position for gastric emptying for 15 minutes, then the patient is placed in the prone position to separate the bowel loops.



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- After then the radiologist observes the flow of barium sulfate in the jejunum and proximal ileum under the fluoroscopy. Whenever barium fills the jejunum and proximal ileum, and then spot film of the jejunum and proximal ileum is taken.
- Consequently, the radiologist monitors the flow of barium sulfate after every 30 minutes until the barium reach at the terminal ileum.
- When barium is visualized in the terminal ileum, the patient is placed in a supine position, then turns the patient's right side slightly up, and spot film of the ileocecal junction is taken.
- As barium reach in the caecum or in ascending colon, the full-length radiograph of the abdomen should be taken in AP projection.



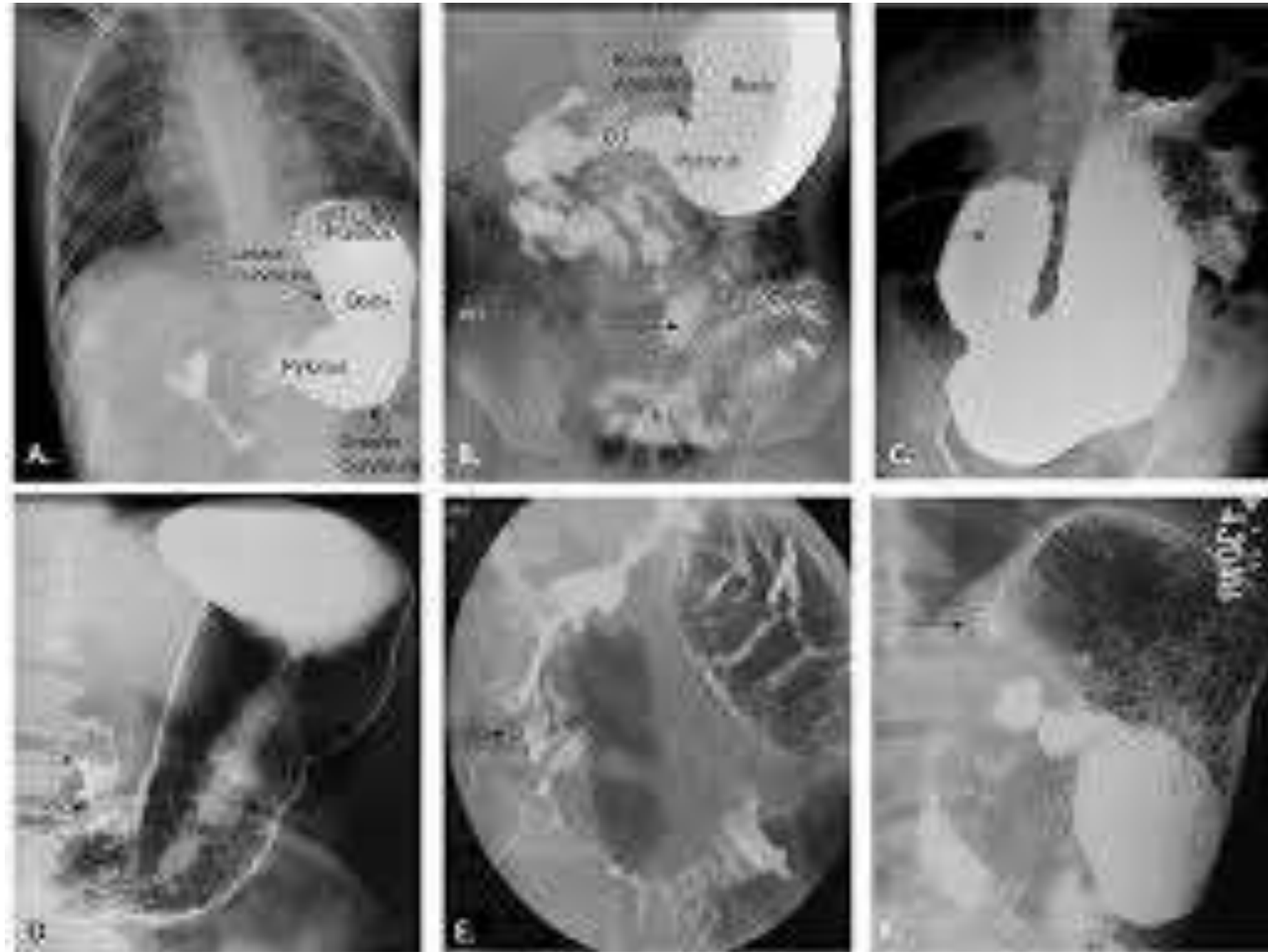
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➤ **Double Contrast Study –**

It may be performed as continuous with the single contrast study. During the single contrast study, whenever the barium reaches at the caecum, then the effervescent powder is given to the patient, and then turn the patient in the left lateral position. As a result, the gas leaves the stomach and enters into the small bowel. The radiologist observes the flow of gas under the fluoroscopy, and spot filming is done in various positions like oblique, prone and supine.

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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