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QUESTION NO : 1
ANSWER:

IMAGING PROCEDURE:

- For the difficulty in swallowing, the procedure which is diagnosis is the **BARIUM SWALLOW TEST.**

STANDARD PROTOCOLS:

- Following are the standard protocols of the barium swallow;
 - 1.The technician or healthcare provider will explain the barium swallow test to the patient.
 - 2.The patient can ask any question about the barium swallow test.
 - 3.Ask the patient to sign the consent form that gives permission to do the swallowing test.
 - 4.Patient can read the form carefully and ask questions if anything is not clear.
 - 5.Tell the patient to stop eating and drinking for about 8 hours before the swallowing test. Generally, this means after midnight.
 - 6.Ask the patient if you are pregnant or think you may be pregnant before scheduling a barium swallow test.
 - 7.Asked the patient that he or she is sensitive to or allergic to any medicines,latex,or anesthetic medicines (local and general) before scheduling a swallowing test.
 - 8.Before test the patient may need to stop all the medications. This includes prescriptions,over-the-counter medicines and herbal supplements.
 - 9.Ask the patient that if he had a recent barium swallow or upper GI Test this may make it harder to get good x-rays of the lower GI area during a barium swallow test.
 - 10.Remove all the metallic things from mouth to the waist e.g **jewellery and undergarments etc.**

QUESTION NO :3

ANSWER:

CLASSIFICATION OF CONTRAST AGENTS:

EXPLANATION:

- **CONTRAST AGENTS:**
- Contrast agents are the chemical substances which have high or low atomic number with increase or decreases the density of organ under examination.
- It is further divided into two types.

1.POSITIVE CONTRAST MEDIA.

2.NEGATIVE CONTRAST MEDIA.

1.POSITIVE CONTRAST MEDIA:

- It have high atomic number(Z)
- It is radio-opaque.
- Appears white on the radiograph.
- High absorption of x-rays.

It is further classified into;

1.NON-WATER SOLUBLE CM.

2.WATER SOLUBLE CM.

1.NON-WATWER SOLUBLE CM:

For Example:

- Barium sulphate BaSo4.
- Oil based CM.

BARIUM SULPHATE:

- Its atomic no is 56.
- Highly radio-opaque.
- Non- toxic.
- Insoluble in water.

OILY BASED CM:

- Insoluble in water.
- Fatty acids.
- White on the radiograph.
- e.g **Myodil and ethiodol**

2.WATER SOLUBLE CM:

- It is further divided into;
 - 1.Hepatic excretion.
 - 2.Renal Excretion.

RENAL EXCRETION:

- It is divided into three types.
 1. **High osmolar CM.**
 2. **Low osmolar CM.**
 3. **iso osmolar CM.**

1: HIGH OSMOLAR CM:

- These are Ionic contrast medium.
- Toxic
- It is water soluble compound.
- Its osmolality is high 4-7 times of blood osmolality.

FOR EXAMPLE:

1. **Gastrografin.**
2. **Conray.**

2. LOW OSMOLAR CM:

- It's osmolality is high 2-3 times of blood osmolality.
- Maximum LOCM is non-ionic.
- All non Ionic contrast are LOCM but not all LOCM are non-Ionic.
- It is less toxic.

FOR EXAMPLE:

1. **Omnipaque.**
2. **Ultravist.**

3. ISO-OSMOLAR CM:

- It's osmolality is same with blood osmolality.
- It is least toxic.

FOR EXAMPLE:

Visipaque(currently use)

- It is safe contrast agent.

USES OF POSITIVE CM:

1. **Angiography** (contrast study of vessels)
2. **Hysterosalpingography** (contrast study of fallopian tubes)
3. **Sialography** (contrast study of salivary glands)

2. NEGATIVE CONTRAST MEDIA:

- It have low atomic number (Z).
- It is radiolucent.
- Appears black on radiograph.
- Low absorption of x-rays.

FOR EXAMPLE:

1. Water
2. Air
3. CO₂

USES OF NEGATIVE CM:

- It is used for double contrast studies.

QUESTION NO : 2

ANSWER:

POSITIONS USED TO TAKE FILM FOR BARIUM MEAL:

1. SPOTS FILMS OF THE STOMACH (LYING):

1. RAO (RIGHT ANTERIOR OBLIQUE):

- Semi-prone
- Patient head in the right lateral position.
- This is **the RAO** position because the right side of the anterior body is close to the Image receptor.
- Demonstrate antrum and greater curvature.

2. SUPINE POSITION:

- Patient position (Anteroposterior)
- Arms at sides outside of the radiograph.
- Barium filled AP stomach and bowel.
- Demonstrate antrum and body.

3. LAO POSITION:

- Demonstrate the lesser curvature of the stomach.

2. SPOT FILMS OF THE DUODENAL LOOP (LYING):

1. PRONE POSITION:

- Duodenal spot filming is done first to avoid flooding into the bowel.
- Demonstrate the anterior wall of the duodenal loop.
- May be taken in RAO position.

3. SPOT FILMS OF THE DUODENAL CAP:(LYING)

1. PRONE POSITION:

- Oblique right side down Duodenal cap.

2. RAO.

- Patient attains this position to avoid flooding into the Duodenal loop.

3. SUPINE:

- Right side up oblique duodenum.

4.LAO POSITION:

**THANK YOU!
END OF PAPER...**