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**Qus:1**

A patient came with complain of difficulty in swallowing (**Dysphagia**) the imaging procedure is best for diagnosis is **Barium swallow**.

**Barium swallow:**

A barium swallow test ( cine Esophgram, swallowing study, Esophagraphy) is a type of imaging test that use barium and X-ray to create images of your upper GI tract includes back of mouth and esophagus.

Barium is used during swallowing test to make the anatomy more clearly on an x-ray .

Radiologist will be able to see how patient is swallow and also examine the size and shape of esophagus accurately.

**Protocols for barium swallow:**

- Protocol for procedure starts with the recording a " holding" position.
- "Holding "position is important for the measurement of hyoid position before swallow.
- The patient does not swallow until given the command to swallow.
- The patient will swallow liquid barium in 1cc,3cc and 20cc sequence.Barium should be standardized and of know viscosity.
- Before barium swallow test ,Patient may be asked to eat low-fiber food for 2 to 3 days.
- Patient will wear hospital gown clothes and told to remove all accessories including belly buttons ,hair clips and all other things that might be show on X-ray.
- Patient will drink ½ cups of barium a chalky drink with with the consistency like a milk shake. But given to baby patient less in amount.
- Barium can seen on x-ray while passing to digestive tract.
- Barium swallow procedure may take about 30 minutes to finish. But in some cases it may take 60 minute to fill the stomach.
- As barium moves down through digestive tract, table will be tilted at different angles to spread the barium for different views.
- The entire examination should be saved in an avi format. The files can then be transferred to desktop computer for further analysis.
- **Complication:**
  - Barium swallow is generally safe test but like every procedure there are some complications.
  - Like; Allergic reactions may occur in people who are allergy from barium drink.
  - Constipation may occurs.
  - Aspiration; Accidentally getting barium in windpipe or lungs.

**Qus:2**

### **Position used to take film for barium meal:**

Comprehensive documentation of the examination is provided by the following:

#### **1. Spot exposures of the stomach (laying):**

- **RAO\_** to demonstrate the antrum and greater curvature curve.
- **LAO\_** to demonstrate antrum and body.
- **SUPINE\_**
  - Supine; with 60 degrees head up for upper stomach.
  - Supine; lower body of stomach, pyloric antrum.
  - Supine with Right side up oblique, pyloric antrum and canal.
- **LEFT LATERAL \_** titled head up with 45 degree for demonstration of Fundas of stomach.

From left lateral position, patient returns to supine position and then rolls onto the left side and over into prone position . This sequence of movement is required to avoid barium flooding in the duodenal loop. Which occurs only ,if patient were to roll onto the right side to achieve a prone position.

#### **2. spot images of the duodenal loop(lying):**

- **PRONE:**To prevent barium flooding into duodenum, the patient lies on a compression pad.

#### **3. Spot images of the duodenal cap(lying):**

- **RAO\_** The patient attains this position from the prone position by rolling first onto the left side.
- **LAO**
- **SUPINE** with Right side up oblique: duodenum.
- **PRONE:** prone oblique Rt.side down duodenal cap ,c-loop.

**4.** Additional view of the fundas in an erect position. If there is suspicion of fundas lesion.

**5.** Spot images of esophagus are taken , while barium is being swallowed to complete examination.