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**PAPER CRP&CP**

**PROGRAME RADIOLOGY**

**QNO1:**

**Ans:** **BARIUM SWALLOW:**

* Barium swallow is diagnostic radioghraph
* Using x-ray for the examination of GI tract such as esophagus.
* Barium swallow test ;the cause the difficulty in swallowing and also pain.

**PROTOCOLS:**

* The doctor tells that the patient or you did not eat or drink any substance for several hours before the examination.
* Doctor also tells to patient about smoKe ,you did not take a smoke or chew gum before and after both cases during the examination.
* The patient remove all the matlic things such as jewellary.
* The patient waer a hospital gown and remove clothes and also remove eye glasses.
* The female should inform to the doctoe before the examination ,the women would be a pragnant ,the pragnant women should bed effect on to the fetus.
* If the pragnant women x –ray more necessary ,so the doctor give low exposur radiation.
* The barium can move through to the digestive system seen that in the x-ray procedure.
* No drink more fluid take after the examination because this is the bed effect on patient bowel problem .
* The barium is not used for the perforation problem.
* The doctor will tells to the patient to eat something low fatty substance for several days such as 2 or 3 days befare the exam.
* If the diabetic patient regularly used medication ,the patient would examine so after the examination it should stop the medication for 48 hours after the exam.
* Ceatinine and urea rang must be cheakef before the exam .
* Allargic patient the doctor give anti allergic medication before the exam.

**QNO2:**

**Ans: BARIUM MEAL** ;

* It is diagnostic radiography
* It examine of stomach and samll intestine.

**POSITION:**

* SUPINE: antrum and body.
* RAO: To antrum and greater curve of stomach.
* The duodenal loop of anterior wall in RAO position .
* LAO: Lessercurve of stamaech en face.
* Left lateral: To fundus.
* When the atient is left is left lateral position to estiblish the fundus ofn the returune to the supine position and also turne to left side so that the patient would be prone position would ber prone position although to prevent the barium flooding into duodenal loop.
* When the patioent is RAO Position the turn into left side and aachive proone position the pron position lying to prevent barium flooding into duodenum.
* Spot film of the abdoumen in prone position
* And other view the fundus spot film of the esophaguse in erect position.

**QNO3:**

**Ans:** **Contrast Agents:**

* Contrast Agents is also called contrast media.
* It is chemical substance
* The high atomic no increas density of organ
* The low atomic number decreas density of organ.

**CLASSIFICATION OF CONTRAST AGENTS**

* Thy are divided into three parts.
1. X-ray and CT
2. Ultrasound
3. MRI
* 1..) X-ray and CT
* X-ray and CT are positive contrast media.

**POSITIVE CONTRAST MEDIA.**

* It is high atomic number
* It show white
* It is readiopaque
* **Exmple** barium sulfate and indin compounds

**NEGATIVE CONTRAST MEDIA.**

* It is low atomic no
* It is show black
* It is not radioopaque

**POSITIVE CONTRAST MEDIA.**

It is diveided into two parts.

1. Non water soluble.
2. Water soluble.

**1.. Non water soluble CM**.

* Barium sulfate
* Oily based CM.

**2.. Water soluble CM.**

* Idoniated contrast media.

**IODINATED CM.**

It divided into three Parts

1. High osmoter CM It is Ionic Contrast Media.
2. Low osmoler contrast media , it is ionic and non ionic contrast media.
3. Iso osmoler contrast media , it is non ionic contrast media.

**1: BARIUM SULFATE:**

* It is type of positive contrast media.
* It is organic compound .
* Chemical formula is Baso4.
* It is insoluble in water.
* The atomic no of barium in 56.
* Highly radiopaque.
* Hydrophobic ,because it is not loving .
* Routes orally and rectaly.
* Barium sulfate used in ,
* Barium swallow,barium meal, barium meal follow through.

**ADVANTAGE**;

* Excellent coating.
* Effective means offerdable.

**DISADVANTAGE:**

* Highly morbidity because incidence of disease rate.
* First we take CT and x-ray abdomen before the barium meal contrast ,because the contrast minumum eliminat in 7 days from the body.

**COMPLICATION**:

* 1 :Perforation in stomach.
* 2: aspiration in lungs.
* Problem caused by aspiration of fluid into the patient lungs.
* 3: intravassion:
* The polmunary stack the vessels and also polumanary embolus.
* 80% mortility occur.

 **2: IODIN**

* Atomic Number 53.
* Mass Number 127.

Iodin is prefered because

1. High contast density due to high atomic nomber
2. Lowtoxity Mens Poisonous Matrial
* Radiopacity depends upan namber of iodin atom in one maolecul .

**OIL BASE CONTRAST**

Fatty acid , insuble in water

White on radiograph

**Example:**

1. Myodil oily contrast media used contrast stud of spinal cord radiograph
2. Ethiodol contrast study of lymphatic vesssels.

**COMPLICTION:**

* Fat Embulism:

**IDONITED CONTRAST MEDIA**

1. **High osmolar Contrast Media**
* Osmolaty of blood 4-7 time
* They are monomeres
* They are offerdable or inexpencive
* Routs: intervascular and interrectal
* IS Ionic.
* Example: Gastrograffine and conary
1. **Low osmolar contrast media**
* 2-3 time highe of osmolity of blood.
* The increas solublity
* Lowe toxicity
* Ionic and non ionic
* Routs: intravascular, interthecal
* EXAMPLE : Omnipaque, ultravist
1. **Iso osmolar ccontrast media:**
* It is the same osmolity of blood.
* It is less toxic .
* It is non ionic contrast media.

Less frequent and less intense.

 **EXAMPLE;**  VISIPAQUE.