IQRA NATIONAL UNIVERSITY

Sessional Assignment 2020

CRP & CP

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Question No (1)

Which contrast is ideal for IV administration? What are favourable characteristics to be used as IV contrast?

Answer:

Iodine based contrast material injected into a vein (intravenously) are used to enhance xray and CT images. Gadolinium injected into a vein (intravenously) is used to enhance MR images typically they are used to enhance the :

- Internal organs, including the heart, lungs, liver, adrenal glands, kidneys, pancreas, gallbladder, spleen, uterus and bladder.
- Gastrointestinal tract, including the stomach, small intestine and large intestine.
- Arteries and veins of the body, including vessels in the brain, neck, chest, abdomen, pelvis and legs.
- Soft tissue of the body, including the muscles, fat and skin.
- Brain
- Breast

Characteristics

- Rapid onset of effect
- Usefulness in situation of poor gastrointestinal absorbtion
- Avoidence of tissue irritation if present with in or other routes
- Ability to administer large volumes over time by a slow infusion
- Ablity to administer drugs at constant rate over a long period of time.

Question No (2)

How is venography performed? Explain.

Answer:

Venography is a procedure in which xrays of the veins, a venogram, is taken after a special dye is injected into the bone marrow or veins The dye has to be injected constantly via a catheter, making it an invasive procedure.

Procedure

Venography can be divided into following section .

(1) Peripheral venography

- Lower limb venography
- Upper limb venography
- Peripheral varicography

(2) Central venography

- Inferior vena cavography
- Superior vena cavograp

(3) Selective visceral venography

- Renal venography
- Hepatic venography
- Portal venography

Patient preparation

- NPO for 4-6hrs prior to examination
- Check serum creatinine and urea level
- Taking proper medical history
- Signing informed consent

Contraindications

- Contrast media allergy
- Impaired renal function
- Blood clotting disorder
- Anticoagulant medication

Contrast media

- Low / iso osmolar contrast media 240 mgI /ml
- Volume about 50 - 150ml

Procedure

- Patient is placed supine on the xray table with all elastic wrappings removed from the leg
- Preliminary radiograph of leg and thigh is taken in order to ascertain optimum exposure.

Images

- Anterior -posterior (AP) of calf
- Both oblique of calf (internal and external)
- AP of popliteal, femoral and iliac veins.

After care

- The limb should be excercised.

QUESTION No (3)

What is loopogram? Explain.

Answer:

Loopogram

This is a test to show the loop of bowel (conduit) that has been used as a substitute for your urinary bladder.

Loopogram procedure

- Patient lies supine on the examination table.
- The stoma bag will be removed.
- The radiologist will clean the urostomy stoma and insert a catheter.
- Contrast (xray dye) will be injected through the catheter and several images will be taken.
- This exam usually takes about 30 min to 1 hour.

Examination shows

- Kidneys
- Ureters
- Ileum
- Stoma

Question No(4) What is the role of radiologic technologist in performing fluoroscopic procedure?

Answer:

The technologist essentially performs the procedure.

- Change patient into gown and empty bladder
- Take scout KUB and show film to radiologist
- Check lab values and report them to radiologist
- Measure patient with calipers to determine tomography slices
- Draw up contrast into syringe, attach and flush tubing
- Start IV line, inject contrast
- Inform patient thay may experience a warm flushed feeling
- Contrast reaction usually occure in the first 5 minutes
- Take 0 minute nephrogram image
- Take tomos or plain KUBs at 5, 10,15 min are directed by a radiologist
- At radiologist direction have patient empty the bladder
- Take a post -void plain film, show to radiologist
- Discontinue IV line.

Question No (5) What are catheters and guidewires? Why and how are thay used? What are their types?

Answer:

Guidewires

A catheter over a stiffer wire also may facilitate passage of the catheter into the vessel and prevent guidewire kinking.

Guidewires working

Guidewires are designed to navigate vessels to reach a lesion or vessel segment.
Once the tip of the device arrives at its destination, it acts as a guid that larger catheter can rapidly follow for easier delivery to the treatment site.

Catheter

A catheter is a tube that is inserted into your bladder, allowing your urine to drain freely.

Working

It is designed to deliver radiopaque media, guidwires and therapeutic agents to selected sites in the vascular system.

Used for :

Guidewires and catheters are used during minimally invasive interventional procedures to travers in vascular system and access the desired position.

Types catheters

- Indwelling catheters
- External catheters
- Short term catheters

Types of Guidewires

- Solid core wire
- Mandrel wire
- Ribbon wire.

Thank You