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Assignment : CRP & CP
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QUESTION NO: 2

How is venography performed? Explain in detail.

ANSWER:

VENOGRAPHY:
INTRODUCTION:

- ⇒ Venography is an x-ray examination that uses an injection of contrast material to show how blood flows through veins.
- ⇒ The doctor may use it to find blood clots, identify a vein for use in a bypass procedure or dialysis access or to varicose veins before surgery.

HOW IS PROCEDURE PERFORMED:

- ⇒ This examination is usually done on an outpatient basis.

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- ⇒ A venogram is done in a hospital department.
- ⇒ You will lie on an x-ray table.
- ⇒ Depending on the body part being examined e.g. (The legs) the table may be situated to a standing position.
- ⇒ If the table is repositioned during the procedure you will be secured with safety straps.
- ⇒ The physician will insert a needle or catheter into a vein to inject the contrast agent.
- ⇒ Where that needle is placed depends upon the area of your body where the veins are being evaluated.
- ⇒ As the contrast material flows through the veins being examined, several x-rays are taken.
- ⇒ You may be moved into different positions so that x-rays can take pictures of your veins at different angles.

PATIENT PREPARATION:

Signing informed consent
Taking proper medical history so that appropriate premedication can be used.

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- ⇒ Tell the patient do not eat or drink anything several hours before your exam.
- ⇒ Changing patient to an appropriate gown.
- ⇒ Check recent serum creatinine.

CONTRAINDICATIONS:

- Impaired renal function
- blood-clotting disorder
- neurologic status
- Anticoagulant medication

INDICATIONS:

- Deep vein thrombosis
- Congenital venous anomalies
- venous vascular malformations
- Venous Stenosis

EQUIPMENT:

- Butterfly needle

CONTRAST MEDIA:

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

IMAGES:

- AP of calf
- Both oblique of calf.
- AP of popliteal femoral and iliac veins.

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AFTERCARE:

The limb should be exercised.

QUESTION NO: 3

What is loopogram? Explain

ANSWER:

LOOPOGRAM:

⇒ INTRODUCTION:

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

LOOPOGRAM PROCEDURE:

→ Fluoroscopic imaging is done with a contrast called X-ray dye.

→ The contrast dye shows up on the images and allows the radiologist to clearly see and check the internal organs.

PATIENT PREPARATION:

- 1: Patient lies on the examination table.
- 2: The stoma bag will be removed

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- 3: The radiologist will clean the urostomy stoma and insert a catheter.
- 4: Contrast will be injected through the catheter and several images will be taken.
- 5: This examination takes about 30 minutes to 1 hour.

* LOOPOGRAM EXAMINATION

⇒ The examination shows

- Kidneys
- Ureters
- Ileum
- Stoma

It is done to ensure the conduit and surrounding organs are functioning efficiently. This procedure is also known as ileal conduitogram and ileal loopography.

* BENEFITS :

This examination will help your doctor to make a correct diagnosis or decision about your treatment.

* RISKS :

It is an X-ray procedure, so there are some risks associated with radiation. But the radiation should be kept as

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minimum as possible.

ROLE OF LOOPOGRAM IN BLADDER:

- Surgery for bladder cancer involves a laparoscopic radical cystectomy.
- In this procedure the bladder is removed.
- To restore urinary flow, surgeons then have a number of options to divert the flow of urine.

QUESTION NO: 4

What is the role of Radiologic technologist in performing fluoroscopic procedures?

ANSWER:

ROLE OF RADIOLOGIC TECHNOLOGIST IN FLUOROSCOPIC PROCEDURES:

As a technologist you have a key position in protection of the patient.

The role of technologist is

- Identify the patient
- Inform the patient
- Inform accompanying persons

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THE ROLE OF RADIOGRAPHER:

The technologist is responsible for the following parts of the medical imaging procedure.

- 1: Reviewing the patient's clinical history to ensure the proper imaging procedure has been ordered.
- 2: Preparing the patient for the procedure.
- 3: Selecting the proper imaging equipment and associated accessories.
- 4: Positioning patients to best demonstrate of interest.
- 5: Immobilizing patients as necessary.
- 6: Preparing and administering medications such as contrast agents, prescribed by a licensed practitioner.
- 7: Determining the radiographic exposure technique, while applying principles of radiation protection to the patient and staff.

* NOTE:

- ⇒ Following image acquisition, the radiographer should evaluate the images before submitting them to the radiologist.
- ⇒ Images should demonstrate proper patient positioning appropriate anatomy and overall satisfactory image quality.

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- ⇒ The technologist should determine if additional images might improve the overall diagnostic value of the procedure.
- ⇒ If additional images are obtained the technologist must record the justification for the repeated images.
- ⇒ Radiographers also should develop and maintain a technique chart for imaging equipment, including fluoroscopy systems to minimize repeats caused by exposure errors.

QUESTION NO: 5

What are catheters and guidewires?
Why and how they are used?
What are their types?

ANSWER:

CATHETER:

DEFINITION:

- ⇒ It is a thin tube made from medical grade materials.
- ⇒ Catheters are medical devices that can be inserted in the body to

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treat diseases or perform surgical procedure.

⇒ Catheters can be inserted into a body cavity duct or vessel.

⇒ USES OF CATHETERS:

⇒ Catheters are used if you have urinary incontinence (leakage urine or being unable to control when you urinate)

⇒ It is used for drainage of fluid collections eg an abdominal abscess

⇒ It is used to direct measurement of intracranial pressure.

⇒ HOW CATHETERS ARE INSERTED:

⇒ Catheter is inserted through urethra.

This is the tube that carries urine from the bladder to the outside of the body.

⇒ Sometimes the provider will insert catheter into the bladder through a small hole in your belly.

TYPES OF CATHETERS:

1. Indwelling catheters
2. Condom catheter
3. Foley catheter

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⇒ INDWELLING URETHRAL CATHETER:

- An indwelling catheter collects urine by attaching to a drainage bag.
- It has a small balloon inflated on the end of it.
- Indwelling catheter can be inserted through urethra or through a small hole in your belly.

⇒ CONDOM CATHETER:

- Condom catheter are most often used in elderly men with dementia.
- Instead of placing tube inside the penis a condom-like device is placed over the penis.
- The condom catheters must be changed everyday.

GUIDE WIRES: DEFINITION:

* A wire used to restrict and control the movement of other equipment such as catheter being inserted into the body.

WHY GUIDEWIRES ARE USED:

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⇒ The guidewire is the device used to guide the catheters into place during CVC insertions.

⇒ The purpose of guidewires is to gain access to the blood vessels during using an invasive technique.

TYPES OF GUIDEWIRES:

* There are three types of guidewires.

SOLID CORE WIRE:

- The central wire is encased by a metal ~~wire~~ "spring" coil.

MANDREL WIRE:

- The outer spring coil is at one end.

RIBBON WIRE:

- The spring coil encases both the core wire and a ribbon wire.

QUESTION NO: 1

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

IDEAL CONTRAST FOR IV ADMINISTRATION:

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- ⇒ In iodinated contrast agents the non ionic dimers are the most ideal contrast agent used for intravenous administration.
- ⇒ They are very less toxic and delivers more iodine with the least effect on osmolality.
- ⇒ All the radiological procedures are performed with the injected contrast agents which involves the administration of iodine-containing compounds.

FAVOURABLE CHARACTERISTICS OF IODINATED CONTRAST:

1. Iodinated contrast is a form of intravenous radiocontrast agent containing iodine.
2. Enhances the visibility of vascular structures and organs during radiographic procedure.
3. Some pathologies such as cancer have particularly improved visibility with iodinated contrast.
4. In non-ionic iodinated contrast media

the iodine is bound to organic non-ionic compound and has a low osmolality.

5. Iodine containing are related with low toxicity and have great radio-opacity.

6. Iodinated-based contrast materials injected into a vein (intravenously) and are used to enhance x-rays and CT-images.

7. Enhance the internal organs, including the heart, lungs, liver, kidneys, uterus and bladder.

END OF ASSIGNMENT.....!