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Assignment

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(2)

Q NO 3

Ans

Loopogram :

It is a test to show the loop of bowel that has been used to substitute for out urinary bladder.

Procedure :

⇒ the fluoroscopic image is done with a contrast is called as x-ray dye.

⇒ the contrast dye show the image and the radiologist ~~show~~ clear see the check the internal organs.

⇒ patient lies supine position.

⇒ The stomach bag will be removed.

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- ⇒ the radiologist clean the ~~urostomy~~ stoma and insert a catheter.
- ⇒ Contrast injected through catheter and also the radiologist takes several images.
- ⇒ The exam time usually takes 30 to 60 minutes.

Examination Show:

- ⇒ Kidney
- ⇒ Ileum
- ⇒ Stoma
- ⇒ Ureter

⇒ this procedure is also called ileal loopography.

Benefits:

The examination will help to your doctor take a good decision and also diagnosis and treatment.

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Role of loopogram in Bladder Cancer.

- 1) Subject for bladder cancer involved a laproscopic radical cystectomy.
- 2) the bladder is removed.
- 3) To restore urinary flow, subjects then have number of operation to divert the flow of urine.
- 4) A section of bowel from small intestine connecting the ureters to it which help the urine to flow through stomach.
- 5) the loopogram test used as a conduit to see if functioning as it should.

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Q110(4)

Ans

Fluoroscopy:

Fluoroscopy is a type of medical imaging.

⇒ it show continuous x-rays image on monitors.

⇒ the x-rays passed through the body.

⇒ the image is transmitted to monitors.

So the contrast agent used in fluoroscopy.

through the body image can be seen clearly.

⇒ it is real time image.

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Role of radiological Technologist :

The Radiological Technologist is responsible for the following part of medical imaging procedure.

⇒ Reviewing the patient clinical history to ensure the proper medical imaging procedure has been ordered.

⇒ Preparing the patient for procedure.

⇒ Selecting the proper imaging equipment and associated accessories

⇒ ^{patient} Positioning must be proper and also area of interest.

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⇒ No mobilization,

⇒ Stop breathing,

⇒ Remove metallic things,

⇒ antiallergic medication
gives to the patient

⇒ Determining and
radiographic Technique,
exposure. While applying
principles of radiation
protection to the
patient and staff.

(8)

Q10(a)

An Venography:

⇒ it is also called phlebography.

⇒ it is procedure in which x-ray of the veins.

⇒ A contrast injected into the bone marrow or veins.

⇒ these contrast injected into the catheter. making it an invasive procedure.

⇒ it is mostly occur in legs or arms.

⇒ it is sometime look like too blood clot is called as Deep vein thrombosis.

⇒ first ultrasound procedure take when it is not clearly seen.

(9)

in ultrasound and then
venography procedure perform.

⇒

Indication:

- Deep vein thrombosis.
- Congenital abnormality in venous system.
- ⇒ edema of.

Contraindication:

- ⇒ Allergic to iodinated contrast media.
- ⇒ local sepsis.
- ⇒ impaired renal function test.

Contrast Media.

High osmolar contrast
low osmolar contrast

Equipment.

Fluoroscopy,

Tilting radiography table,

Patient preparation.

The legs should be elevated to lessen oedema.

⇒ If the legs is swelling is severe

⇒ remove jewellery.

⇒ wear comfortable, loose clothes.

Technique:

The patient lying supine position

⇒ head tilted up.

⇒ A Tourniquet is

applied above the ankle joint occlude the superficial anterior of vein.

⇒ A 19g butterfly needle inserted into vein of the foot.

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- ⇒ 40ml Contrast injected
by hand and Spot film
of the selected areas.
- ⇒ 20ml Contrast is
injected while Compression
is applied.
- ⇒ to delay the transit time
of Contrast in the
upper thigh and pelvic veins.
- ⇒ The needle should be
flushed with normal
Saline to reduce the
Chance of Phlebitis.
due to Contrast medium.

Film:

AP of the Calf.

AP of popliteal Common
femoral and iliac veins.

After case:

CFCCIS must be
proper.

Q NO 5

Ans

CATHETERS

A Catheter is hollow flexible tube that can be inserted into body cavity.

⇒ it is allow drainage or injected of fluid, distend a passageway or provide access of surgical instrument.

⇒ the process of insertion of catheter is called as catheterization.

Characteristic of catheter:

- ⇒ Strength
- ⇒ Radiopacity
- ⇒ Flexible
- ⇒ Atraumatic Tip

⇒ Better Torque control!

⇒ low surface frictional resistance. for good track ability over guidewire.

Types:

⇒ Diagnostic Angiographic catheter

⇒ Micro catheter

⇒ Drainage catheter

⇒ Ballon catheter

⇒ Central venous catheter.

⇒ ~~Catheter~~ ~~Catheter~~.

⇒ First when catheter used in that time.

Whose patient urine not flow outside the body.

⇒ they cause cystitis disease. occur in urinary bladder.

⇒ and other the urinary system are infected.

(14)

⇒ ~~the~~ When cysts produce
in urinary bladder
the urine is not passed
outside through urethra

⇒ The doctor insert the
catheter ~~through~~ ~~ureter~~
~~the~~ through urethra
and the catheter
correctly inserted
the urine come outside
stably.

⇒ this process is called
as catheterization.

⇒ Sometime the catheter
inserted into other organ.

Guidewire:

they are the stainless
steel metallic structure
that guide the catheter through
the blood vessels for
placement.

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⇒ Guidewire are use
for both Cardiology
and radiology angiographic
procedures

Types

There are two main
types.

- ① the solid guidewire
- ② wrapped guidewire.

Both guidewire one
end is rigid.
and the other end is

flexible
⇒ the flexible part
is inserted into the
blood vessels.

⇒ the guidewire strikes
the vessels wall, it is
bend, and preventing
damage to the vessels.

Solid guidewire

① ⇒ The advantage of solid guidewire are that it reduce possibility of catheter tip flaring. Blood clotting on the guidewire.

⇒ The disadvantage of this type is lack of versatility.

Wrapped Guidewire:

It can be constructed so that it has a movable core, making it more versatile than the solid stainless steel guidewire.

Disadvantages:

Blood clotting on guidewire
Abrasion of vessels
the danger of unbraiding.

Test:

① Determination of flexibility of the guidewire tip by bending the tips of 180 degree.

⇒ Visual inspection of wrapped guidewire junction of stiff cath and external cath at the distal tips

⇒ Checking of the cath by giving a slight twist and tugs to the guidewire.

NO 1

Ans

The Iodine-based and gadolinium based contrast media has ideal for intravenous administration.

⇒ the Iodine-based contrast media injected into a vein are used to enhance x-ray and CT image, and also fluoroscopy

⇒ the gadolinium based contrast injected into veins

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and are use in
MRI

⇒ the following are
enhance

⇒ internal organ such
heart, lungs, kidney,
liver, adrenal glands,
spleen, uterus, and
bladder.

⇒ gastrointestinal tract,

⇒ artery and veins.

⇒ abdomen, Drain, pelvis,
legs,

⇒ and also soft tissue.

Iodine base Contrast

① High Osmolar Contrast media
example gastrografin and Conaty.
Osmolality: 4-7 times
⇒ intravascular leaks

② Low Osmolar CM,
example omnipaque and
ultravist,
intravascular leaks.

(3) ~~low~~ low ISO esmalts (M)

example: Visipaque.

⇒ it is characteristic
is low viscosity, toxicity
iodin content, miscibility
and persistence must
be considered

⇒ the radiographer should
understand the characteristic
of contrast agent to
be able to
use them intelligently
and efficiently during
the procedure.

⇒ the ability of distinguish
tissue from the surrounding
structure and identify
pathology.

⇒ specific anatomical structure
have inherent contrast
due to their physical
properties.

(20)

⇒ To increase the contrast of these similar tissues, ⇒ can be used to change the appearance of the target tissue,

⇒ The optimal use of contrast depend on modality and physics of the imaging system.

⇒ Heat and chemical stability.

⇒ High water solubility.

⇒ Reasonable cost.

⇒ selective excretion, like excretion by kidney is favourable!

⇒ no toxic effect.

Thank you