

Date: _____

(1)

Hira Gul
14949
4th semester
CRP & CP

Question # 1

→ If there is non-visualization of ureteral segment on IVO & CTU which alternative procedure will you perform? What is the general protocol for performing that procedure?

→ Answer:-

The nonvisualization of ureteral segment on IVO & CTU we perform retrograde pyelogram which may better image the segment of ureter

→ Retrograde Pyelography:-

in this procedure the collecting system is evaluated by directly injecting radiographic contrast through injection catheters, rather than utilizing the excretory phase of contrast excretion after

Date: _____

(2)

Intravenous injection, as with a CT urogram or IVO.

→ This test is performed in the hospital in radiology department by urologist.

→ carried out under general anesthesia.

→ Protocol for performing procedure:-

→ Doctor will explain the procedure to you

→ you may ask questions that you want to know, about the procedure.

→ Sign the consent form that gives permission to do the procedure.

→ Doctor will notify you how long to fast, whether for few hours or over night

→ If you are pregnant or suspect that you may be pregnant you should notify your doctor.

Date: _____

(3)

- If you have ever had a reaction to any contrast dye or if you are allergic to iodine tell to your doctor.
- Notify your doctor if you're sensitive to or allergic to any medication, latex, tape & anesthetic agents.
- Notify your doctor of all medication and herbal supplements that you're taking.
- If you have a history of bleeding disorders notify doctor.
- Before going to procedure empty your bladder.
- Remove all jewelry
- Put on a hospital gown.

→ Question # 2

- Which radiological procedure is commonly performed for assessing congenital anomalies of renal systems? Explain in detail the whole procedure

Date: _____

(4)

→ Intravenous Pyelography :- IVP

The intravenous pyelography also called excretory urography is a radiological procedure used to visualize abnormalities of the urinary system, including the kidney, ureters & bladder.

→ Indications :-

before going for procedure check for

- normal kidney function
- anatomical variants or congenital anomalies.
- course of ureters
- ureteric obstruction
- Suspected urinary tract pathology.

→ Contra indication :-

- Contrast allergy
- Hepato-renal syndrome.
- Thyro toxicosis
- Raised Serum Creatinine.

→ Contrast Media :-

→ low osmolar contrast material (LOCM) 300-370 mg lml⁻¹.

→ DM patient receive HOCM.

Date: _____

(5)

→ Adult dose:

50-100 ml

→ Paediatric dose:

1 ml kg⁻¹

→ Patient Preparation:-

→ NO food for 5h prior to the examination!

→ Dehydration is not necessary and not improve image quality

→ Ambulant for 2h prior to the examination to reduce bowel gas.

→ Routine administration of bowel preparation dont improve the diagnostic quality of the examination

→ Patient who has previously had a severe contrast medium reactions,

administering methyl prednisolone 32 gmg orally 12 & 2h prior to injection of contrast medium

in addition to ensuring that a LOcm is used.

Date: _____

(6)

→ Preliminary Films:-

- Supine, full length anterior posterior (AP) of the abdomen in inspiration.
- The lower border of the cassette is at the level of the symphysis pubis & x-ray beam in the midline at level iliac crests.
- Supine AP film of renal areas in expiration. The x-ray beam is centred in the midline at the level of the lower costal margin.
- 35° posterior oblique views.
- Tomography of the kidney.

→ Technique :-

- The median antecubital vein is preferred injection site.
- A 19G needle injection is given rapidly as a bolus to maximize the density of the nephrogram.
- Upper arm or shoulder pain may be due to stasis of contrast medium in the vein.
- Relieved by abduction of arm.

→ Films :-

→ Immediate film :-

- AP of renal areas.
- exposed in 10-14s after injection
- aims to show nephrogram.

→ 5 min film :-

- AP of renal areas.
- determine if excretion is symmetrical & invaluable for assessing the need to modify technique.

→ Compression band :-

- aim to produce better pelvicalyceal distension
- band Applied around abdomin balloon positioned midway b/w anterior superior iliac spines-

→ 15 min film :-

- AP of renal areas.
- adequate distension of pelvicalyceal systems with opaque urine by this time
- compression is released when satisfactory pelvicalyceal systems has been achieved.

Date: _____

(8)

→ Release film :-

- supine AP abdomen.
- film show whole urinary tract
- Empty bladder.
- After micturition film :-
- This may full length abdominal film or coned view of bladder.
- a return to normal dilated upper tracts
- relief bladder pressure.

→ Complication :-

- Due to the contrast medium
- Due to technique :-
incorrectly applied compression may produce discomfort or hypotension.

Date: _____

(9)

Question :- 3

→ Which procedure is performed for investigation of extrahepatic biliary obstruction? Discuss the general protocol followed for that procedure.

→ Answer:-

For investigation of extrahepatic biliary obstruction we perform endoscopic retrograde (ERCP).

→ Endoscopic retrograde:-

Endoscopic retrograde is a technique used to combine use of endoscopy and fluoroscopy to diagnose & treat certain problems of the biliary or pancreatic ductal system-

→ ability to visualize & biopsy ampullary lesion.

→ Demonstrate of biliary tree & pancreatic duct.

→ Greater therapeutic potential

→ Protocols :-

→ Before the ERCP performe asked for diet or medication in detailed instructions

Date: _____

(10)

- Notify doctor if you take any blood thinning medication.
- Not allow for heavy meal at least 8 hours before procedure.
- Plan to take the day off from work.
- Notify that procedure is performed with general anesthesia.
- Physician know about your medical condition allergies and all medication you are taking.
- In some cases doctor may prescribe antibiotic before procedure.

→ Question # 4.

→ Which radiological procedure is recommended for evaluating the causing of female infertility. Explain the procedure in detail.

Answer:

The HSG is recommended for the female infertility.

Date: _____

(11)

→ Hysterosalpingography :-

is also known as HSG uterosalpingography.

- is a fluoroscopic examination of the uterus and the fallopian tube
- Performed to investigate shape of uterine cavity and shape & patency of fallopian tubes.

→ Indications :-

- Infertility
- Recurrent miscarriages
- Following tubal surgery.

→ Contrast medium :-

- HOCM or LOCM 10-20 ml.

→ Equipment :-

- Fluoroscopy unit
- vaginal speculum
- vulsellum forceps
- uterine cannula

→ Preliminary film :-

- coned AP view of pelvic cavity.

→ Technique :-

- Patient lies supine, knee flexed, legs abducted heel together

Date: _____

(12)

- insert speculum & cleans the vagina & cervix with chlorhexidine.
- cannula is inserted to the cervical canal.
- remove air bubbles from the syringe & cannula otherwise these were confuse.
- Contrast medium is injected slowly, with control of fluoroscopic
- spasms of the uterine cornu may be relieved by IV glucagon
- NB: opiates increase pain by stimulating smooth muscle contraction.

→ Films:-

- Using the under couch tube
 - 1- As the tubes begin to fill
 - 2- when peritoneal spill has occurred and all instruments removed.

→ Complications:-

- Due to the technique:
 - pain may occur.

Date: _____

- Bleeding from trauma
- nausea
- vomiting
- headache.
- Infection
- Abortions: must ensure that patient is not pregnant.
- Allergy to contrast.

Question # 5

→ Explain in detail the conventional radiological procedure used for diagnosing the disorders of joints ligaments & tendons.

Answer:-

For diagnosing the disorders of joints, ligaments ~~the~~ and tendons Arthrogram procedure is performed.

→ Arthrograms:-

Arthrogram is a series of images of a joint after injection of a contrast medium.

- done by fluoroscopy or MRI.
- done under local anesthetic.

Date: _____

(14)

→ Method:-

- Single contrast (contrast)
- Double contrast (air)

→ Indication:-

- joint capsule torn
- joint cavity
- Synovial membrane
- Articular cartilage, Labrum
- Ligaments
- Tendons
- Loose bodies with in joint.

→ Contraindication:-

- Active arthritis
- joint infection
- Bleeding problems
- Previous sensitivity to contrast.

→ Equipment:-

- Fluoroscopy with spot film

→ Preliminary Film:-

- Routine plain film radiograph
- AP & true lateral of the joint of interest.
- Axial in shoulder & oblique view / inversion / eversion in ankle.

Date: _____

15

→ Radial & ulnar deviation
in wrist joint.

→ After care :-

→ Avoid driving for two
days

→ joint pain may occur

→ Complications :-

→ Allergic reaction

→ Synovitis

→ pain capsular rupture

→ Trauma to adjacent
structure. e.g. nerve &
vessels.

The End.
