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Q1 →

If there is non-visualization of ureteral segment on IVU and CTU which alternative procedure will be performed? what is the general protocol for performing this procedure?

Ans

The alternative procedure is "Retrograde pyeloureterography". This "RPUG" procedure is performed if there is non-visualization of ureteral segment on the IVU and CTU procedure. The Retrograde pyeloureterography is also referred to as Retrograde pyelography.

The Retrograde pyelography is a procedure that use x-ray to check your kidney (renal), bladder and ureters. This retrograde pyelographic procedure is done with cystoscopy by placing an endoscopic camera via the urethra into the bladder. Under general anesthesia in hospital radiology dept this procedure is done.

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General Protocols:→

The general protocols for performing retrograde pyelography is given below.

Your physician would explain the procedure and make you satisfy for each and every thing about procedure.

You will be signing the form which gives the permission for the procedure.

You will be fast for a certain period of time prior to the examination/procedure.

May inform your doctor in ~~case~~ case of pregnancy.

Inform your physician about the allergies from rays, or iodine.

Inform your doctor about the medicines which you are taking.

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The procedure is started by properly positioning of the patient after the patient has been anesthetized.

Cystoscopy is done just after the positioning process is complete.

The SF and GF Catheter are used to cannulate the ureter.

The Contrast is injected by the physician through the catheter, 5-8ml contrast is needed for complete opacifying.

Once the contrast is injected several images are taken then.

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Q2:→

Which Radiological procedure is commonly performed for assessing congenital anomalies of renal system? Explain in detail the procedure?

Ans:→

For assessing the congenital anomalies of the renal system the most commonly performed procedure is IVP "Intravenous pyelography".

Intravenous pyelography is the procedure.

This procedure is also known by intravenous urography or excretory urography.

This procedure is used to check the abnormalities of urinary system, kidney etc.

Detail of IVP:→

Indication/uses:→

This IVP procedure is also used for below abnormalities -

For the normal function of kidney -

To check course of ureters

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To check the ureteric obstruction.

Contraindications:→

This procedure is not used in such condition below.

Contrast Allergy.

Hepato-renal syndrome.

Raised Serum Creatinine.

Thyrotoxicosis.

Contrast Media:→

HOEM or LOEM 370 are acceptable.

But LOEM cause following high risk group.

poorly hydrated patients, the diabetics ~~poor~~ patients, sickle cell anaemia, patient with strong allergic history.

Dose for Adult

50ml

Dose for child's (paediatric Dose)

1ml.

Preparation of patient:→

About from five hours prior to the procedure no food will be eaten.

Image quality does not depend upon the dehydration.

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To reduce the bowel gas the patient should preferably be ambulant for 2 hours before the procedure.

To improve the diagnostic quality of the procedure the routine administration of bowel preparation fails.

Film:→

Full length Antero posterior AP of the abdomen, Supine in inspiration.

The x-ray beam is placed in the level of the mid line at the level of iliac crests.

Supine AP of the renal areas in expiration.

35° posterior oblique view.

Techniques:→

An 19G needle is advanced up the vein to reduce risk of perivenous injection and the injection is given rapidly as bolus.

Due to stasis of the contrast medium in the vein, there

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Pain in the upper arm or shoulder - This is relieved by abduction of the arm.

Films:→

Immediate Films:→

renal AP of the

15min Film:→

AP of the renal areas.

Release film:→

Supine Anteroposterior AP of abdomen.

Complication:→

- ↳ Contrast reaction (due to absorption through bladder mucosa).
- ↳ UTI
- ↳ Urethral trauma or rupture.
- ↳ Extravasation of contrast - due to use of excessive pressure in structure.
- ↳ Incorrectly applied abdominal compression may produce intolerable discomfort or hypotension.
- ↳ Swelling, pain and infection during injection.

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Q3: Which procedure is performing for investigation of the extrahepatic biliary obstruction. Discuss the general protocols follow for this procedure?

Ans

The procedure which is used for the investigation of the extrahepatic biliary obstruction is ERCP/ "Endoscopic retrograde Cholangio-pancreatography".

Simply we say that for the indication of extrahepatic biliary obstruction "ERCP" procedure is used.

This technique/procedure is used to treat certain problems of biliary or pancreatic ductal system.

This procedure may also used for post-cholecystectomy syndrome and pancreatic disease as well as for Diffuse biliary disease.

"General protocol for ERCP"

↳ At the time when your doctors tell you, Stop eating and drinking.

- ↳ Only take those medications on the morning of surgery, about which your doctor tells you only.
- ↳ Don't take medications which are blood thinners, supplements and the medications that affect the immune system.
- ↳ Tell your physician about your pregnancy if you have for to changes the procedures somehow and protect the fetus from the x-rays.
- ↳ Let your physician know about your allergies and other problems relating.
- ↳ With 4% xylocaine spray the pharynx will be anaesthetized.
- ↳ Diazepam 5mg is given to the patient until seated.
- ↳ The endoscope is introduced and the patient will be lying on the left side.
- ↳ The patient is turned prone and the ampulla of Vater

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will be located.

↳ With having Contrast medium a polythene catheter is inserted into the ampulla.

↳ The Catheter ensures that all air bubbles are excluded.

↳ For the showing of Cannula a small ~~test~~ test injection is made.

↳ The pancreas is not over filled.

Q4: →

Which radiological procedure is recommended for evaluating the cause of female infertility? Explain the procedure in detail?

Ans: →

The procedure which is used/recommended for evaluating the cause of female infertility is known by "Hysterosalpingography"

Simply we say "HSG" is the procedure used for evaluating the cause of female infertility.

Hystero → uterus.

Salpingo → Fallopian tube.

Graphy → To Draw.

The HSG procedure is used to check the uterine cavity and the fallopian tubes.

This procedure is also known by uterosalpingography.

This procedure is also used for recurrent miscarriage, following tube surgery and for assessment of integrity.

Detail of Hystersalpingography:->

① Contrast Medium:-> CM

↳ HOCM-or-LOCM 300 vol 10-20ml.

↳ LOCM have no advantage with regard to the image quality.

Equipment:->

- vulsellars
- vaginal speculum
- forceps
- uterine cannula
- leech cannula
- Fluoroscopy with spot film device.

Preparation:->

Fearful Patient should need medication.

Should be done in secretive phase because of higher chance of vascular intravasation.

patient to avoid unprotected sexual intercourse.

View:->

Coned posteroanterior PA view of the pelvic cavity is done.

Techniques:->

on the table with the knee p. flexed, the patient

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lies supine.

The Patient legs are abducted & heel together.

To clean vagina and cervix, use aseptic technique.

To expel all air from the syringe and cannula, care must be taken otherwise it will cause confusion in interpretation.

Aftercare:→

Before she leaves it should be confirmed that the patient have no issue of bleeding and no serious discomfort.

Clarify the patient about the bleeding per vagina for 1-2 days and pain would also for two weeks.

Complications:→

Pain occur at the time of using inseration of cannula, using vulsellum & forceps etc.

May be occurring of vomiting, nausea and headache also observed.

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Investigated Diseases/Pathology:-

uterine malignancy
uterine Congenital anomalies
adenomyosis etc.
Tubal polyps
tubal malignancy.

The above all mentioned pathology were detected through HSG.

Q5: Explain in detail the conventional radiological procedure used for diagnosing the disorder of joints, ligaments and tendons?

Ans: The conventional radiological procedure used for the diagnosing the disorder of the joints, ligament and tendons are "Arthrography".

Simply Arthrography is used for disorder of the joints, ~~lig.~~ ligaments and tendons.

Arthrography:

It may be single contrast and double contrast (gas). This procedure is use to indicate the abnormalities of the joints ligament and tendons.

Indication/uses:

The Arthrography is also use for detection of the following.

Joint Capsule torn.
 Joint Cavity.
 Synovial membrane.
 Ligaments.
 Tendons.
 Loose bodies in joints.

Contraindications:

Contraindication means that this procedure is not applied in the following conditions.

- Joint infection if having.
- Having Active arthritis-
- If someone having previous sensitivity to Contrast media.
- If someone having bleeding problems.

Equipments:

Fluoroscopes with spot film devices.

preliminary films:

plain film radiograph

True lateral and Ap of the joint of interest.

Deviation in wrist joint radial and ulnar.

Aftercare:→

Avoid the driving for minimum two day after this procedure.

↳ There may be joint occur upto several days.

↳ ~~AA~~ NSAIDs are given to decrease the swelling and pain, NSAID are available without doctor orders.

↳ Rest your joint and use ice to decrease pain and swelling.

Complication:→

↳ This may cause allergic reaction.

↳ pain capsular rupture -

↳ Trauma to adjacent structure e.g nerves and vessels.

↳ Synovitis.

↳ Hypotension

↳ Seizures

↳ Air embolism.

↳ Laryngeal edema.

↳ Synovitis.

↳ vasovagal reactions.