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:: I-d - 15371 ::

:: 4th - Semester ::

:: CRP ::

Ans :: Retrograde pyelography is used

Q1 ~~Ans~~ For Nonvisualization of ureteral segment on (IVU) and (CTU) better Image characterization of ureteral or pelvicalyceal abnormalities are seen.

Contrast medium HOCM or LOCM 15-200

In x-ray department Supine AP of abdomen is performed

patient is prepared As for a

Surgery and patient is anesthetized

### Technique:

After the patient has been anesthetized

The procedure begins by ensuring

proper positioning of the patient

in the dorsal lithotomy position

once positioning is complete a

Cystoscopy is performed The

physician uses The The

Cystoscopy to identify The Left

and right ureteral orifices.

Then physician used a SF or BF open the ends to cannulate the ureter that need to be imaged. At this point radiographs are taken to ensure proper placement of the catheter.

When placement is confirmed then inject the contrast through the catheter typically 5-8 ml of contrast needed to completely opacify the ureter and renal collection system. As the contrast is being injected several images are taken using fluoroscopy. If there is pelvoureteric junction obstruction the contrast medium is the pelvis is aspirated. The films are examined and if satisfactory the catheter is withdrawn first 10 to 15 cm below the renal pelvis and then to lie just above the

ureteric orifice.

About 2ml of Contrast medium are injected at each of these levels and films taken

Films :-

- ① Supine PA of the ureter
- ② both 35° anterior obliques of the ureter.

The catheter may be left in the pelvis to drain a pelvoureteric obstruction in this case withdrawal. ureterograms are not possible.

after complication are anaesthesia infection

Mucosal damage of ureter.

Perforation of catheter.



Q2 Ans:

INTRAVENOUS PYELOGRAPHY (IUP) also called (IUU) is Radiological procedure which is used ~~from~~ for assessing Congenital anomalies of renal Systems.

### Indications

to checked function of kidneys  
checked for Congenital anomalies of (horse. Shoe kidney)

### Contraindications:

- Contrast allergy
- Hepato renal Syndrome.
- Thyrotoxicosis
- Raised Serum Creatine.

### Contrast Media:

① ICM or LOCM 370

high-risk should receive LOCM.

② Small children and infants and The elderly

③ Those with renal and Cardiac failure.

④ poorly hydrated patients.

⑤ patients with diabetes myelomatosis.

or Sickle Cell anaemia

- ① Patients who have had a previous Severe Contrast medium reaction with LCM or Those with a strong allergic history
- Adult dose. 50 ml  
~~ped~~ paediatric dose 1ml

### Technique.

The median antecubital vein is the preferred injection site because flow is retarded in the cephalic vein as it pierces the claupectoral fascia. 19G needle is used and injection is given rapidly to maximize the density of the nephrogram

### Films

Immediate film. AP of the renal areas This film is exposed 10-14 s after the injection it aims to show the nephrogram

S. Mint film AP of renal areas This film is taken to

determine if excretine is symmetrical and is invaluable for assessing the need to modify technique.

15 mint film .. AP of the renal areas there is usually adequate distension of the pelvicalyceal system with opaque urine by this time. Compression is released when satisfactory demonstration of the pelvicalyceal system has been achieved.

Release film.

Supine AP abdomen. This film is taken to show the whole urinary tract if this film is satisfactory the patient is asked to empty their bladder

(5) After micturition. Base on the clinical finding and radiological finding on the earlier films this will be either a full length abdominal film or a

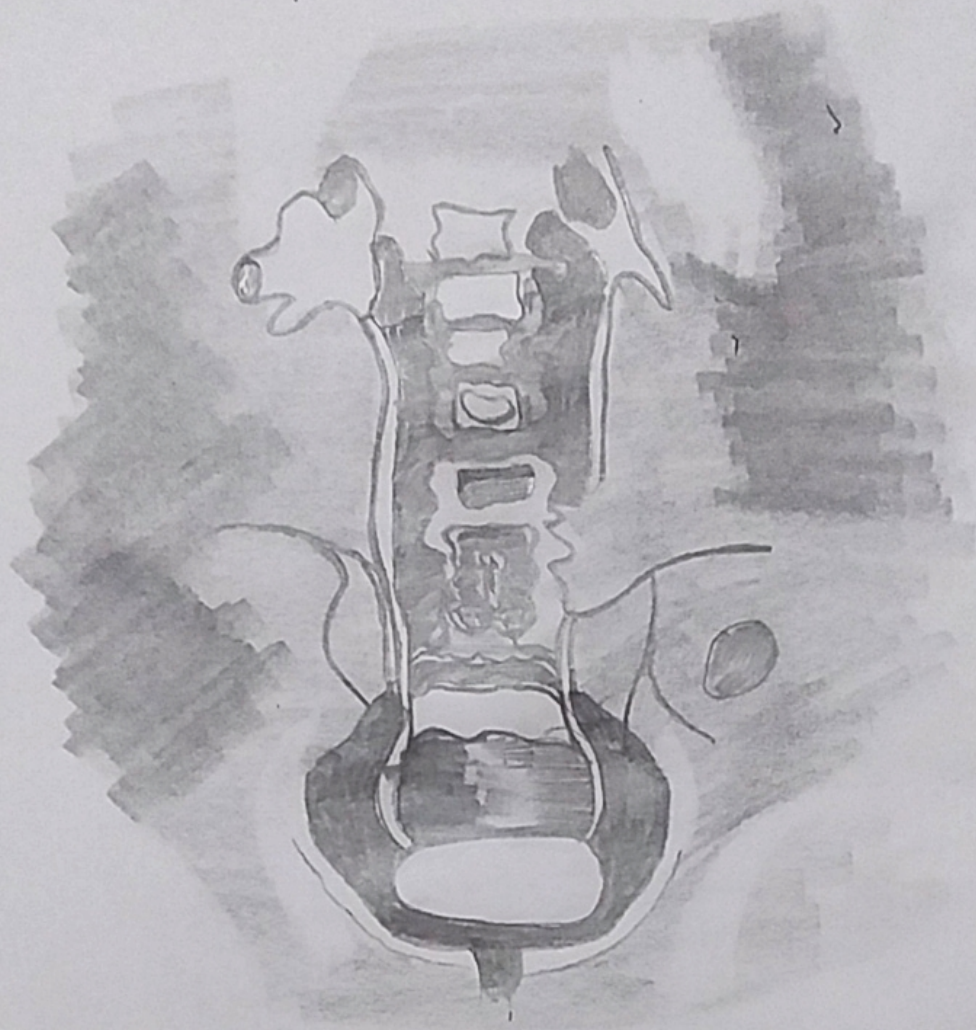
Coned view of the bladder  
with the tube angled  $15^{\circ}$   
Cauded and centred 5 cm  
above the symphysis pubis.

The principal of this film  
is to assess bladder emptying  
to demonstrate a return to  
normal of dilated upper  
tracts with relief of bladder  
pressure to aid diagnosis  
to bladder tumours of confirm  
uretero-vesical junction calculi and  
uncommonly to demonstrate  
a urethral diverticulum in  
females.

Due to contrast medium  
complications are.

Due to the technique incorrectly  
applied abdominal compression  
may produce intolerable  
discomfort or hypotension





Intravenous pyelogram (IVP) demonstrating dilation of right renal collecting system & right ureter consistent with right ureterovesical stone.

Q3 Ans. Endoscopic retrograde Cholangio-pancreatography is used for extrahepatic biliary obstruction.

ERCP is technique that combines the used of endoscopy to diagnose and treated certain problems of biliary ductal systems. Contrast media LCM 150.

### Technique.

- The pharynx is anaesthetized with 4% xylocaine spray and the patient is given diazepam 5mg min i.v. until sedated.
- The patient then lies on the left side and the endoscope is introduced.
- A polythene catheter prefilled with contrast medium is inserted into the ampulla having ensured that all air bubbles are excluded.
- A small test injection of contrast under fluoroscopic control is made to determine the

The position of the cannula. it is important to avoid over filling of the pancreas if it is desirable to opacify both the biliary tree and pancreatic duct then the latter should be cannulated first. A sample of bile should be sent for culture and sensitivity of there is evidence of biliary obstruction.

### Films

- ① Early filling films to show calculi
- ② Mono. straight and posterior oblique
- ③ Supino. straight both obliques
- ④ Trendelenburg to fill intrahepatic ducts
- ⑤ Semi erect to fill lower and of common bile duct and gallbladder
- ⑥ Films following removal of the endoscopy which may obscure the duct.

Q7

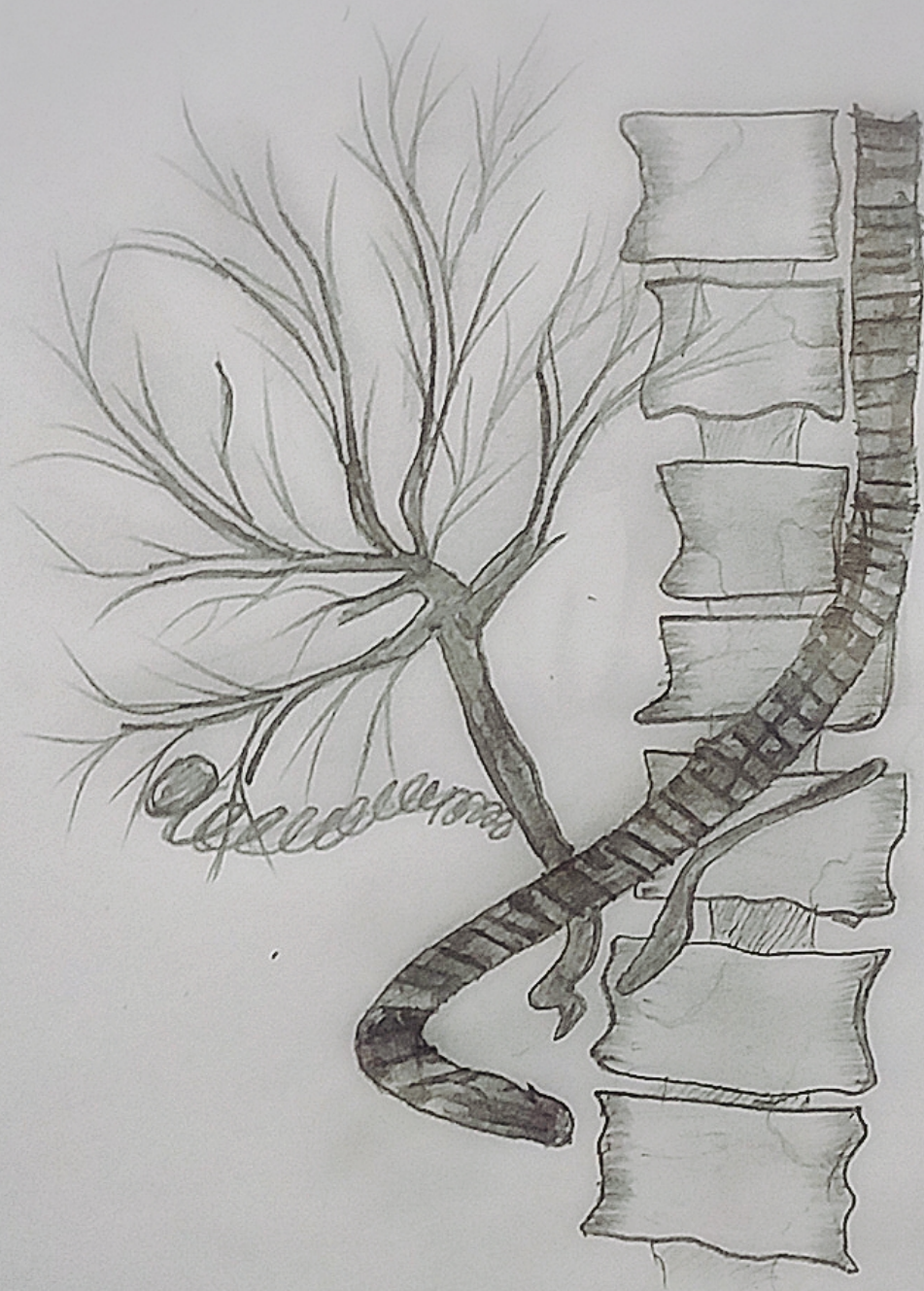
M T W T F S

H/W C/W

Dated:...../...../20.....

③ Delayed films to assess  
the gallbladder and emptying  
of the common bile duct  
Complication due to the contrast  
medium

Local - Damage by the endoscope  
e.g. rupture of the oesophagus  
damage to the ampulla proximal  
pancreatic duct and distal  
common duct.



Q4. Ans. Hysterosalpingography (HSG) is ~~done~~ radiological procedure is done for evaluating the cause of female infertility. also known is uterosalpingography examination of the uterus and the fallopian tubes. it is performed to investigate the shape of the uterine cavity and the shape and patency of the fallopian tubes.

### Contraindications.

- ① Pregnancy.
- ② A purulent discharge on inspection of the vulva or cervix or diagnosed PID in the preceding 6 months.
- ③ Recent dilatations.
- ④ Contrast Sensitivity.

### Contrast media

oily contrast.

Hocm or locm 300.

Volume. 10 - 20 ml

Cemed PA. view of the pelvic. cinte

## Technique.

- The patient lies supine on the table with knees flexed legs abducted and heels together.
- using aseptic technique the operator inserts a speculum and cleans the vagina and cervix with chlorhexidine.
- The anterior lip of the cervix is steadied with vulsellum forceps and the cannula is inserted into the cervical canal if Foley catheter is used there is usually no need to grasp the cervix with the ~~to~~ vulsellum forceps.
- Care must be taken to expel all air bubbles from the syringe and cannula as these would otherwise cause confusion in interpretation contrast medium is injected slowly under intermittent fluoroscopic control.

Q.

M T W T F S

H/W - C/W

Dated: ...../...../20.....

⑤ Spasm of uterine Cornu

may be relieved by i.v.

glucagon

or opiates increases pain by

stimulating smooth muscle contraction

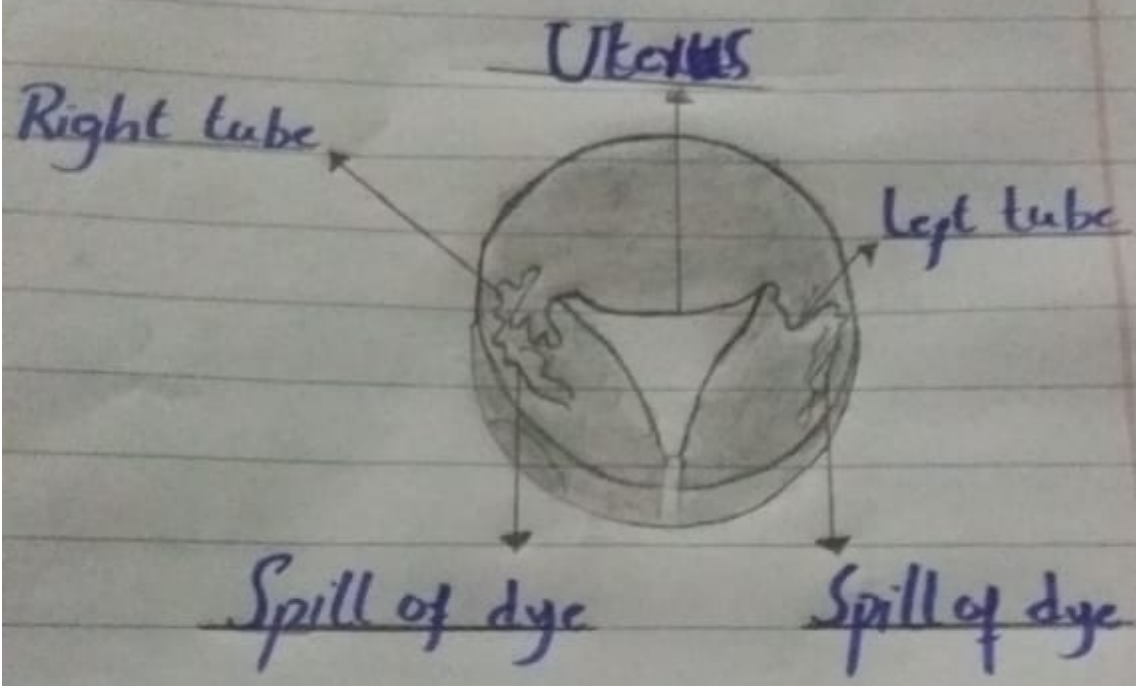
Films

① As the tubes begin to fill

② when peritoneal spill has

occurred and with all instrument removed.





## Q5. Arthrogram

Arthrogram is a radiological procedure used for diagnosing the disorders of joint, ligaments and tendons.

An arthrogram is a series of images of a joint after injection of a contrast medium usually done by fluoroscopy or MRI. The injection is normally done under a local anesthetic such as Novocain or lidocaine.

The radiologist performs the study using fluoroscopy or x-ray to guide the placement of the needle into the joint or tendon and then inject around 10ml of contrast based on age. There is some burning pain from the

Anesthetic and a painful  
bubbling feeling in the  
joint after the contrast  
is injected. This only  
lasts 20-30 hours until  
the contrast is absorbed.  
After that the radiologist  
can more clearly see  
what is on under your  
skin and get the result.

### After Care

Avoid driving for two  
days.

Joint pain may occur.

### Complications

- Allergic reaction
- Synovitis.
- Pain Capsular rupture
- Trauma to adjacent structures  
e.g. nerves and vessels

Most common is knee joint,  
Hip joint and  
Shoulder joint.

# Arthrograph of Knee Joint.

