

(1)

Day: MTWTFs

Date: / /

Q NO: 1

Non-visualization
of ureteral segment
on IVU and CTU

If there is

non-visualization of
ureteral segment on
IVU and CTU

Retrograde pyelography
will be used which
is also known as

(2)

Day: MTWTFSS

Date: / /

~~retrograde pyelouretero-~~
~~graphy~~ is a method
of imaging the
upper urinary
collecting system.

After IVU and CTU
were developed,

it has been rarely
performed as a
primary study.

Definition: It is

the roentgenographic

(3)

Day. MTWTFSS

Date. / /

demonstration of the renal pelvis and ureter by the retrograde injection of radio-opaque material through the ureters.

Indications:

⇒ Non visualization of ureteral segment on IVU and CTU if there is still clinical concern for evaluating the

(4)

Day: MTWTF S

Date: / /

collecting system after
an IVU or CTU a
retrograde pyelogram
may be able to
better image the
segment of ureter)

⇒ unexplained hematuria,
when the ureters
have not been
completely visualised
by IVU.

⇒ Evaluating persistent
intraureteral or
intrapelvic filling defects
on IVU

5

Day: MTWTFSS

Date: / /

- ⇒ Better characterization of ureteral or pelvicalyceal abnormalities seen on IVU or CTU.
- ⇒ Access for brush biopsies of a suspicious area of urothelium.
- ⇒ Demonstration of the site length, lower limit and, if possible, the nature of an obstructive lesion.

(6)

Day: MTWTFSS

Date: / /

possible complications
of retrograde
pyelogram include:

- ⇒ sepsis
- ⇒ Urinary tract infection
- ⇒ Bladder tear
- ⇒ Bleeding
- ⇒ Nausea or vomiting.

General protocol
for Retrograde
pyelography:

Technique:

Babar Paper Product

Checked By: Parents: Exam:

7

Day. MTWTFSS

Date. / /

⇒ 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 cystoscope to identify the left and right

(8)

Day: MTWTFs

Date: / /

ureteral orifices.

⇒) The physician then uses a 5F or 6F open-ended or cone tipped catheter to cannulate the Ureter that needs to be imaged.

⇒) At this point, radiographs are taken to ensure proper placement of the catheter.

(9)

Day: MTWTFB

Date: / /

⇒ once placement, is confirmed, the physician may inject the contrast through the catheter. Typically 5-8 mL of contrast is needed to completely opacify the ureter and renal collecting system. As the contrast is being injected, several images are

10

Day. MTWTFSS

Date. / /

After care:

1= postanaesthetic
observation.

2= prophylactic antibiotics
may be used.

QNO: 2:

An intravenous

pyelography also

called an intravenous

urography or excretory

urography. is

procedure used to

11

Day: MTWTFSS

Date: / /

visualize abnormalities
of the urinary
system, including
the kidneys (renal
parenchyma,
pelvicocalyceal system),
ureters, and
bladder.

Indication:

- ⇒ check for normal
function of kidney
- ⇒ check for anatomical
variants or congenital
anomalies.

(12)

Day: MTWTFSS

Date: / /

- ⇒ check the course of the ureters.
- ⇒ Detect the localize a ureteric obstruction.

Contraindications:

- ⇒ Contrast allergy
- ⇒ Hepato-renal syndrome
- ⇒ Hyponatremia
- ~~Renal~~
- ⇒ Raised serum creatinine.

How is the procedure done?

19

Day. MTWTFSS

Date. / /

⇒ You may be asked to change into a hospital gown.

⇒ A lab technician will inject a liquid called a contrast material into your hand or arm through an IV. The dye travels through your bloodstream to your kidneys and urinary tract.

Babar Paper Product

Checked By: Parents: Excellent Good Need Improvement

(14)

Day: MTWTFB

Date: / /

⇒ You'll lie very still on a table as the tech takes the x-rays. You may be asked to turn from side to side and hold different positions.

⇒ The IVP shows the urinary tract in action as the kidney begins to empty into the ureters. These are the tubes

Babar Paper Product

Checked By: Parents: Excellent Good Need Improvement

(15)

Day: MTWTFSS

Date: / /

that carry urine to
the bladder. The
iodine will show
up as bright white
on the film. Dye
that doesn't move
or moves too slowly
shows where the
blockages are. The
images also may
show that the
kidney, bladder,
or ureter is not
working as well as
it should.

Babar Paper Product

Checked By: Parents: Excellent Good Need Improvement

(16)

Day. MTWTFSS

Date / /

⇒ Near the end of the exam, you'll be asked to pee.

This lets your radiologist get a picture of your bladder after it empties.

⇒ An IVP usually takes less than 1 hour. If your kidneys function more slowly, the test can last up to 4 hours. You should be able

Babar Paper Product

Checked By: Parents: Excellent Good Need Improvement

(17)

Day: MTWTFSS

Date: / /

to go back to
your normal diet
and activities

- afterward. Your doctor may tell you to drink more fluids than normal to flush the contrast dye from your body.

(18)

Day: MTWTFSS

Date: / /

QNO: 3:

procedure performed
for investigation of
extrahepatic biliary
obstruction:

Biliary obstruction
refers to blockage
of the bile from
flowing from the
liver into the
intestinal tract.

⇒ percutaneous transhepatic
cholangiography (PTC) 15

Babar Paper Product

Checked By: Parents: Excellent Good Need Improvement

(19)

Day: MTWTF S

Date: / /

a radiographic
technique employed
in the visualization
of the biliary tree
and can be used
as the first step
in a number of
percutaneous biliary
interventions.

Indication:

- ⇒ Failed ERCP/EBCP not feasible
- ⇒ Anatomic evaluation of complications of ERCP.

(20)

Day: M J W T F S

Date: / /

- ⇒ delineating bile leaks
- ⇒ postoperative stricture
dilatation
- ⇒ stone removal

Contra indications:

- ⇒ bleeding diathesis
- ⇒ gross ascites
- ⇒ biliary tract sepsis
- ⇒ Hydatid disease

Contrast medium

LOCM 150; 20-60ml

Equipment:

(21)

Day. MTWTFSS

Date. / /

- ⇒ Routine trolley pack
- ⇒ Chiba needle (22G, 15cm long)
- ⇒ connecting tube
- ⇒ water soluble iodinated contrast.

preliminary film

- ⇒ supine PA of the right side of the abdomen.

patient preparation:

- ⇒ Haemoglobin, prothrombin time and platelets are checked. and

(22)

Day: M T W T F S

Date: / /

- corrected if necessary.
- => days after examination
 - => premedication.

Technique:

- => The patient lies supine. Under fluoroscopic control a metal is placed on the skin in the right mid-axillary line such that its position overlies the liver during full

Babar Paper Product

Checked By: Parents: Excellent Good Need Improvement

inspiration and expiration. A second metal marker is placed on the xiphisternum.

⇒) Using aseptic technique the skin, deeper tissues and liver capsule are anaesthetized at the site of the first metal marker.

⇒) During suspended respiration the chiba needle is inserted

(24)

Day: MTWTF S

Date / /

into the liver, but
once it is with
in the liver
parenchyma the
patient is allowed
shallow respirations.
It is advanced
parallel to the
table top in the
direction of the
xiphisternum until
just short of the
right lateral margin
of the spine.

(25)

Day. MTWTFs

Date. / /

⇒ Excessive parenchymal injection should be avoided and when it does occur it results in opacification of intrahepatics. Injection of contrast medium into a vein or artery is followed by rapid dispersion.

⇒ If the intrahepatic ducts are seen to be dilated, bile should

Babar Paper Product

Checked By: Parents: Excellent Good Need Improvement

(26)

Day: MTWTF S

Date: / /

be aspirated and sent for microbiological examination.

⇒ contrast medium is injected to fill the duct system and define the lower end of an obstruction.

The needle is withdrawn. Care should be taken not to overfill an obstructed duct system because septic shock may be

Babar Paper Product

Checked By: Parents: Excellent Good Need Improvement

(27)

Day: MTWTFSS

Date: / /

precipitated -

After care:

⇒ pulse and blood pressure half-hourly for 6h.

Q NO: 4:

Hysterosalpingography (HSG) is a

radiological procedure used to demonstrate the uterine cavity and the fallopian

Babar Paper Product

Checked By: Parents: Excellent Good Need Improvement

(28)

Day: MTWTFB

Date: / /

tube lumens using contrast medium. It is a valuable technique in the evaluation of an infertile female patient.

⇒ It is fluoroscopic examination.

Meaning:

⇒ Hystero mean uterus

⇒ salphingo mean fallopian

⇒ Graphy mean to draw tubes

⇒ It is also known as

Babar Paper Product

Checked By: Parents: Excellent Good Need Improvement

(29)

Day: M T W T F S

Date: / /

uterus salpingography.

procedure:

The

procedure involve x-rays.

it should be done

in the follicular

phase of the cycle.

it is contraindicated

in pregnancy. it is

useful to diagnose

uterine malformations,

Asherman's syndrome,

tubal occlusion and

pelvic inflammatory disease

Babar Paper Product

Checked By: Parents: Excellent Good Need Improvement

(30)

Day: MTWTFSS

Date: / /

and used extensively
in the work up of
infertile women. It
has been claimed
that the chance
of pregnancy
increases after HSG
has been performed
using catheters, an
interventional radiologist
or specifically trained
radiographer can open
tubes that are
proximally occluded.

Balor Paper Product

Checked By: Parents: Excellent Good Need Improvement

(31)

Day: M T W T F S

Date: / /

⇒ The test is usually done with radiographic contrast medium (dye) injected into the uterine cavity through the vagina and cervix. If the fallopian tubes are open the contrast medium will fill the tubes and spill out into the abdominal cavity.

It can be determined whether the fallopian

Babar Paper Product

Checked By: Parents: Excellent Good Need Improvement

(32)

Day: MTWTFSS

Date: / /

tube are open or blocked and whether the blockage is located at the junction of the tube and the uterus or whether it is at the end of the fallopian tube

⇒ The HSG can be painful - so analgesics may be administered before and/or after the procedure to reduce pain. Many doctors will

Babar Paper Product

Checked By: Parents: Excellent Good Need Improvement

33

Day: MTWTFSS

Date: / /

also prescribe an
antibiotic prior to the
procedure to reduce
the risk of an
infection.

QNO: 5:

procedure used for
diagnosing the
disorders of
joints.

procedure used
for diagnosing the

Babar Paper Product

Checked By: Parents: Excellent Good Need Improvement

(34)

Day: MTWTFSS

Date: / /

disorder of joint
as Arthrography

Method:

- ⇒ single contrast
- ⇒ Double contrast

Knee joint

Arthrography:

- ⇒ The patient is lying supine
- ⇒ using sterile technique the skin and underlying soft tissue are

Babar Paper Product

Checked By: Parents: Excellent Good Need Improvement

(35)

Day: MTWTFSS

Date: / /

anaesthetised posterior
to mid point of
the patella.

⇒) 21g needle is inserted
into the joint space
and then slightly
angle anteriorly so
that the tip of
the needle comes
to lie against the
posterior surface of
patella.

⇒) An effusion is aspirated
and small dose of
contrast is injected

Babar Paper Product

Checked By: Parents: Excellent Good Need Improvement

(36)

Day. MTWTFSS

Date / /

follow by 40ml of
air for double
contrast.

⇒ Then full volume of
contrast medium is
injected followed
by 40ml of air for
double contrast.

⇒ The needle is then
removed and the
limb is exercised
for uniform distribution
of contrast.

(37)

Day: M T W T F S

Date: / /

Hip Arthrography:

- ⇒ The patient is lying supine with legs internally rotated so that entire length of femoral neck is visualised.
- ⇒ The position of the femoral vessels are visualised to avoid puncture.
- ⇒ The skin is clean using aseptic technique.
- ⇒ A point marker is

(38)

Day: MTWTFSS

Date: / /

placed at the site of entry and should be parallel to intertrochanteric line, after local anaesthesia 20 or 22g needle is then advanced in to the femoral neck.

⇒ Inject 6 to 8ml of contrast under fluoroscopic control.

⇒ The needle is then removed and joint

Babar Paper Product

Checked By: Parents: Excellent Good Need Improvement

(39)

Day: MTWTFSS

Date: / /

is exercised for
equal distribution of
contrast within joint.

Shoulder Arthrography:

- ⇒ The patient is lying
supine with arm of
side under examination
close to the body
external rotation. so
that the head of
biceps is out of
the path of needle.

Babar Paper Product

Checked By: Parents: Excellent Good Need Improvement

(40)

Day, MTWTFSS

Date / /

⇒ using sterile technique
the skin and soft
tissues are anaesthetised
1cm inferior and 1cm
lateral to the
coxoid process a
spinal needle 21g
is inserted vertically
into the joint space
under fluoroscopy
guidance and test
dose of contrast
is injected followed
by full injection 15ml
for single contrast or

Babar Paper Product

Checked By: Parents: Excellent Good Need Improvement

(41)

Day. MTWTF S

Date. / /

~~are~~ air to distend
the synovial sac.

- ⇒ The needle is then removed and joint is exercised for uniform distribution of contrast medium.

procedure used
for diagnosing
the disorders
of ligaments: