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Paper : Conventional Radiological procedure.

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Q1:-

Ans:- Image quality in an intravenous urogram (IVU) can occasionally be compromised by variables like bowel preparation, renal function and radiographic factor, posing a challenge to all urologist. The computerised Tomography urogram (CTU) yields better diagnostic information than an IVU, due to inherent superior anatomic delineation and contrast sensitivity, against a trade of involving radiation dose and cost. Our study was conducted to assess the utility & timing of performing a single phase CTU, as a problem solving tool, to clear the diagnostic dilemma in a selected subset of patient in whom an ongoing IVU could potentially be inconclusive.

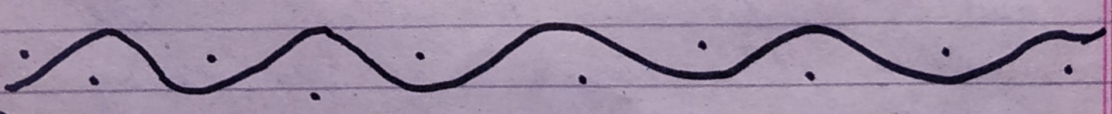
The concept of a CTU limited to a single phase study to supplement an inconclusive IVU optimize the contrast and radiation.



if the IVC procedure is in the afternoon, patient can take light breakfast. untill 4-6 hour before the procedure; The patient can take a small cup of clear fluids per hour such as water, fruit juice, black tea or black coffee.

protocol: -

The goal of CT urography protocols is to obtain images of fully opacified & distended collecting system and bladder with adequate image quality of renal parenchyma, tumor enhancement, & vascular anatomy with the lowest number of scans as possible.



~~Ans:~~  
Ans:

- ① Demonstration of the site, length, lower limit and if possible the nature of an obstructive lesion.
- ② Demonstration of the pelvic/ureteral system after an unsatisfactory excretion urogram.
- ③ Nonvisualization of ureteral segment on IVC and CTU if the still



Clinical concern for evaluating the collecting system after an IVC and CTU, a retrograde pyelogram may be able to better image the segment of ureter.

4 Better characterization of ureteral & pelvicalyceal abnormalities seen on IVC & CTU.

5 To aid in stent placement.

6 patient who has allergy on iodinated contrast media and have renal insufficiency is indicated for evaluation of retrograde urogram but because the contrast media is not injected intravenously the possible reaction is low.

Q2:-

Ans-

An intravenous pyelogram (IVP) is an x-ray examination of the kidneys, ureters & urinary bladder that uses iodinated contrast material injected into veins.

An x-ray is a noninvasive medical test that help physicians diagnose and treat medical condition. Imaging with x-rays involves exposing a part of the body to small dose of ionizing



Radiation to produce picture of the inside of the body.

X-ray are the oldest & most frequently used form of medical imaging.

When contrast material is injected into a vein in the patient arm, it travels through the blood stream & collects in the kidneys and urinary

tract, turning these areas bright white in the X-ray images. An IVP allow the radiologist to view and assess the anatomy and function of the kidney ureters and the bladder.

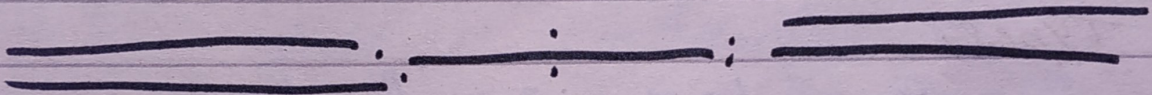
An intravenous pyelogram examination helps. The radiologist assess abnormalities in the urinary system as well as how quickly and efficiently the patient system is able to handle fluid waste. The exam is used to help diagnose symptoms such as blood in the urine or pain in the side or lower back.

The IVP exam can enable the radiologist to detect prostate problems which with in



urinary tract resulting from

- kidney stones.
- enlarged prostate.
- tumors in the kidney, ureters or urinary bladder.
- starting from urinary tract infection.
- surgery on the urinary tract.
- congenital anomalies of the urinary tract.



Q3:-

Ans:- billiary obstruction:-

A billiary obstruction is a blockage of the bile ducts. The bile ducts carry bile from the liver and gallbladder through the pancreas to the duodenum, which is a part of the small intestine. Bile is a dark-green or yellow-wish brown fluid secreted by the liver to digest fats. After you eat, the gallbladder releases bile to help in digestion and fat absorption. Bile also helps clear the liver of waste products.



obstruction of any of these bile ducts is referred to as a biliary obstruction. many of the conditions related to biliary obstruction can be treated successfully. However, if the blockage remains untreated for a long long time, it lead to life threatening diseases of the liver.

Types: —

You have several types of bile ducts. The two types of bile ducts in the liver are intrahepatic and extrahepatic ducts.

• intrahepatic ducts: —

intrahepatic ducts are a system of smaller tubes within the liver that collect & transport bile to the extrahepatic ducts.

• extrahepatic ducts: —

The extrahepatic ducts begin as two paths one of the right of the liver and the other on the left as



They descends from The Liver.  
They unite to form The common  
hepatic ducts. This runs  
directly toward The intestine.

The biliary duct. of The  
duct from The gallbladder  
also open into The common  
Common hepatic ducts. The  
bile ducts from this point  
onward is known as common  
bile duct or choledochus. Before  
emptying into The small  
intestine. The common bile  
duct passes through The pancreas.

Causes biliary obstruction:-

A biliary obstruction may be  
caused by number of factors  
involving the.

- bile ducts.
- Liver
- gallbladder.
- pancreas.
- small intestine.

The following are some of  
The most common causes  
of biliary obstruction.

- gallstone. which are The most



### Common Cause.

- inflammation of the bile ducts.
- trauma.
- A ~~biliary~~ biliary stricture which is an abnormal narrowing of the ducts.
- cysts.
- enlarged lymph nodes.
- pancreatitis.
- An injury related to gallbladder or liver surgery.
- tumors that have reached the liver, gallbladder, pancreas or bile ducts.
- infection including hepatitis.
- parasites.
- cirrhosis or sea screening of the liver.
- severe liver damage.
- choledochal cyst.

### Factors :-

- The risk of factor for biliary obstruction usually depends on the cause of the obstruction the majority.
- a history of gallstone.
  - chronic pancreatitis.
  - obesity
  - rapid weight loss.



Q4:-

ANS- infertility female:-

most people will have the strong desire to conceive a child at some point during their lifetime. understanding what defines normal fertility is crucial to helping a person or couple, know it is time it seek help. most couple approximately 85% will achieve pregnancy within one year of trying, with the greatest likelihood of conception occurring during the earliest months only an adimal 7% of couple will conceive in the second year. as a result, infertility has come to be defined as the inability to conceive within 12 months. This diagnose is therefore shared by 15% of couples attempting to conceive. we generally recommend seeking the help a reproductive endocrinologist has not occurred within 12 months. However there are various scenarios the include.



• infrequent menstrual periods:-

when a woman has regular menstrual periods. defined as regular cycles occurring every 21 to 35 day. This almost always indication that she ovulates regularly. ovulation of the egg occur approximately 2 week before the start of the next period if a woman has cycles at intervals a greater than 35 days it may indicate ovulation an egg predicable irregular in couple attempting ~~ptenon~~ pregnancy.

female age of 35 year or older:-

for unclear reason, egg number decrease at a rapid rate as woman age furthermore as aging occurs egg quality egg being genetically normal decrease. Therefore we recommended a fertility evaluation if a couple attempting pregnancy ~~for~~ for 6 months or more when the ~~wk.~~ woman is 35 years of age or older.



A history of pelvic infection or sexually transmitted disease:-

Sexually transmitted infections such as chlamydia or gonorrhoea can cause inflammation and permanent scarring of the fallopian tubes. The presence of open tubes is essential for natural conception.

• known uterine fibroids or endometrial polyps:-

Such as fibroids that indent the endometrial cavity and endometrial polyps. The endometrial cavity pregnancy rates. These abnormalities can also cause irregular.

Fertility Evaluation:-

History and physical examination:-

First and foremost your fertility physician will take a very thorough medical and fertility history. Your doctor.



## Transvaginal ultrasound -

ultrasound is an important tool in evaluating the structure of the uterus, tubes and ovaries. ultrasound can ~~detect~~ detect uterine abnormalities such as fibroids and polyps. distal fallopian tube occlusion and ovarian abnormalities.

laboratory testing.

Hysterosalpingogram

semen analysis.

causes of in fertility

(1) Advancing or maternal age.

(2) ovulation disorder.

(3) Tubal occlusion.

(4) uterine fibroids.

(5) Endometrial polyps.

(6) male factor affecting sperm function. male factor infertility.

(7) Endometriosis.

(8) unexplained.



Q5:-

Ans:- Tendon and Ligament:-

MRI and ultrasound are now widely used for the assessment of tendon and ligament abnormalities. Healthy tendons and ligaments contain high levels of collagen with a structured orientation, which gives rise to their characteristic normal imaging appearances as well as causing particular imaging artefacts. Changes to ligament and tendon as a result of disease and injury

Tendon and ligament structure and function:-

The structure of tendons makes them uniquely suited to their role connecting muscle to bone. They have a very high collagen content, mostly Type I collagen arranged in a cross linked triple helix structure. Tightly bound water molecules bridge the strands of the helix, stabilising the structure and



allowing hydrogen bonding to further water molecules, all of which are confined to the transverse plane of the tendon. There is a complex hierarchical structure with collagen macromolecule grouped into which in turn are bundled into fibres and fascicles surrounded by vascularised connective tissue endotendon. These are bound together to form the tendon. A tendon sheath, comprising two layers of synovium is typically seen surrounding osseous tunnels around corners comprising a thin layer of loose fatty connective tissue.

### Normal tendons and ligaments:-

The structure of tendons has important implications for their imaging appearance. On ultrasound the fascicular structure is seen as multiple closely spaced echogenic parallel lines on longitudinal scanning. Wheat in the transverse plane.