The use of intravenous urography health and social care essay

Health & Medicine

Radiography scrutiny of urinary piece of land via endovenous injection of contrast media (giving liquid substances straight into a vena) . This construction became as a flow or urination. This flow did n't demo a clear image in a general x-ray. Although, with endovenous urography process, contrast media is injected into vena (endovenous injection) .

Intravenous urography will finish information all about kidney disease, ureter and chafe bladder. This process consists of two phase. First, it needs good functional of kidney to filtrate dye comes out from blood to urine. Time that needed for dye to be on X ray is related with kidney function. Second stage gives anatomical image of urination piece of land.

Between foremost proceedingss, the dye will give clear image of kidney, stage that called as nephrogram. The other image will follow dye that passes down to the ureter and saddle sore bladder. The last movie is taken after urine comes out will demo how the saddle sore vesica is emptied well. Intravenous urography by and large undergoes for valuate the abnormalcy construction or obstructor of the micturition piece of land.

INTRAVENOUS UROGRAPHY HELPS IN THE PROBLEMS

Kdney rocks in the kidney (a rock in kidney or ureter will be shown clearly on the x-ray movie) , Urine infection (if patient has infection at the vesica or kidney, endovenous urography helps to happen if patients has obstructor or unnatural kidney) , haematuria / hemorrhage in piss (it is caused by infections, annoyance and tumour in kidney. with endovenous urography, it

can assist to happen the cause) , obstructor or amendss at any portion at urination piece of land can be seen by endovenous urography.

Contrast MEDIA

High- osmolality contrast media (HOCM) or low-osmolality contrast media (LOCM) are acceptable but the undermentioned 'high hazard ' groups should have LOCM such as babies and little kids and the aged, those with nephritic and / or cardiacfailure, ill hydrated patients, patients withdiabetes, myelomatosis or sickle-cell anemia, patients who have had a old terrible contrast medium reaction with LOCM or those with a strong allergic history.

ADULTS DOSE

50 milliliter.

PAEDIATRIC DOSE

1 ml kgE‰? .

PATIENT PREPARATION

No nutrient for 5 hours prior to the examination. The patient should non be overhydrated but should be usually hydrated. Dehydration is non necessary and does non better image quality. Patients should be, sooner, be ambulatory for 2 hr prior to the scrutiny to cut down intestine gas. The everyday disposal of bowel readying fails to betterdiagnosticquality of the scrutiny and its usage makes the scrutiny and its usage makes the scrutiny more unpleasant for the patient, others claim there is no grounds this is advantageous.

The patient should avoid the heavy repast prior to the scrutiny to cut down the sum of intestine gas, and the vesica should be empty. If the scrutiny is to be performed on a patient who has antecedently had a terrible contrast medium reaction, consideration should be given to administrating methyl Pediapred 32 milligram orally 12 and 2 hr prior to injection of contrast medium inaddition to guaranting that a LOCM is used Preliminary radiogram should be taken to show possible calcifications, concretions or other abnormalcies in the venters to happen the place of the kidneys, and to look into the

technique factors.

Preparation BEFORE INTRAVENOUS UROGRAPHY EXAMINATION

The kidney should can be filter the contrast. For that, it is rare to make if the patient has unfunctional kidney. Before the process, the patient needs to undergoes blood trial to do certain the kidney is good function. The patient should inform the physician if there are any allergic reaction, prior to the contrast media likes iodine. The patient informed that do non devour any heavy repast certain hours before the procedure. This is to do certain, the patient 's colon is free from nutrients that can do the image became clear

. The patient will be given laxatives (dulcolax / heavy doses causes painful cramps) before the procedure. the intent is to clean the intestine that can do the x-ray image more clear. The patient will besides be given the informed consent for patient understand about the procedure. If patient has diabetes and takes Glucophage, the patient should halt takes the pills for

two yearss before the examination. This is caused by the combination of Glucophage and contrast media that maybe gives side effects to the kidney.

AFTER THE PROCEDURE

After the endovenous urography process, the physician will name the movies discourse how to do colony with the patient andfamily. As an illustration, the physician can non see both of the kidney x-ray image clearly after four hours, the patient should let them to see for the following process.

There are many causes of the obstructors is kidney stones. the other causes are mass, tumour or malignant neoplastic disease at the tissue near the ureter. Sometimes, the hemorrhage in kidney can do blood coagulum that cause obstructor of micturition from gall vesica and ureter.

See of this scrutiny, the physician will do two actions ; either waiting for yearss for the rocks pass out in urine or refer to the specializer of the Urology that maestro in micturition disease. If the endovenous urography shown the obstructor of big rock in the upper or in-between portion of ureter, the urologist possibly used lithotripter machine that send sound moving ridges to interrupt rocks to little atoms that can go through through the ureter easy and comes out from organic structure via piss.

PRELIMINARY FILM

Supine, full length AP of the venters, in inspiration. The lower boundary line of the cassette is at the degree of the symphysis pubic bone and x-ray beam is centred in the mid-line at the degree of the iliac crests.

Technique

The average antecubital vena is the preferable injection site because flow is retarded in the cephalic vena as it pierces the clavipectoral fascia. A 19-G is advanced up the vena to cut down the hazard of a perivenous injection and the injection is given quickly as a bolus to maximise the denseness of the nephrogram. Upper arm or shoulder hurting may be due to stasis of contrast medium in the vein. This is relieved by abduction of the arm.

The patient is undress (have oning infirmary gown) and lying on the x-ray table. The contrast media is injected into venas or the arm. Ptient possibly feels pain. The contrast media is filtered via kidney and to ureter. The uninterrupted x-ray image is taken at the venters, normally every five proceedingss to ten proceedingss.

Patient is lying on the x-ray tabular array when the x-ray image is taken but, the patient will teach to travel to the lavatory for micturution before the last x-ray image is taken. Although, a few x-ray image is taken for hours before the examinationin certain conditions. Patient can endorse place after the process is done. Patient can devour normal repast after the scrutiny.

Movies

IMMEDIATE FILM

Anteroposterior (AP) renal areas. This movies is exposed 10-14 seconds after the injection (arm-to-kidney clip) . Its purposes to demo the nephrogram, as an illustration the nephritic parenchyma opacified by contrast mediain the nephritic tubules.

5-MINUTES FILM

AP nephritic areas. This movie is taken to find if eliminations is symmetrical and is priceless for measuring the demand to modify technique, as an examplea farther injections of contrast media if there has been hapless initial opacification.

A compaction set is now applied around the patient 's venters and the balloon positioned halfway between the anterior superior iliac spinal columns, as an illustration exactly over the ureters as they cross the pelvic brim. The purpose is to bring forth better pelvicalyceal distension. Compression is contraindicated after recent abdominal surgery, after nephritic injury, if there is a big abdominal mass and when the 5-minutes movie shows already distended calyces.

15-MINUTES FILM

Ap of nephritic areas. There is normally equal distention of the pelvicalyceal systems with opaque piss by this time. Compression is releasd when satisfactory presentation of the pelvicalyceal systems has been achieved.

RELEASE FILM

Supine AP abdomen. This movie is taken to demo the whole urinary tract. If this movie is satisfactory, the patient is asked to empty their vesica.

AFTER MICTURITION FILM

Based on the clinical findings and the radiological findings on the earlier movies, this will be either a full-length abdominal movie or a coned position

of the vesica with the tubing angled 15 & A ; deg ; caudad and centred 5cm above the symphysis pubic bone.

The chief value of this movie is to measure vesica voidance, to show a return to normal of dilated upper piece of lands with alleviation of vesica force per unit area, to help the diagnosing of vesica tumours, to corroborate ureterovesical junction concretion and, uncommonly, to show a urethral diverticulum in females.

RISKS AND SIDE EFEECTS

There are small opportunities to acquire malignant neoplastic disease from radiation exposure. Radiation dosage that effectual from this process this is 3msv, same like people who are got the radiation in one year. Contrast media that is used in endovenous urography can do to irritation reaction to patients, sometimes it need medical treatment. Pregnant adult female should inform physician or radiographer if they are pregnant.

Small per centum of patient that got serious allergic reaction to contrast media, like unable to talk, breath or sup, swollen at lips and lingua, low blood force per unit area or faint. During the contrast media is injected, patient feels hot. This allergic reaction to contrast media is rare to happen. The effects is inflammation of the tegument, annoyance and conceited lips, The serious effects is hard in take a breathing and swoon cause of the low blood force per unit area.

Decision

Radiographer demand to hold a high grade of cognition, accomplishment, consciousness and involvement in this field so that they can carry through their day-to-day responsibilities efficaciously without seting patients life in danger. Contrast media is used in endovenous urography so that there are opaque or white countries at the kidney construction, ureter and vesica and this aid in better more clear x-ray image. Intavenous urography is an x-ray process that is used to name kidney jobs, ureter, vesica and urethra tract. This construction became it as micturition tract. The urination piece of land did n't demo clear image in general x-ray image.

Although, with endovenous uroraphy, contrast media is injected into the vien (endovenous is the giving of liquid substances straight into a vena) that focused at kidney and comes out through the ureter as urine. Contrast media will be opaque to the x-ray. So, the kidney, ureter and vesica will shown as white or opaque countries in x-ray image. X -ray image that green goods is known as endovenous urography.