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subject

Clinical Medicine Lab

Exam

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Teacher

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Q5

Ans Urinary tract infection (UTI)

A Urinary tract infection is an infection in any part of urinary system kidneys, urinary ureters bladder and urethra.

Most infection involve the lower urinary tract. the bladder and the urethra.

women are at greater risk of developing a UTI than men.

Infection limited to bladder can be painful and annoying. UTI spreads in kidneys.

Symptoms

Urinary tract infection don't always cause symptoms they may be include signs

②

- 1) A strong, persistent urge to urinate
- 2) A burning sensation when urinating
- 3) passing of frequent, small amount of urine
- 4) Urine that appears cloudy
- 5) strong smelling urine
- 6) pelvic pain, in women
- 7) Urine that appears red.

Causes :-

UTI Infection typically occur when bacteria enter the urinary tract through the urethra and begin to multiply in the bladder. The most common UTI, occur mainly in women and affect the bladder and urethra.

- i) Infection of the bladder
- ii) Infection of the urethra

i) Infection of the bladder
This type of UTI is usually caused by *Escherichia coli* a type of bacteria commonly found in the gastrointestinal tract.

Infection of the urethra
This type of UTI can occur when GI bacteria

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Spread from the anus to the urethra.

Type of UTI infection

Each type of UTI may result in more specific signs and symptoms depending on which part of urinary tract is infected.

part of urinary tract affected	Signs and symptoms
1) Kidneys	upper back and side pain High fever shaking and chills Nausea vomiting
2) Bladder	pelvic pressure lower bladder abdomen discomfort Blood in urine.

Diagnosis

Tests and procedures used to diagnose UTI infection

1) Analyzing a urine sample doctor may ask for a urine

u) sample to blood or for look cells. for Lab red bacteria. analysis white blood cell

*1) Growing Urinary tract bacteria
in a Lab Lab analysis
of the urine in
some time following by
urine culture.
which medication will be
most effective

*2) Creating image of your urinary
tract

* Using a scope see inside bladder
If you have recurrent
UTIs your doctor may
perform to a cystoscopy,
using a long
cystoscope to see inside
your urethra and
bladder.

Treatment :-

Antibiotics usually
are the first line treatment
for UTI infection.
which drug are prescribed
and for how long depend
on health condition
Simple infection

- 1) Trimethoprim
- 2) Nitrofurantoin
- 3) Cephalexin.

5)

ceftioxone.

frequent infection

doctor may be certain treatments recommendation such as.

- 1) low dose antibiotics
- 2) self diagnosis and treatment
- 3) Vaginal estrogen therapy if you are postmenopausal.

Severe infection

UTI need treatment with intravenous antibiotics

Complications :-

when treated promptly and properly, lower urinary tract infection rarely used lead the complication.

- 1) Recurrent Infections
- 2) permanent kidney damage from an acute or chronic kidney infection
- 3) urethral narrowing in men from recurrent urethritis seen with gonococcal urethritis.

Q9

Any polycystic kidneys :-

kidneys polycystic diseases

6)

is an inherited disorder in which clusters of cysts develop primarily within your kidneys, causing kidneys to enlarge and lose function over time. Cysts are noncancerous round sacs containing fluid. The cysts vary in size and they can grow very large. Large cysts are damage kidney.

Symptoms :- PKD symptoms can include =

- 1) high blood pressure
- 2) Headache
- 3) Back or side pain
- 4) Blood in urine
- 5) Kidney failure
- 7) Urinary tract or kidney infection.
- 8) Increased size of abdomen due to enlarged kidneys

Abnormal genes cause polycystic kidney disease which mean most common causes.

Type They are two main type of polycystic kidney disease which are following.

7)

- 1) Autosomal dominant (PKD)
- 2) Autosomal recessive (PKD)

Causes of PKD :-

PKD is almost always inherited from a parent or from both parents. Men and women get PKD with relative frequency.

Caused by different genetic flaws, this form accounts for about 90 percent of PKD.

Complication

complication associated with polycystic kidney disease.

- 1) High blood pressure

Elevated blood pressure is a common complication of polycystic kidney disease.

- 2) Loss of kidney function

Progressive loss of kidney function is one of the most serious complications of polycystic kidney disease.

- 3) pregnancy complication

pregnancy is successful for most women with PKD in some cases.

⑧

4) Growth of cysts in Liver

likelihood for developed liver
cysts for someone
with disease. polycystic kidney
with age. increase at

Diagnosis

The following Diagnosis
are polycystic kidney
disease - are

- 1) Ultrasound
- 2) CT Scan
- 3) MRI Scan.

Q4

Ang term used medical dictionary
with suffix "otomy."

The suffix otomy is derived
derived from greek
world

Suffix meaning cutting
sharp or separate.

Otom-y

suffix denoting incision

cutting for example gastrotomy
suffix → meaning

Spasm → contraction

stasis → stopping

otomy → cutting operation

stenosis → narrowing

(9)

Q1

Ans Nuclear Medicine is directly involved both the diagnosis and treatment of benign thyroid disease. which requires an understanding of the pathophysiology and management of thyroid disorders in condition to expertise in nuclear methodology. Thyroid uptake and imaging the principal nuclear tests in thyroid disease may be used as follows.

- 1) Differential diagnosis of Hyperthyroidism.
- 2) function of thyroid nodules.
- 3) Differential diagnosis of congenital hypothyroidism.

Nuclear medicine involve using small amount of radio active material to diagnose disease. Radio active iodine is typically used in thyroid tests include thyroid scan.

Radiactive iodine therapy
Radioiodine therapy is an nuclear medicine treatment of thyroid disease.

(10)

radioiodination also called hyperthyroidism also may be used to treat thyroid cancer.

Thyroid gland absorbs nearly all the iodine in body. Because radioactive iodine are also called treat thyroid cancer.

Nuclear medicine is directly involved in both treatment and diagnosis begin thyroid gland disease.

which require understanding of the pathophysiology and management of thyroid disorders in addition.

Nuclear medicine plays a major role both in the treatment and diagnosis of thyroid disease. Use of radioactivity in pediatric population is strictly controlled due to possible side effect such as secondary cancers.

Q3

Ans Lithotripsy:- Lithotripsy is a medical procedure used to treat certain type of kidney stones.

(11)

and stones in other organs
such as your gall bladder or your liver.

The term is derived from
greek work which
mean "breaking stones"

Kidney stone occurs when
minerals and other substance
in your urine crystallize
in your kidney forming
solid masses
or stones.

Side effect Lithotripsy for
kidney stone

- 1) Bleeding around the kidney
- 2) Infection
- 3) Damage the kidney
- 4) stone that block the flow
of urine

Lithotripsy performed

During
Lithotripsy a surgeon will
use a medicine
which are called
Lithotripter to aim
sound wave directly
at the stones through
the body.

The sound waves break down the stone in small pieces. The wave only affect stone and will not harm muscle, bone or skin.

⊙ Basic components of Lithotripsy machine

- 1) A Shockwave generator
- 2) A focusing system
- 3) A coupling system
- 4) An imaging units.

Complications

- 1) Hematomas the higher to total energy the higher risk.
- 2) Risk of hemorrhage
- 3) Hyperventilation tetany
- 4) Blockage of urinary tract

Advantages of Lithotripsy

- 1) No lengthy hospital stays
- 2) No incisions
- 3) safe
- 4) Non invasive
- 5) short treatment.
- 6) Time convenience
- 7) No surgery

14)

4) The stone will be monitored by fluoroscopy or ultrasound during the procedure

5) Once the stone fragments are small enough to pass through the urinary system, the procedure will end.

~~(14)~~

~~(14)~~

Lithotripsy are the therapeutic

Type Lithotripsy

two main type which are the following. They are Lithotripsy

1) laser lithotripsy

2) extracorporeal shock wave lithotripsy.

~~The End~~

The End

(13)

Disadvantage of Lithotripsy

- 1) some discomfort.
- 2) Medicine to prevent infection
- 3) Painful
- 4) Cause complications
- 5) May require repeat procedures.
- 6) Not suitable for all type of stones

During the procedure

Because Lithotripsy is completely non-invasive therapy, most lithotripsy treatment are performed on an outpatient basis.

- 1) An intravenous line will be inserted arm or hand.
- 2) you may receive a sedative or anesthetic agent to ensure that you remain still and pain free during the procedure.
- 3) If you are asked to remove clothing you will be given a gown to wear.