

Unit -12

Organ Function Test

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* kidneys →

- kidneys body में pain में और इ
मिशन work body में waste

1) Regulation of blood Tonic

composition →

- में some ions और concen-
-tration और regulate करता है-

like- Na^+ , K^+ , Ca^{++} , Cl^- etc...

or Regulation of blood Volume →

Biochemistry II D Pharm 2nd Year

Unit - 12

Organ Function Test

* Kidneys →

- Kidneys body में pain में और है
जिनसे work body में waste
materials में filter करते हैं।

* Functions of kidney →

- Kidneys following functions में perform करते हैं -

1) Regulation of blood Ionic

composition →

- में some ions में concentration में regulate करते हैं -

like - Na^+ , K^+ , Ca^{++} , Cl^- etc...

2) Regulation of blood Volume →

- Kidneys blood volume में regulate करते हैं by conserving water and eliminating the excess in urine.

3) Regulation of blood PH →

- H^+ ions and urine in excreting organs blood pH and regulate and Cl^-
- 4) Regulation of blood pressure \rightarrow
 - in blood volume and regulate and blood pressure and regulate and Cl^-
 - in hormones and release and and in blood pressure and regulate and Cl^-
- 5) waste products and body in remove and Cl^-

- 7) Red blood cells and production and control and Cl^-
- 8) Body fluids and balance and Cl^-

* kidney function test

And their clinical

Significance \rightarrow

- Renal or kidney functions and following urine test

• Urine is evaluated for its E-

* Urine Analysis →

Urine is physically and chemically examined for its E-

1) Physical Examination →

a) colour →

- Normally urine is colour yellow
- Amber is but its colour depends on diet

* Significance →

• Urine is dark colour dehydration is indicated

• Urine is red colour urine is RBCs presence is show

b) Odour →

- Normal odour (smell) → like - Ammonia.
- Urine is small various pathological conditions is show

* Significance →

- Diabetic patients of urine of small sweat on faintly etc, ketones on glucose and presence of acet etc

c) PH →

- Usually urine, slightly acidic etc etc
- PH range between 4.5 to 8.

* Chemical Examination →

a) Proteins →

- Urine of acute abnormal Albumin and globulin and presence Proteinuria and indicate etc

b) Glucose →

- Urine of acute high level of glucose - glycosuria and indicate etc

c) Other sugars →

- Urine of acute fructose and presence fructosuria and indicate etc

*** Liver →**

- Liver, body's largest organ

- Liver body's all blood is filtered

*** functions of liver →**

1) Metabolic function →

- Liver actively, carbohydrates, lipid, protein, minerals & vitamin metabolism is participates

2) Excretory function →

- Bile pigments, bile salts & cholesterol are excreted in bile into intestine.

3) Hematological function →

- Liver blood is formed is participates

- Liver, clotting factors is produce

like-factor V, VIII

4) Storage function →

- Liver is glycogen, vitamin-B, D & B12 & trace element iron stored etc

5) Protective function →

- Liver, xenobiotics or metabolism or liver responsible etc
- Liver body of foreign and dangerous materials if protect etc

6) Circulatory function →

- Liver blood volume and regulate etc

* Liver Function tests and their clinical significance →

1) Serum bilirubin test →

- if haemoglobin or break-down product etc and bile or green major pigment etc

* Normal Range →

- Direct bilirubin → 0.1 - 0.4 mg/dl.

- Indirect bilirubin →
0.3 - 1.3 mg/dl.
 - * Significance →
 - Direct bilirubin or high level
Intrahepatic or indicates or/
 - Indirect bilirubin or high level
Intrahepatic cholestasis or/ indicate
or/
 - Bilirubin or/ total high level - Haemolysis,
Jaundice etc. indicate or/
- 2) Serum (Plasma) Protein test →

- Albumin and Globulins Prime
plasma protein or/
- or/ liver or/ or/ produced
or/
- * Normal Range →
 - Albumin → 3.5 to 5.1 gm/dl.
 - Globulin → 1.8 - 3.1 gm/dl.
- * Significance →
 - Low level indicates -
Oedema, shock, haemorrhage etc.

- High level indicates -

Dehydration, tuberculosis,

Kala-Azar etc. -

3) Serum cholesterol (Lipid Profile) test →

i) Serum cholesterol (Lipid profile) test →

- 2nd test blood triglyceride and cholesterol level and calculate andr ई/
- following four type of fats blood में measured इनर with ई इर

test of liver

i) Total cholesterol level →

- 2nd blood में total cholesterol amount and indicate andr ई/

ii) Low-density lipoprotein (LDL) or bad cholesterol →

- 2nd cholesterol arteries में with ई with ई and heart attack of risk and increase andr ई/

iii) High-density lipoprotein (HDL) or

Good cholesterol →

• If cholesterol LDL cholesterol or

arterias क॑ धरर ररर॑ इ॑ रररर

रररर इ॑

iv) Triglycerides →

• If circulatory fats इ॑र इ॑ व॑र

body क॑ धरर॑ प्ररररर ररररर इ॑

* Normal range →



Total cholesterol level is < 200 mg/dl.

• LDL cholesterol level is < 100 mg/dl.

• HDL cholesterol level is > 40 mg/dl.

• Triglycerides level is < 150 mg/dl.

* Significance →

• cholesterol or high level

indicates रररर इ॑ -

→ heart diseases, liver

diseases, higher risk of

Atherosclerosis and stroke

etc.....

4) Serum (SGOT) or (AST) test →

(SGOT - serum glutamic oxaloacetate
(transaminase)

(AST - Aspartate Transaminase)

- if enzyme liver and heart if liver and energy production if help order

* Normal Range →

• SGOT → 0.40 u/L

* Significance →



• High level of SGOT indicates

- Liver diseases (like

viral hepatitis • toxic hepatitis
• cirrhosis • jaundice etc.

(cardiac diseases like congestive
heart failure, shock etc.)

5) Serum Glutamate Pyruvate

Transaminase (SGOT) or

Alanine Transaminase (ALT)

test →

- if enzymes mainly liver

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calls in urea and 1/

• urea alanine and formation in helps
and 1/

* Normal range →

• 5 to 36 u/L

* Significance →

- STPT and high level liver
damage and indicate and 1/

Complete

Website - www.Eazypharms.Com

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