Assignment viva
Course Title: Chemical Pathology
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- **Explain the following.**

- **Liver function tests,**
- **Renal function tests,**
- **Lipid profile,**
- **Cardiac enzyme profile**
- **Fertility hormones,**
- **Tumors marker,**
- **Electrolyte,**
- **Thyroid profile,**

Liver function tests,
Liver function tests, also called hepatic panels, are a group of blood tests that provide information about a patient's liver condition. These tests include protraumen time activated partial thromboplastin time albumin, bilirubin (direct and indirect).
Liver function tests are recommended for the following reasons.
-Planning for pregnancy.
-Screening for any liver infection such as hepatitis C.
-Monitoring pre-existing liver disease and its status during treatment.
-If you are taking medications that may have a side effect on liver function.
-If you have any liver problems or symptoms of liver disease.

Why do I need a liver function test?
The liver is an important organ of the human body and the functions of the liver play an important role in the overall health of your body.
The following liver function tests can help determine the condition and health of your liver.
The most common blood test taken for a liver function test is aminotransferase. If your liver function test results are found between 7-56 units/liters and 10-40 for Alt, your liver function is normal. Anything that goes beyond a liver function test normal range means that some liver problems or liver infections may occur and need to be diagnosed and treated.

Renal function tests,
Kidney function tests are common lab tests that assess how well the kidneys are working. Such tests include:
-urea nitrogen in the blood,
-Creatinine - blood.
-creatinine clearance,
-Creatinine - urinate.

Urea nitrogen in the blood,

Ben stands for urea nitrogen in the blood. What form does urea nitrogen protein form when it breaks down?
A test can be done to measure the amount of urea nitrogen in the blood.
Performed: how to perform a test of urea nitrogen in the blood, a blood sample is needed. Most of the time blood is drawn from a vein located on the inside of the elbow or the back of the hand.

Creatinine - blood,
The creatinine blood test measures the level of creatinine in the blood. This test is done to see how well your kidneys are working. Creatinine can also be measured with a urine test.
Performed: how to perform a creatinine blood testing, A blood sample is needed.

Creatinine clearance,
The creatinine clearance test helps provide information about how well the kidneys are working. The test compares the level of creatinine in the urine with the level of creatinine in the blood.
Performed: How to perform a tests of creatinine clearance,This test requires both a urine sample and a blood sample. You will collect your urine for 24 hours and then blood will be drawn. Follow the instructions exactly. This ensures accurate results.

Creatinine - urine,
Creatinine Urine testing measures the amount of creatinine in the urine, this test is done to see how well your kidneys are working. Creatinine can also be measured with a blood test.
Performed: How to perform a creatinine urinate tests, after the urine sample is provided is tested in the lab. If needed, your doctor may ask you to collect your urine at home for more than 24 hours. Your healthcare provider will tell you how to do this. Follow the instructions exactly so the results are correct.

Lipid profile,
A complete cholesterol test is also called a lipid panel or lipid profile. Your doctor may use it to measure the amount of "good" and "bad" cholesterol and triglycerides, a type of fat in your blood.
Cholesterols is a soft, waxy fat that your body needs to function properly. However, too much cholesterol can lead to; atherosclerosis, a blockage or hardening of your arteries.
Cholesterol test measure how?
-High-density lipoprotein cholesterol.
-Low-density lipoprotein (LDL) cholesterol.
-Total cholesterol.
-Triglycerides.
Performed, How to perform a lipid profile tests, your doctor will need to get your blood sample to check your cholesterol level. You will probably have your blood drawn in the morning, sometimes after fasting the night before.
Blood testing is a patient procedure. It only takes a few minutes and is relatively painless. This is usually done in a diagnostic lab. In some cases, this can be done during a regular doctor's visit.
Normal values, here are the ranges for total cholesterol in adults: Normal: Less than 200 mg/dL. Borderline high: 200 to 239 mg/dl. High: At or above 240 mg/dl.

Cardiac enzyme profile,
Cardiac enzyme profile measure the levels of enzymes and proteins that are linked to heart muscle injury. Tests for protein Troponin l and Troponin T .Tests can also test for an enzyme called creatine kinas. Low levels of these proteins and enzymes are usually found in your blood but if your heart muscle is injured, such as a heart attack, proteins and enzymes leak out of damaged

heart muscle cells, and blood Their level rises in the flow because some of these proteins and enzymes are also found in other body tissues, their levels in the blood can increase when those other tissues are damaged. Cardiac enzyme profile should always be compared with your symptoms, the results of your physical examination, and the results of an electrocardiogram.
Expect during the test, It includes your: cholesterol level, blood glucose (sugar) level, white and red blood cell counts, as well as your platelet levels, levels of electrolytes, such as sodium and potassium levels, B type neutrophilic peptide, a It also contains hormones that can signal heart failure.
Normal level, Troponin General Values: TNI: less than 0.12 micrograms per liter (mg / L) Less than TNT: less than 0.01 mg / L.

Electrolyte,
An electrolyte test can help determine whether an electrolyte imbalance is present in the body.
Electrolytes are salts and minerals, such as sodium, potassium, chloride and bicarbonate, found in the blood. They can conduct electrical impulses in the body.
The test is sometimes performed during a routine physical exam, or can be used as part of a more comprehensive set of tests.
For example, your electrolyte levels may be checked if you are prescribed certain medications, such as diuretics or angiotensin converting enzyme (ACE) inhibitors, which are often used to treat high blood pressure. There are.
In addition to checking the level of electrolytes in the blood, an electrolyte panel (a group of specific blood tests) can also be used to determine if there is an acidic imbalance. Normal arterial blood pH ranges from 7.35 to 7.45).
Electrolyte tests can also be used to monitor the effectiveness of treatment for an imbalance that affects the functioning of an organ.
The treatment for an electrolyte imbalance will depend on which electrolyte is out of balance and by how much. For example, if you have a sodium imbalance, you may be advised to reduce your salt intake (if sodium is too high) or reduce your fluid intake (if sodium is too low).

Fertility hormones,
You may get a blood test to check your follicle-hormone or F levels, which stimulates your ovaries to produce eggs for each month's release. High F can mean less fertility in women. FSH blood levels are checked in your menstrual cycle (usually day 3). fertility hormones test will be done on male and female.

These hormone tests include the following:
Luteinizing Hormone,
Follicle Stimulating Hormone,
Estradiol,
Progesterone,
Prolactin,
Free T3.
Total Testosterone,
Free Testosterone,
Androstenedione,

Thyroid profile,
For a gland that is only two inches in size, the thyroid has a huge impact on our health. It produces a hormone that carries blood to all parts of the body. Thyroid hormone plays a key role in regulating metabolism - the process by which body cells convert nutrients into energy and thus

increase body temperature, heart rate, and even brain function. Helps to manage. So when thyroid hormone levels fall, the body slows down.

Women of all ages are more likely to have low levels of thyroid hormone than men. However, many of their symptoms are attributed to other conditions or are written as a result of aging.

A blood test for TSH levels is the most sensitive test to determine if you have hypothyroidism. Most laboratories use 0.45 -5.00 MIU / L as a general reference range for TSH. People with TSH between 5.00 and 9.99 MIU / L often have no symptoms (known as subhypothyroidism), but some do. If your TSH is within this range, another test called T4 will be done. Low T4 levels usually mean that you will benefit from thyroid hormone replacement.

Many people with hypothyroidism or subclinical hypothyroidism do not know that something is wrong because they have not been tested.

Normal values,

Cpt Code,

Diagnosis code,

Color tube,

Normal t3 and t4 levels, Normal ranges will vary among laboratories; however, a typical range is 4.6 to 11.2 mcg/dl (60to145 m mol/L), Serum Total T3 concentration: A high T3 level may help confirm a diagnosis of hyperthyroidism if the T4 level is normal.

Tumors marker,

These tests sometimes look for tumor markers in the blood, urine or body tissues called cancer markers. Tumor markers are substances produced by cancer cells or normal cells in the body in response to cancer. Some tumor markers are specific to one type of cancer. Can be found in many other types of cancer,

Because tumor markers can also appear in certain non-cancerous conditions, tumor marker tests are not commonly used to diagnose cancer or to screen people with a lower risk of the disease. These tests are often performed on people already diagnosed with cancer. Tumor markers can help determine if your cancer has spread, whether your treatment is working, or if your cancer has returned after you have finished treatment.

Tumor marker tests are often used: Plan your treatment. If the level of the tumor marker goes down, it means the treatment is usually working. Help determine if a cancer has spread to other tissues, or help predict the possible outcome of your disease check, so that you know if your cancer is at higher risk for cancer. Successful treatment is back after screen people. Risk factors may include a family history and a previous diagnosis of another type of cancer.

What is the normal range of cancer markers? Normal range: < 2.5 ng per ml. The general range may vary somewhat depending on the brand of intent used. Surface >10 ng / ml is widely recommended for disease and level >20 ng / ml is suggested for metastatic disease.

THE END