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BLOOD BIOCHEMISTRY AND CLINICAL PREDICTION OF BLOOD

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Annotation
Blood is the most important, complex structural combination of the body. In this article, we can get information about the function of blood in the body and about the extraction of drugs from the blood and the structure of proteins in the blood plasma.Clinical analysis of blood is important for the identification of most diseases and does not require complex laboratory equipment as well as expensive consumable material. It will not take a lot of time and funds for the usual urine analysis. Therefore, they are suitable for primary medical and sanitary facilities.

Keywords
glucose , suspension, hyperprotoinemia, hypoprotoinemia, dysproteinmia, kinins, albumins,blood, blood biochemistry, disease, laboratory, diagnosis, medicine, medical education.

Purpose of the study:
1. To familiarize yourself with the methods of finding hemoglobin products in the blood in order to understand the cause of diseases associated with a violation of oxygen transport of the blood.
2. To familiarize yourself with the methods of measuring the amount of products in the blood in order to be able to carry out biochemical analysis of the blood in order to identify diseases in the future.
3. To study the methods of measuring the activity of certain enzymes in the blood and be able to use it to identify future diseases and treat it.
4. To familiarize yourself with the methods of studying the mineral composition of the blood in order to understand the causes of the origin of certain diseases.

Blood is the main internal environment and solution of the body. Exchange products of substances, cells, tissues in the external environment are constantly falling into the blood. The blood has a reddish, viscous, weak alkaline environment. It has a pH of 7.36-7.4 in adults, 7.2-7.3 in newborns, a specific gravity of 1,050 - 1,060, and a heterogeneous substance of 1,060-1,080 in infants.

A newborn has a total blood count of 0.7 L, compared to 1.3 for 5 years, 2.5 for 10 years, 4.5 for 15 years, and 5.0 - 5.5 l for adults. In adults, blood is 7% of body weight, while in younger children this indicator is 2-3 times more.

When the blood centrifuges, its cells (Erythrocytes, Leukocytes, platelets) fall into the sediment. At the top of the precipitate, a light-yellowish clear liquefaction plasma remains. Plasma contains about 7% protein as well as various molecular substances. The plasma coagulates within a few minutes, that is, it forms a well. As a result of this Ivic contraction, the blood serum is released. Serum differs from plasma in that it does not contain fibrinogen protein. In plasma ivigan, fibrinogen is converted to soluble fibrin. It is fibrin that forms the Ivic. The Blood performs important functions in close connection with the process of metabolism.

1. The Blood performs the functions of breathing and exhaling by transporting oxygen from the lungs to the tissues and vice versa, transporting carbon (IV) oxide (CO_2) formed in the tissues to the lungs. With this

function, the blood processes oxidation and reduction in tissues, and controls energy almanication.
2. The gastrointestinal system has the function of supplying the products produced by digestion to different organs, glucose, ketone tannacesinig functions to feed by transferring liver to muscles, fats from liver to adipose tissue, lactic acid from muscles to liver, fatty acid from adipose tissue to different organs.
3. Toxic substances formed in tissues (ammonia, bilirubin, etc.), which are brought to the liver through the blood, where the detoxified compounds are excreted outside through the kidneys. With this, it acts as a blood separation.
4. Chemical signals through the blood-hormones and other compounds necessary for the body are transported to tissue cells and participate in the process of almanicization of substances.
5. Blood acts as protection with the help of leukocytes and antibodies. Water maintains salt, acid-base balances in one norm, performs a number of important tasks, such as maintaining body temperature.
In addition to blood cells - Erythrocytes, Leukocytes, platelets, organic and inorganic compounds are also included in the blood composition. Of the organic compounds, the most important are proteins, fats, carbon dioxide, hormones, enzymes, vitamins. In the blood also occur intermediate and final products of the processes of almanicization of substances, as well as mineral salts.
The constancy of the morphological and chemical composition of the blood in moderation is relatively unchanged, despite the fact that various substances end up in and out of the blood incessantly. temporary changes in the blood of a healthy person are quickly corrected. But it can be observed that the chemical composition of the blood has changed as a result of a violation of its functional state in most diseases, especially in diseases of the liver, heart, bladder, pancreas, lungs. Blood is the main indicator that the state of the human organism has changed. The study of biochemical blood visualizations, knowing the level of almanescence of substances of the human body is important in the diagnosis of the disease and its treatment.
Blood is a liquid connective tissue that forms the internal environment of the body with lymphatic tissue fluid. The chemical composition of the blood is very complex , in which organic and inorganic substances that perform many different functions are dissolved. One of its main characteristics is the preservation of the relative constancy of the body's composition.In a healthy person, random changes in blood composition are brought to relative constancy through nerve humeral control. However, in patalogic cases, this mehanism may not be able to provide a normative state, and in doing so, it changes on the side of reducing or increasing the amount of substances it contains. In general, blood responds to various pathalogical States of the body to a certain extent by changing its composition . For this reason, it is important to analyze the blood composition in a medical practice . Blood performs functions in the body such as transport , breathing , trophic excretory , tissue water balance maintenance , protection. 83% water in the blood, and the rest corresponds to dry matter. According to its physicochemical properties, the blood density is 1,050-1,060 . Its density and thickness depend on the amount of protein and blood cells it contains . The rN content of blood(7.36 - 7.40) is maintained continuously using the buffer system.The total amount of blood is on average 7-8% of the body mass , the volume is equal to 4.5-5 liters . In the fiosilogical state, part of it stands in the blood Depot.Losing most of the blood is fatal. The blood embodied the properties of suspension , colloidness. The suspensory and electrological nature, on the other hand, depends on the cations and anions.
Transport-in the help of blood, which performs the transfer of organic compounds (digestive products) from the intestine to various body parts ,compounds are assimilated or assimilated in the lungs, for example, glucose or musculature accumulated in the liver to be energy dressing . The depletion of the final soluble products of excretion produced in metabolism into the excretory organs. For example, the sickle, which is characteristic of the liver, is transported to the kidney, as well as excreted in the urine. Carbanates, which are characteristic of tissue nasaf acquisition, are excreted outwards by all cells
.the distribution of heat in the body is also carried out in the presence of blood, the transfer from the organs located inside to the upper tissues is performed, helping to maintain the constancy of the body's charisma. Under the action of the erythrocyte enzyme carboangidrase , carbonagemoglabine is soluble, and under the action of an enzyme that activates the degradation reaction, hemoglabine binds the dissociated vadarote Proton, in which oxyhemoglabine undergoes dissation. Carbonate anions, on the other hand , bind to calcium cations that are high in content within the erythrocyte, with hydrocarbonate dressing: calcium bicarbonate within the erythrocyte, and sodium bicarbonate in the plasma . Due to the buffering action of

hemoglabin, carbanate cislates are neutralized from tissues and the pH is kept constant.
The osmotic function of the blood - osmotic pressure within the vessels-is realized by the presence of albumin and calcium cations in the plasma. In the case of erythrocytes, hemoglabin and sodium ions are controlled. A decrease in blood proteins or hypoproteinmia leads to a decrease in the oncotic pressure in the capillaries , which in turn leads to edema. An increase in protein and sodium levels in plasma leads to water binding in the vessels and is called hyperproteinemia.
The buffer function of the blood-the cislata-base balance of the blood-is achieved in the presence of a buffer system of plasma (bicarbonate , phosphate, proteins, organic phosphates) and cells (hemoglabin, bicarbonate,phosphate).
The controlling function of the blood - plasma and substances secreted by blood cells (heparin, histamine , serotonin,) is observed to alter the maxillary capillary permeability , contraction of smooth muscles of the vessels , the realization of allergic reactions . Heparin serves as the activator of lipoproteidlipase.
Biologically active polypeptides make dressing-as a substrate for which there is a guru called kinins. They include bradykinin callidine and methionyl-Lysyl - bradykinin. These substances are characteristic of plasma kinionogens. Three types of kiniongens are found in human blood plasma:1 and 2 small-molecule kininogens (mol heavy 50,000) and up-molecular kininogen (mol heavy 200,000).

Changes in the amount of carboxyhemoglobin and methgemoglobin with age (in the process calculation with respect to total hemoglobin)

Table 1.

Age of the child	Pregnant Hb	Adult Hb	A2 hemoglobin
In a newborn child	75	25	0
1-7 days	71	29	0
Day 8-21	65	34,6	0
22-30 days	60	40	0
1-2 months old	56,1	43,4	0,5
2-3 months old	38,3	60,9	0,8
3-5 months old	22,5	75,3	2,2
6-9 months old	9,1	88,2	2,7
9-12 months old	4,3	92,8	2,9
1-3 years old	1,6	94,9	3,5
3-7 years old	0,8	94,9	4,3
7-14 years old	0,7	94,9	4,4

Under the influence of kininogenases, kininogens are characteristic of kinins. They include plasma and tissue callicreins. Callicroonogens pancreas
the gland is activated by the action of esa proteins (Hageman factor , plasmin) in the plasma in the TAA'sir of cathepsins or trpsin.Thus ,there is a relationship between blood clotting fiborinolysis, in that the kinins are dressing because their activator is common. The activity of callicreins in blood plasma and tissue controls protein and polypeptide inhibitors. Tissue callicreins secrete callidin from kininogens ,and plasmanics secrete bradykinin.Plasma binds to the proteolyte that cleaves kinins, while the kininase system inactivates them.
Various drugs are taken from the blood – they are divided into 4 groups ; complex action drugs (albumin , protein, nativ plasma, etc.) immununologically active drugs (gamma-globulin, antistoflokkok , anti-influenza,anti-whooping cough , interferon) hemostatic drugs (antigemophilic plasma , thrombin , fibrinova gubka fibrin film, fibrinogen) anti-animia and stimulating drugs (polybolin-dry powder of plasma components, dried nemolysis of dissolved-erythrocytes).
Protein structure in blood plasma-proteins in blood plasma are considered to be globular according to their

structure, while according to their composition they are divided into simple and complex types. Albumins are simple proteins . More complex proteins include lipoproteins(XM,ZIPLP,OZLP,ZPIP,ZYuLP), glycoproteins, and metalloproteins (transferrin seruloplasmin).
The total amount of proteins in the blood plasma is 70-90g/L in moderation. An increase in the total amount of proteins in the blood plasma is called hyperproteinemia, and a decrease – hypoproteinemia.Hyperproteinemia occurs in dehydration , injuries, burns , myoloma disease (absolute). Hypoproteinemia occurs when tumors in the body return, hunger, liver patalogy , kidney disease , blood loss. - Dysproteinemia changes the percentage ratio of protein Francia against the background of the amount of total proteins in the blood plasma in meiore, such as a decrease in the amount of albumins and an increase in the amount of one or more globulin Francia in various inflammatory diseases. Paraproteinmia is the appearance of pathological immunoglobulins - paraproteins-in the blood plasma . Such proteins include cryoglobulins , a - fetoglobulin , carcinoembrional antigen.

Literature:

1.‘‘Biokimyo Va Biokimyoviy Tekshirish Usullari’’, M.M. Tadjibayev , R. A. Sabirova,M.M . Madazimov, Y.A. Madrahimov, Toshkent-2017y
2.‘‘Klinik Biokimyo ‘’S.NDolimova,G.B. Umarova,G.M. Muxammadjonova, Toshkent-2019y

3.‘’ Tibbiy Biokimyo’’ Sobirova R.A , Toshkent-2020y

4.‘’Biokimyo Amaliy Mashg’Ulotlar’’ Sultonov R. 2006y
5.O’Zbekiston Respublikasi Prezidentining “Tibbiyot Va Farmatsevtika Ta’Limi Va Ilm-Fani Tizimini Yanada Rivojlantirish Chora-Tadbirlari To’g’Risida” Gi Qarori.
6.R.G‘.Sultonov, N.M. Xolmuhammedova, Sh.F.Karimova, U.L.Sultonho‘Jaev. “Biokimyodan Amaliy Mashg‘Ulotlar” Toshkent 2006. 161-b
7.Https://Mymedic.Uz/Kasalliklar/Qon-Kasalliklari/Temir-Tanqisligi-Anemiyasi/