

CHEMICAL BASIS OF FORMATION OF USING METHODS OF STONES IN THE BODY AND THEIR TREATMENT FOLK MEDICINE

Umidjon Xusanov

Senior teacher (PhD) of the Department of Medical Chemistry, Andijan state medical institute, Republic of Uzbekistan, Andijan

Yigitaliyev Fuzailshokh,

Student of Andijan State Medical Institute

ХИМИЧЕСКИЕ ОСНОВЫ КАМНЕОБРАЗОВАНИЯ В ОРГАНИЗМЕ И ИХ ЛЕЧЕНИЕ МЕТОДАМИ НАРОДНОЙ МЕДИЦИНЫ

Хусанов Умиджон Шокиржонович

ст.(PhD) преподаватель кафедры медицинской химии, Андижанский государственный медицинский институт, Республика Узбекистан, г. Андижан

Йигиталиев Фузаилшоҳ

Студент Андижанского государственного медицинского института

ABSTRACT

In this article, various causes and complications of the formation of stones in the body are given, as well as an understanding of the methods of treatment of stone accumulation diseases in the body using folk medicine.

АННОТАЦИЯ

В данной статье даны различные причины и осложнения образования камней в организме, а также дано представление о методах лечения болезней накопления камней в организме с помощью народной медицины.

Key words: gastritis, intestine, stomach, angioedema, amino acids, barley, immunosuppression, immunity, vitamin, dyspepsia, diarrhea, enterocolitis, stomach wall, stones, protein, cholesterol, gallbladder.

Ключевые слова: гастрит, кишечник, желудок, ангионевротический отек, аминокислоты, ячмень, иммуносупрессия, иммунитет, витамины, диспепсия, диарея, энтероколит, стенка желудка, камни, белок, холестерин, желчный пузырь.

Introduction

The human body is made up of known cells. Stones are freely located in the human body. These stones can be formed by Ca- calcium and Na- sodium salts. Stones can appear not only in the kidney and gall bladder, but also in the exits of the pancreas, salivary glands, tonsils, veins, intestines, bronchi, and the edges of the palate. Metabolism of substances and energy, chemicals such as Ca- calcium, cholesterol, purine bases, Na- sodium, soil structure, disturbance of nutrition, changes in the acidity of water are several pathological processes, as well as stones

in organs such as kidneys, bladder and bile ducts. causes it to form. Stones can form not only in the kidneys and bile ducts, but also in the excretory ducts of the pancreas, salivary glands, intestines, bronchi, tonsils, the edges of the palate, the inner parts of veins and other places. There are several types of stones that appear in different parts of the urinary system and bile ducts in the human body. For example: the surface of Ca- calcium oxalate in the kidney is uneven and rough, which inflames and bleeds the mucous membrane. Due to the pigments in the blood, there are oxalate stones that are colored brown. Such stones have a high density and are difficult to erode. The main reason for the appearance of this type of stones is the high consumption of fruits and vegetables rich in ascorbic acid and the lack of vitamin B6. In addition, yellow, smooth stones, urates, formed from uric acid, are also found. Uric acid is a residue of protein metabolism in the body. This situation depends on the environment, and when the pH value in urine drops below 5.5, uric acid begins to crystallize. Disruption of the composition of urine is caused by increased consumption of poor quality water, sour, bitter, and salty foods. In addition, white, smooth, fast-growing and easily decaying phosphates, consisting of $\text{Ca}_3(\text{PO}_4)_2$ -calcium phosphate, are found in the kidney. One of the main reasons for the formation of such a stone is infection of the organs located in the pelvic cavity. In this case, the acidity of urine changes as a result of the entry of bacteria from the rectum into the urinary organs. An alkaline environment is ideal for the formation of phosphate stones Citruvite-coral stones contain magnesium ammonium phosphate MgNH_4PO_4 , CaCO_3 . An alkaline environment has a positive effect on their formation and accelerates the formation of stones. This type of stone is a fast-growing and chronically recurring stone. In addition, kidney stones are more common in women than in men. The fact that stones can be passed from mother to child during pregnancy is included in the genetic cause of stone formation. Stone formation in the urinary and bile ducts is a common disease nowadays. Even these diseases can be repeated chronically and cause human death. The formation of stones is influenced by the alkaline environment in the human body and accelerates the process. To determine the formation of stones in the kidneys and bile ducts, it is necessary to conduct blood and urine analyzes with special laboratory tests. If the amount of Calcium (Ca) in the blood is more than 2.5 mmol/l, and in the urine is more than 0.015g/100ml, Potassium K^+ is more than 0.15g/100ml, and Phosphate PO_4^{3-} is more than 0.12g/mol, it means that stones are starting to form in the body. Among stone diseases, the most common is in the kidney and bile ducts. Any stone diseases are caused by excessive dehydration of the body. These diseases are also caused by changing fashions and dry weather conditions.

1. The relevance of the topic: Kidney stone disease (nephrotiasis) is a disease caused by the formation of stones (concrement) in the kidney and urinary tract. It has been found that it occurs more often in older people, that is, in women than in men. Kidney stones can form in the kidney, calyx, urinary tract and bladder. The disease is chronic along with the outbreak. The causes of the disease are mineral metabolism disorders, vitamin deficiency, kidney inflammation. As a result of sticking of salt crystals insoluble in urine around the protein residues, they form microlili, and they grow again and form stones. Their size can be from several mm to 10 cm. 4. The disease can also occur as a result of genetic predisposition. It is mainly associated with an increase in the amount of oxalate, phosphate, citrutive (coral) stones and salts such as $\text{Ca}_3(\text{PO}_4)_2$, Mg_3N_2 , H_3PO_4 , CaCO_3 .



Figure 1. Calcium carbonate formula

Patients suffering from the disease may have painful urination, nausea, vomiting, cloudy urine, and bleeding in the urine (due to the edge of the stones damaging the urinary tract). If there are stones in both kidneys, it is characterized by oligouria, hematuria, and anuria.

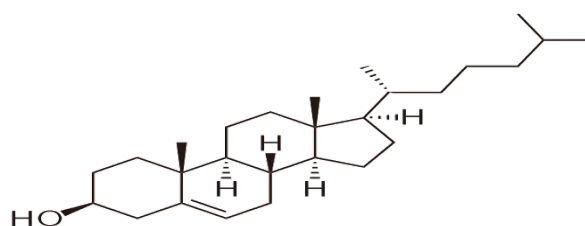


Figure 2. Cholesterol formula

Gallstone disease (Cholelithiasis) is formed in the gallbladder and bile ducts. The reasons can be an increase in the amount of cholesterol in the blood, a violation of metabolism, a violation of the work of the digestive organs, disturbances in the development of bile ducts, a derailment of the diet and many other reasons. Mainly, in this disease, we observe symptoms such as pain in the right intercostal space, mouth watering, stool discoloration. To check, it is necessary to undergo laboratory tests such as biochemical analysis of blood, cholecystography, UTT, MR and CT. Ultra sound and electromagnetic rays are used to crush the stone. If not treated in time: Pericholecystitis-inflammation of the gallbladder, rupture of the gallbladder-peritonitis and abdominal abscess. For prevention, proper nutrition, timely treatment of gastrointestinal diseases, and consumption of more fluids are necessary. In conclusion, we can make the following conclusions about this disease: Any disease is caused by changes and

problems in the diet. The environment and the weather also have an effect on our body. In order to get it, we need to eat less salt and salty products and drink more liquid. Cholelithiasis, cholelithiasis is a disease characterized by formation of stones in the gallbladder and bile ducts as a result of a metabolic disorder in the body, where bile stagnates. The disease is more common in women. It develops slowly. Often, for several years, the patient feels heaviness under the right ribs, the mouth becomes dry, and the throat boils 2. (especially when fried, smoked, salted products are eaten). These are the first symptoms of gallstone diseases, and when the disease is delayed, the pain is stabbing under the right ribs, and the pain spreads to the abdomen, right shoulder blade, right shoulder, spine and interscapular area. These symptoms indicate gallstones. The number and size of stones are different, the composition is the same (cholesterol, bile pigment, calcium salt, etc.) and mixed. Substances such as oxalic acid, purine bases, magnesium, phosphoric acid salts, and uric acid serve as the basis for stone formation in kidney stone disease. Inadequate fluid intake and amount, sedentary lifestyle, high intake of meat products, high sodium intake, etc. participates as an additional component. That is, Ca-calcium and Na-sodium are mutually synergistic elements, and the more Na-sodium is consumed, the more Ca-calcium increases. Excess Ca-calcium is excreted in the urine. Hypercalciuria is mainly caused by the following three factors:

1. Bad absorption of Ca-calcium in the intestine;
2. Release of Ca-calcium from bone due to pathological processes;
3. It is considered that the kidney cannot regulate the amount of Ca-calcium.

Due to the listed factors, stones containing $\text{Ca}_3(\text{PO}_4)_2$, CaC_2O_4 , CaCO_3 appear. The most common of them are stones of CaC_2O_4 type. Epithelial migration is observed in cholecystitis. Mineral salts, as well as elements such as Ca-calcium and K- potassium are absorbed into the migrating cells. At the same time, they accumulate layer by layer, and each new layer is separated from the other layer by lines like a tree trunk sawed crosswise. The appearance of such stones is caused by an increase in the level of cholesterol and high-density lipoprotein, multiple pregnancies, metabolic diseases, diseases of the organs of the gastrointestinal tract, excessive production of bile, its dampness, bilirubin, biliverdin, glucuronic acid, etc. Factors such as changes in the standard of substances were studied. It has been determined that there are 3 stages of stone formation in the human body.

Stage 1: Initial physico-chemical stage

Stage 2: Stone formation stage

Stage 3: Clinical stage - acute, chronic stage

Gallstones can also be caused by eating too much food and not exercising enough. Gallbladder inflammation is caused by inflammation of the gallbladder and bile ducts, anatomical changes in them (scarring, adhesions) and decreased movement of these organs (lack of regular meals, flatulence, constipation, etc.). The type of food, genetic characteristics of a person, tendency to obesity, etc. can cause gallstones. As a result of metabolic disorders, bile stagnation, the amount of bile acid in the bile decreases, which causes bile pigments - cholesterol and bilirubin to precipitate and form stones from them. The amount of bile acid depends to some extent on the composition and amount of fat consumed. Stones are formed when there is too much or too little fat in the food. In case of gallstone disease, the patient must strictly follow the diet prescribed by the doctor. It is important to engage in physical education and prevent obesity. Spasmolytic drugs, anti-inflammatory antibiotics and sulfanilamides are used during an attack of the disease. If the disease lasts a long time and causes complications, surgery is performed.

Conclusion- In order to prevent the formation of diseases in the body, a person should first of all follow a healthy lifestyle and proper nutrition. In case of gallstone disease, the patient must strictly follow the diet prescribed by the doctor. Doing physical education and taking measures not to gain weight are important in the prevention of gallstone diseases in addition, it is necessary to take it under the supervision of a doctor from time to time

REFERENCES

1. Krishna Ramaswamy, David W Killilea, Pankaj Kapahi, Arnold Jay Kahn, Thomas Chi 1, Marshall L Stoller 1. "Calcium elements in urinary stones and their role in urothelial disease" .
- 2 Askarov.I.R "Dictionary of Medicine" 2019 .
3. "Kidney stones (urolithiasis) - causes, symptoms, diagnosis and treatment methods"
[HTTPS://MYMEDIC.UZ/KASALLIKLAR/UROLOGIYA/BUYRAKDATOSH LAR-UROLITHIAZ/](https://mymedic.uz/kasalliklar/urologiya/buyrakdatoshlar-urolithiaz/)
4. "How to prevent kidney stones Can I get it?" /uz/news/2020/09/16/how-to-prevent-the-appearance-of-kidney-stones.Treatment of stone formation in the body according to its chemical basis and folk medicine