

GENERAL CHARACTERISTICS AND COMPONENTS OF URINE

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ABSTRACT

Urine is a product of metabolism in the human body. Its main component is water. But at the same time, with an increase in fluid, decay products and toxins are also released. A general analysis of urine allows you to establish its exact composition. The general characteristics and components of urine are very important for human beings. In adults, the amount of urine released in a day ranges from 1000 ml to 2000 ml, and on average it is 50-80% of the volume of liquid taken. A daily amount of urine less than 500 ml and more than 2000 ml is considered pathological in adults.

Keywords: Polyuria, diabetes insipidus, oliguria, diuretic.

INTRODUCTION

Urine is one of the main products of human life. Its main component is water, which makes up 92-99% of the total volume of urine. Along with excess water, decomposition products, toxins and poisons, hormones and some other substances are released from the body. Therefore, urine analysis provides a lot of information. General urinalysis is one of the main diagnostic studies, which is prescribed when suspecting various diseases and pathologies, primarily in diseases of the kidneys and urinary system, as well as during preventive examinations and to monitor the effectiveness of treatment. General urine analysis is used to determine the physical characteristics of this fluid and includes the study of chemical properties. With the help of this research, it is possible to identify various diseases of the kidneys, liver, bladder, problems related to the prostate gland, tumors, pyelonephritis, as well as a number of pathological conditions in the early stages of clinical manifestations.

MAIN PART

General characteristics of urine. In adults, the amount of urine released in a day ranges from 1000 ml to 2000 ml, and on average it is 50-80% of the volume of liquid taken. A daily amount of urine less than 500 ml and more than 2000 ml is considered pathological in adults. An increase in the volume of urine (polyuria) is observed when taking a large amount of liquid, foods that increase diuresis (watermelon, pumpkin, etc.). In pathological cases, diuresis occurs in kidney diseases (chronic nephritis and pyelonephritis), diabetes, etc. Excretion of a large amount of urine - up to a day and more is observed in diabetes insipidus (diabetes insipidus). , observed in vomiting, diarrhea, toxicosis, acute nephritis, etc. Complete cessation of urine

output (anuria) may occur in case of severe injuries of the kidney parenchyma (acute diffuse nephritis), urinary stone disease (when the urethra is blocked), poisoning with zinc, mercury, arginine, severe nervousness. Prolonged anuria leads to uremia. As a rule, more urine is released during the day than at night. The ratio between daytime and nighttime diuresis varies from 4:1 to 3:1. In some pathological cases (aggravated forms of heart decompensation, cystopyelitis, etc.), urine is excreted in large quantities at night compared to daytime. This condition is called nocturia. Normally, the color of urine is straw-yellow to orange. The color of urine depends on the presence of pigments in it - urochrome, urobilin, uroerythrin, urozein, and oxalic acid. Orange-colored urine is usually concentrated, high density, and relatively secreted in small quantities. Pale yellow (straw) urine has a low density and is excreted in large quantities. In pathological cases, the color of urine can be red, green, brown, etc. It depends on the presence of coloring substances that are not found in the norm. For example: red or pink-red color is observed in hematuria and hemoglobinuria, as well as after taking antipyrine, amidopyrine, santonin and other drugs. Brown or red-brown color is observed when the concentration of urobilin and bilirubin in urine is high.

In the urine of a healthy person, there is a very small amount of stercobilinogen, which is absorbed from the hemorrhoidal vein system. Under the influence of light and air, colorless stercobilinogen is oxidized and turns into a colored pigment (Stercobilin). In clinical practice, urine stercobilin is sometimes called urobilin. In such cases, the color of urine becomes dark. Green or pale urine is observed when the body receives methyl blue, as well as when the processes of protein decomposition in the intestine increase. It is observed that the process of decomposition of proteins in the intestine increases. When the process of decomposition of proteins in the intestine increases, the urine contains a large amount of indoxyl sulfuric acid, which can be broken down to form indigo.

Urine is normally clear. Salts, cellular elements, bacteria, mucus, fat (lipuria) can cause cloudy urine. The cause of cloudy urine can be determined either under a microscope (urine sediment test) or by chemical analysis. can be determined. In adults, the relative density of urine changes during the day is (from 1,002 to 1,035), it depends on the order of food, water intake and fluid removal from the body (sweating, etc.). Most often it is equal to 1.012-1.020. The density of urine gives an idea about the amount of substances dissolved in it. During the day, 50-75 g of dry substances are excreted in the urine. In severe renal failure, urine with the same density, equal to the density of primary urine or ultrafiltrate (~ 1.010) is always excreted. This condition is called isosthenuria. Constantly low concentration of urine in chronic nephritis, primary or secondary renal failure indicates impaired concentration function of the kidneys. In diabetes mellitus, low-density urine is also released (1.001 - 1.004), which is associated with a violation of water reabsorption in the tubules. . High density polyuria is characteristic of diabetes mellitus, in which it is associated with the retention of a large amount of glucose in the urine. Urine reaction (pH) is acidic or weakly acidic (pH 5.3 - 6.5) when eating mixed food, which is usually determined using litmus paper or test strips. Normally, 40 to 75 meq of acids are excreted in the urine during the day, and the type of food affects the pH level. Eat meat urine is acidic in nature, and urine reaction in vegetable diet is alkaline in nature. Alkaline urine contains more disubstituted phosphates or sodium (potassium) bicarbonate. In cases of fever with a strong acid reaction of urine, sugary it is observed in diabetes (especially when ketone

bodies are stained in urine), hunger and other changes in the body. Alkaline reaction of urine in cystitis and pyelitis (microorganisms break down uric acid into ammonia in the cavity of the urinary bladder), after strong vomiting, when taking certain drugs (for example, sodium bicarbonate), drinking alkaline mineral waters. when doing and others are observed. Chemical composition of urine. Dry substances in urine (about 60 g per day) consist of organic and inorganic substances. Currently, there are more than 150 chemicals in urine.

determined. Organic substances in urine. Urinary - makes up a large part of organic substances in urine. An average of 30 g (12-36 g) of uric acid per day is excreted with the urine of an adult. Nitrogen excreted in urine per day can be up to 18g of the total amount, and when eating a mixed diet, the nitrogen in the urine is 80-90/m

When the amount of nitrogen in the urine depends on protein, diseases associated with tissue protein breakdown (i.e. cancer, hyperthyroidism, diabetes, etc.) occur.

Summary

General characteristics of urine. In adults, the amount of urine released in a day ranges from 1000 ml to 2000 ml, and on average it is 50-80% of the volume of liquid taken. A daily amount of urine less than 500 ml and more than 2000 ml is considered pathological in adults. An increase in the volume of urine (polyuria) is observed when taking a large amount of liquid, foods that increase diuresis (watermelon, pumpkin, etc.). In pathological cases, diuresis occurs in kidney diseases (chronic nephritis and pyelonephritis), diabetes, etc. Urine is normally clear. Salts, cellular elements, bacteria, mucus, fat (lipuria) can cause cloudy urine. The cause of cloudy urine can be determined either under a microscope (urine sediment test) or by chemical analysis.

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REFERENCES

1. R.A. Sobirova, O.A. Abrorov F.X. Inoyatova A.N. Aripov (2006)
2. Alimxodjayeva N. T. "Tibbiy kimyo".