



THE HISTORY OF CATARACT DISEASE, CHARACTERISTICS, AND ITS SIGNIFICANCE TODAY

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Abstract: *The article analyzes the concept of cataract, the history of its origin, the causes of the disease and information about patients with cataracts today. Information is provided on methods of treating cataracts at home.*

Keywords: *Cataract, cataract, disease, surgery, lens, eye, inflammation, complication, treatment, ophthalmosurgery.*

INTRODUCTION

Cataract (from the Greek word *katarrahaktes* - waterfall) is a disease that is a partial or complete clouding of the lens of the eye, manifested by a decrease in the light transmission properties of the eye and visual acuity [1].

A cataract is a disease caused by a blockage. This is an external moisture that has accumulated between the albuminous moisture and the cornea, which prevents the vision of images. Cataracts vary in both quantity and quality.

The disease "cataract" has been known since ancient times. The word itself is translated from ancient Greek as "waterfall". In those years, the decrease in vision was explained by the appearance of cloudy fluid between the iris and the lens. This disease was familiar to the population both in Ancient India and in Ancient Egypt.

During excavations in these states, instruments used to remove cataracts were found. It turns out that cataracts were treated surgically thousands of years before our time.

RESEARCH METHODS

References about the cloudiness that appears on the eyeball can be found in ancient Indian medicine for thousands of years BC. Ancient Assyrian and Egyptian monuments testify to the practice of removing cataracts. During excavations of ancient Greek and Roman settlements, instruments were found that doctors used to remove cataracts. Cataract surgery was performed during the reign of Marcus Aurelius, which is recorded in the manuals of the great doctors of antiquity - Celsus and Galen. In Rome, cataract removal was carried out using one sharp instrument, while Indian doctors used two instruments - they used a slightly different technique, using a needle and spatula.

RESULTS AND DISCUSSIONS

In ancient times, an operation called lens ossification was used. The essence of this manipulation was to destroy the supporting apparatus of the lens (zonules of Zinn) over a large area. The cloudy lens sank down due to its weight, while the light entering the eye was restored and the patient began to see. Only half of such operations were successful - in other cases, the eye went blind due to the development of inflammation and other complications.

In 1705, the Frenchman Birssot was the first to prove the clouding of the lens of cataracts, and in 1748, Jacques Daviel described a method for removing cloudy lenses. The history of modern cataract surgery began from this time [2].

Although there are several theories on the etiology of cataracts and the mechanism of its development, none of them can prove the exact cause of the development of the disease. One of the most common theories in ophthalmology is the oxidation of free radicals, the formation and accumulation of free radicals in the body - molecules with unstable unpaired electrons - causes strong oxidation.

Changes in the composition of the intraocular fluid as a result of inflammatory eye diseases, insufficient passage of nutrients to the lens, ciliary body dysfunction (Fuchs syndrome), terminal glaucoma, pigmentary degeneration and retinal detachment are also important in the development of cataracts.

In addition to the aging factor, chronic severe infectious diseases also play a significant role in the development of cataracts, such as typhus, malaria, chickenpox, etc., starvation, anemia, strong radiation (sunstroke), radiation exposure, toxic poisoning (mercury, thallium, naphthalene) can also lead to cataracts.

According to statistics from the World Health Organization, cataracts account for almost half of all causes of blindness. In people aged 50-60, cataracts occur in 15% of the population, in people aged 70-80 - in 26-46%, and in almost all people over 80 years old. Among congenital eye diseases, cataracts are the most common disease. The high incidence of the disease proves that it is one of the urgent problems of modern ophthalmology. Risk factors for the development of cataracts include pathologies of the endocrine system (diabetes mellitus, tetany, muscular dystrophy, adiposogenital syndrome), Down syndrome, skin diseases (scleroderma, eczema, neurodermatitis, Jacob's poikiloderma), etc.

Cataracts that develop as a result of complications often occur as a result of eyeball trauma, burns, eye surgeries, a family history of cataracts, high levels of myopia, and uveitis.

Stages of cataract development.

There are 4 stages in the development of cataracts:

Primary;

Immature;

Mature;

Mature cataract [3].

In the initial stage of cataracts, there is a watery discharge in a certain part of the lens, that is, excess fluid accumulates between the fibers of the lens, which is called the "aqueous fissure". The clouding is usually localized to the lens shell, that is, it occurs in the peripheral part, so there are no problems with visual acuity [4].

In the immature stage of cataract, the clouding increases and gradually reaches the optic part of the lens. Biomicroscopic examinations reveal clouding of the lens. At this stage, visual acuity decreases slightly.

Cataracts are diagnosed by ophthalmologists, who perform a number of standard examinations.

Visiometry (visual acuity test);

Perimetry (visual field test);

Light perception tests;

Tonometry (intraocular pressure test);

Biomicroscopy (slit lamp examination of the eyeball);

In the initial stages of senile cataract, conservative treatment is carried out, that is, medications are prescribed in the form of eye drops.

These treatments do not completely stop the development of cataracts, but slow down the process.

The basis of such treatments is the replenishment of missing substances, that is, amino acids, vitamins (riboflavin, nicotinic acid, ascorbic acid), antioxidants, potassium iodide, ATP and other substances are included in the composition of the drops.

The effectiveness of conservative treatment methods in the treatment of cataracts is considered to be much lower. Therefore, microsurgical removal of cataracts is widespread. In this case, an artificial lens is placed in place of the cloudy part of the lens.

Indications for surgery

Indications for surgical treatment are as follows:

Swelling cataracts, mature cataracts, displacement of the lens, development of secondary glaucoma, concomitant diseases of the fundus (diabetic retinopathy, retinal detachment). In the treatment of bilateral cataracts, surgery is performed first on the side with lower visual acuity.

In modern ophthalmology, the cataract is eliminated by several methods: extracapsular and intracapsular cataract extraction, ultrasound and laser phacoemulsification.

Why is there still increasing interest in the treatment of cataracts with alternative means, and why are reviews of survivors of traditional methods available for free?

This is because the means offered by traditional medicine are familiar to everyone since childhood. These are medicinal plants, beekeeping products - everything whose quality is beyond doubt.

How to treat cataracts at home without surgery using folk remedies? "Grandmother's" recipes, advice from herbalists, doctors and even articles on the Internet come to the rescue.

As a rule, all of them are based on traditional medicine and are really effective in many cases. Decoctions, drops, compresses, lotions made from medicinal herbs can bring temporary relief and slow down the course of the disease. Let's consider some methods of treating cataracts [5].

Honey is one of the popular beekeeping products that has antibacterial, antifungal and antiviral effects. With its help, you can alleviate your well-being during colds, have a beneficial effect on joints, improve the quality of facial skin and make hair masks.

There are a huge number of recipes where honey is the main ingredient. But how effective is it for cataracts?

Traditional healers recommend diluting honey with water, apple juice, onion in a ratio of 1: 1 or 1: 2 and instilling it into the eyes according to a certain scheme. You can also make eye lotions.

It is recommended to prepare honey drops from May honey, as well as from other types of first-harvest honey. If you decide to use honey drops, it is important to remember that people who are allergic to this product should not use any products based on honey. And in the hot season, especially at high air temperatures, instilling honey drops into the eyes can cause conjunctivitis.

According to written sources that have reached us, the healing properties of aloe have been known to people for more than three thousand years. It is not for nothing that aloe is called the "source of life", because it helps with many diseases.

Aloe juice is used in folk medicine to treat wounds and ulcers. The therapeutic effect of this plant is associated with a rich content of trace elements and vitamins. It has anti-inflammatory, wound-healing, antibacterial effects.

Aloe extract is also used in ophthalmology. The juice of this plant is used for myopia, inflammation of the eyelid margins, conjunctivitis, keratitis, cataracts and primary glaucoma.

To treat aloe cataracts, use a plant no younger than two to three years old. It is very important to properly prepare the raw material, which should be stored in the refrigerator for a certain number of days at a temperature of 7-8 ° C. The leaves are washed in boiled water, passed through a meat grinder, filtered through several layers of gauze and diluted with water. When treating, it is necessary to take into account that aloe extract is an allergen. Therefore, it is not suitable for everyone.

Dill has useful substances necessary for humans. Its effectiveness is also known in ophthalmology. Due to its rich chemical composition, dill relieves irritation and inflammation, increases blood flow to tissues, promotes good cell renewal and destroys bacteria.

It is recommended to use fennel seeds for the treatment of cataracts. To use this folk recipe, it is recommended to prepare a thick cloth, flannel, and sew two bags from it, into which we pour fennel seeds. Tightly tied bags are filled with water and boiled for a certain time. Then they are removed from the enameled container onto a plate. The water in the bags must be drained, after which they must be applied to the eyes while still warm. You need to keep this lotion for 10-15 minutes. In order for cooling to occur gradually, you need to put cellophane on the bags, and then a thick towel.

The plant that we know as “celandine” was originally called “swallowtail”. The reason for this name was an ancient legend, according to which the swallow heals the eyes of its blind chicks with celandine juice.

Therefore, for hundreds of years, many generations of doctors have considered this plant useful for treating eye diseases.

The active substance is celandine juice, which must be prepared within a month. But you can't use it in its pure form, as it can harm your eyes. Therefore, it is recommended to dilute it with water, moisten a tampon with a solution and apply it overnight. This procedure is carried out within 1-2 weeks. Then it is recommended to take a break for the same period. Then you need to repeat these procedures.

There can be no doubt about the healing properties of *Calendula officinalis*. This plant is used by pharmaceutical companies to produce medicines. For this purpose, calendula is grown on industrial plantations.

The bactericidal, wound-healing and anti-inflammatory effects of calendula have long been known. Calendula tincture or tincture is used internally according to the scheme or used as a lotion. Eye drops are also possible. The course of treatment lasts 1-2 months.

Herbal medicine has long been successfully used all over the world as a method of treating various diseases. It is based on the healing properties of plants. The stems, roots, inflorescences and seeds of the herb can be used. They are dried, crushed and the juice is squeezed out. In some cases, heat treatment or brewing is used.

Although herbs are trusted by people as a medicine from nature, the possible risks and side effects should not be ignored. Dried herbs purchased in a store can be poisonous. Yes, and they should be used only after consulting a doctor.

There may be no information about interactions with other drugs. As a result, instead of the expected positive effect, undesirable reactions, side effects and allergies may develop.

The complex mechanism of action of herbal medicines has not yet been sufficiently studied. What if we talk about "grandmother's" recipes that require independent selection and processing of raw materials? Here the likelihood of negative consequences increases significantly.

The ability to treat any disease, including cataracts, therapeutically, without surgery is the only advantage of this method of treatment. But is this true?

Medicinal herbs, herbal decoctions, eye drops, if everything is done correctly, can remove inflammation and reduce pain, and this active substance will not cause you allergies and has no contraindications for you.

Otherwise, you will add several more to one problem. Trying to treat cataracts with eye drops or lotions, you can cause an infection, "earn" non-existent conjunctivitis, and even cause burns.

Do not forget that cataracts cannot be cured with folk remedies in one day, since such treatment is long-term, lasting weeks or even months. With medicinal herbs, you can stop the development of the disease only if it is at an early stage. But it is definitely impossible to treat advanced cataracts with herbs. Is it worth risking your health by exacerbating one problem with another?

Modern methods of treating cataracts

It is still possible to treat cataracts in one day! Ultrasonic phacoemulsification (FEC) with intraocular lens implantation is considered the most effective and modern treatment method worldwide.

It should be understood that in most cases cataracts are an age-related disease, an irreversible process that sooner or later develops in almost all people. But the elixir of youth that reduces age has not yet been invented, which means that the problem will not go away.

Only a radical solution - ultrasound treatment with the implantation of an IOL (artificial lens) instead of a cloudy natural lens - allows you to get rid of cataracts forever, quickly, painlessly and on an outpatient basis.

Cataracts are an eye disease that affects half of people over 65 years old worldwide. This disease is one of the causes of blindness. In recent decades, the number of patients with cataracts has increased significantly. Surprisingly, this is due to an increase in average life expectancy. Just 100 years ago, the average life span from birth to death was 40-50 years. Therefore, not everyone has ever encountered age-related cataracts before.

Currently, the prevalence of this disease is increasing. Many ophthalmologists consider it nothing more than an inevitable manifestation of old age. In 47% of cases,

the cause of vision loss and blindness is clouding of the lens, the main function of which is to focus light on the retina.

5 simple and understandable methods for everyone will help maintain and strengthen eye health and protect the lens from clouding.

Method 1: A healthy lifestyle is the best prevention of many age-related diseases. According to statistics, women are more susceptible to this disease. So, by the age of 75, almost half (46%) of women have cataracts. This is about 20% more than in men. After another 5 years, the number of cases is almost 90% [6]. Prevention of cataracts is physical activity, giving up bad habits and protecting your eyes from ultraviolet rays.

The likelihood of developing the disease is associated with smoking and alcohol consumption. If possible, try to completely abandon habits that harm your health[7].

In the warm season, when you are outdoors, you need to protect your eyes. For this, it is recommended to wear wide-brimmed hats and sunglasses. Special attention should be paid to your own eyes near the sea or river, when the eyes have an increased light load (from direct sunlight and reflected from water).

Method 2: Vitamins for the eyes. Antioxidants can protect the lens from UV rays, the main ones are ascorbic acid and glutathione. It is difficult to overestimate the importance of ordinary ascorbic acid, since in the eyes of a healthy person it is about 100-200 times more than in the blood.

A healthy, balanced diet is not able to fully satisfy the vitamin needs of the organs of vision. Of course, foods rich in ascorbic acid can and should be consumed. But in addition to this, it is recommended to drink a special vitamin complex for the eyes [8].

The daily dose of vitamin C is about 60 mg, vitamin E - 10 mg, zinc - 15 mg, selenium - 70 mcg. Lutein protects the eyes from free radicals. A person needs at least 5 mg per day.

Blueberry extract, which is part of many vitamin complexes, helps relieve eye fatigue and accelerate the regeneration process.

Method 3: Gymnastics and eye massage. Gymnastics prevents the development and progression of many diseases. There are special sets of exercises for the visual organs. Gymnastics can strengthen muscles, which is very important for older people. The set of exercises is selected depending on the individual characteristics of a person, his health and the tasks to be solved.

Massage helps to relax your muscles and relieve fatigue after exercise. A simple method allows you to specifically improve blood circulation, tone the areas of the lower and upper eyelids, use massage movements to capture the wings of the nose and the temporal region.

Method 4: Eye drops. Eye drops are an excellent prevention against cataracts at any age. The drug in the form of drops should be selected by a doctor. Each drug may differ in its active ingredient and has its own limitations and contraindications.

Method 5: Ophthalmological examinations. Taking good care of your eyes also means regularly undergoing ophthalmological examinations. Of course, a visit to an ophthalmologist cannot cure a disease if it has already appeared. In the treatment of any disease, it is very important to make a diagnosis at an early stage so as not to lose valuable time.

It is better to know about the diagnosis in order to take timely measures. Gone are the days when people waited for years for cataracts to mature. Physical activity can extend the maximum number of years, including good vision, which should be taken care of throughout life.

CONCLUSION

In conclusion, there are preventive measures to prevent the development of the disease. This includes a healthy lifestyle, gymnastics, massage, a nutritious and balanced diet, the use of certain vitamins and the use of eye drops. And all this is necessary to maintain the health of your eyes.

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