

## The Effectiveness of the Drug Siavit in the Conservative Treatment of the Destruction of the Vitreous Body

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**Abstract:** The destruction of the vitreous body (DST) is a pathological process in which the normal structure of the vitreous body is disturbed, accompanied by its liquefaction and thickening of the fibrils.

DST often develops in older people against the background of atherosclerosis and general vascular diseases. The most common filamentous DST, but there can be destruction in the form of "gold" or "silver" rain.

DST does not belong to diseases that are dangerous to health, however, the development of dense, opaque opacities in the vitreous body significantly impairs the patient's quality of life, up to the development of stable depressive conditions associated with constant anxiety.

The drugs used for DST are not effective enough and the attitude towards them is ambiguous. Recently, in the treatment of DST, the drug Siavit (Seavit) has been used, which is a source of micronutrients for the vitreous body. This drug was developed taking into account the metabolic disorders occurring in the vitreous body in older people. The article is devoted to the study of the effectiveness of the drug "Seavit" (LLC "ASEPTICA", Uzbekistan) in the destruction of the vitreous body (DST).

**Keywords:** destruction of the vitreous body (DST), seavit, treatment.

### Methods for visualizing vitreous opacities.

Visualization of floating opacities presents certain difficulties, since during ophthalmoscopy it is not always possible to identify opacities in the vitreous body. The standard method for diagnosing ST is ultrasound examination (ultrasound), which makes it possible to assess the localization of PTs, their density and volume. In particular, ultrasound is highly informative for posterior vitreous detachment and Weiss ring formation. However, the main unsolved problem is the quantitative ultrasound characterization of opacities, as well as the problem of the standard in the PST study protocol.

Ultrasound is of great practical value in assessing the distance from the floating opacity to the retina and lens. according to a number of authors, a safe value is 3 mm or more.

Optical coherence tomography (OCT) of the retina makes it possible to more accurately visualize and document vitreous opacities. allows you to evaluate the area, intensity, localization of shadows and penumbraes cast by the PST on the retina. OCT provides a qualitative and quantitative assessment of PST, but this method is applicable only to opacities located near the retina.

### Relevance

The human vitreous humor is an optically transparent gel-like structure within the eye, composed of approximately 98% water and macromolecules such as collagen and hyaluronic acid. The vitreous body fills the space between the lens and the retina in the eye; it occupies about 2/3 of the volume of the eyeball. It is known that the composition and organization of the vitreous body changes with aging, this is accompanied by an increased risk of posterior vitreous detachment.

The destruction of the vitreous body of the eye most often occurs due to various physiological and pathological reasons:

- age-related changes in the structure of the eyeball;
- the presence of chronic inflammatory processes in the eye;
- diabetes;
- diseases of the circulatory system (atherosclerosis, arterial hypertension, dystrophic changes in the vessels);
- severe myopia;
- dystrophy;
- compression of arterial vessels in the presence of cervical atherosclerosis;
- hormonal changes manifested during pregnancy, menopause, puberty, with the appointment of hormonal therapy;
- injuries to the eyes, nose, head (including surgery);
- helminthic invasion (toxoplasmosis);
- frequent and prolonged visual stress;
- psycho-emotional stress, depression;
- physical exhaustion;
- some diseases of internal organs;
- deficiency of vitamins, macro- and microelements;
- toxic or radiation effects on the body.

Conditions such as myopia and diabetes can also exacerbate the vitreous liquefaction procedure and lead to the formation of intravitreal collagen aggregates. These intravitreal opacities can cast shadows on the retina. Patients see them as black or gray structures moving in the field of view with the appearance of lines, dots, flies. This phenomenon is clinically described as "floating opacities" in the vitreous humor. For a long time, the presence of floating opacities in the vitreous was considered a minor problem, and in most cases their negative impact on patients' vision and quality of life was underestimated. Currently, a large number of patients suffering from floating opacities in the vitreous have the ability to get rid of the symptoms of the disease. Recently, a new non-invasive method of

treatment of floating opacities in the vitreous body, the drug Seavit (ASEPTICA LLC, Uzbekistan), has appeared. the process of synthesis and slowing down the processes of enzymatic or oxidative degradation. Thus, maintaining the physiological structure of the eye in a normal state, and helps to optimize the intake of minerals and vitamins, which are involved in the protection against photooxidation.

**Purpose of the work:** To assess the effectiveness of the drug "Seavit" (LLC "ASEPTICA", Uzbekistan), containing grape seed extract - 20 mg, hyaluronic acid - 25 mg, chondroitin sulfate - 85 mg,

glucosamine sulfate - 160 mg, magnesium oxide - 90 mg, vitamin E - 3.5 mg, vitamin B6 - 0.5 mg in the treatment of patients with non-inflammatory etiology of vitreous destruction.

### Materials and methods

All patients were examined at the Bukhara branch of the RSNPMCMG.

All patients underwent standard ophthalmological examinations (visiometry, refractometry, OCT, pneumotometry, ultrasound A-B scanning).

The study included 36 patients, divided into 2 groups. Main and control. The main group consisted of 18 patients (8 men and 10 women aged 40 to 60 years). The control group consisted of 18 patients (9 men and 9 women aged 40 to 60 years). They complained of floating flies, cobwebs, egg yolks, netting, spiders in front of their eyes, which have arisen or worsened over the past 1–6 months ..

Patients with any other ophthalmologic diseases, as well as patients using drugs of general somatic orientation were excluded from the study.

The control group included patients who had a moderate amount of opacities in CT according to B-scanning, but they did not present active complaints about them. They received "Emoprox" drops (World medicine ophthalmics, Turkey) to drip 1 drop 3 times a day for 3 months, "Wobenzim" tablets (Atrium innovations, Moscow), 1 tablet 3 times a day for 3 months.

Patients of the main group received the drug "Seavit" (LLC "ASEPTICA", Uzbekistan) according to the scheme: 1 capsule 3 times a day for three months, "Emoprox" drops (World medicine ophthalmics, Turkey) drip 1 drop 3 times a day in within 3 months

We analyzed before and after the course.

We have developed a conditional scale of the dependence of the level of vision comfort on the main complaint - from one to four, where

- I - "discomfort, very much interferes with work";
- II - "I see opacities every day, they interfere during active visual work";
- III - "I see turbidity, I notice very rarely";
- IV - "I don't see any turbidity".

We also assessed the dynamics of complaints in patients of both groups by categories: "none or decreased" - 1, "persist" - 2.

Before and after treatment, all patients underwent B-scans on a two-dimensional transverse image of the eyeball and analyzed the topographic (location) and qualitative (reflectivity) characteristics of the opacities.

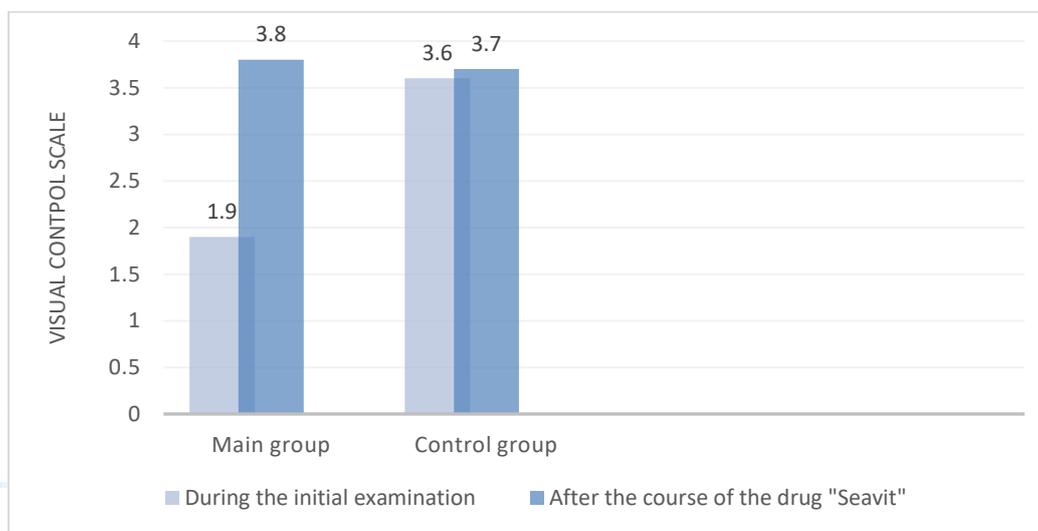
The zone of maximum concentration of opacities was assessed topographically, most often in the lower parts of the CT.

The B-scan was supplemented with a simultaneous image of a vector indicating the position of the A-scan - a one-dimensional image in time-amplitude coordinates.

When interpreting the A-scan, the number of echoes corresponding to the number of visible CT opacities on the B-scan was assessed, as well as the height and strength of the echo of opacities, a parameter that correlates with their histological structure.

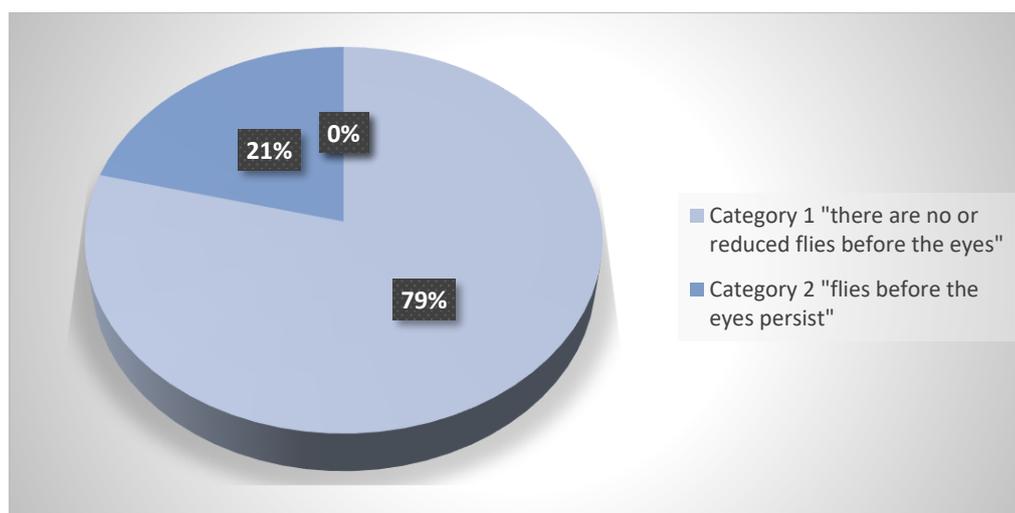
## Results

Based on the analysis of complaints according to the conventional scale of the visual comfort level after undergoing treatment with the Seavit drug (ASEPTICA LLC, Uzbekistan), the level of visual comfort in the patients of the main group, against the background of the dominant complaint of opacity, more than doubled (Fig. 1) ... In the control group, no significant changes were observed, since the level of visual comfort was initially high (see Fig. 1).



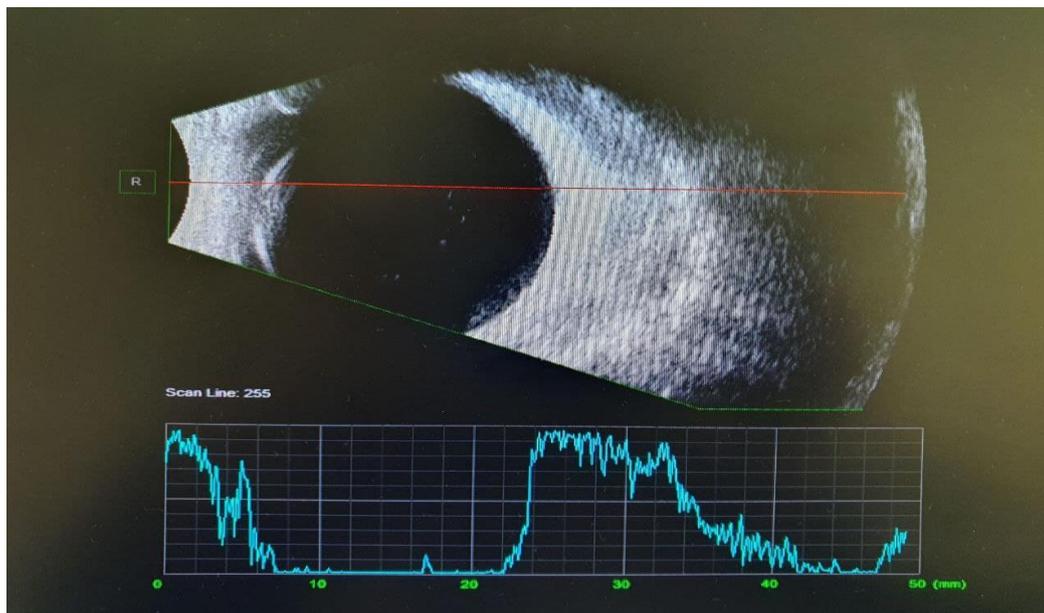
**Rice. 1. Dynamics of the comfort level of vision of patients in the main and control groups.**

Evaluating the quality of complaints about flies before the eyes in categories I and II, it should be noted that in most cases (76%) patients reported a decrease or absence of clouding before the eyes (category I) after undergoing treatment (Fig. 2).

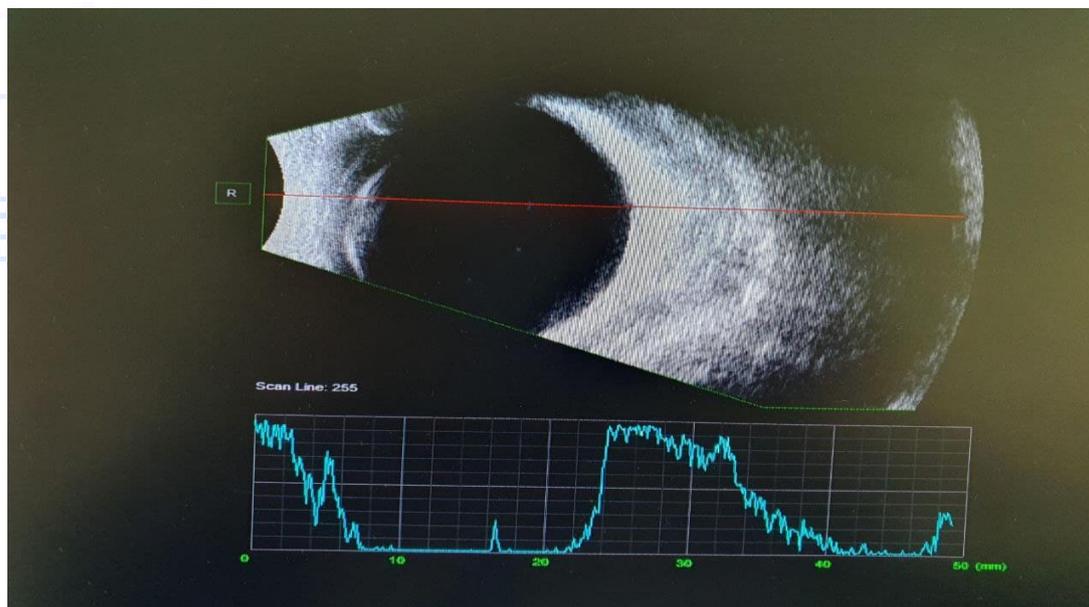


**Rice. 2. Changes in the quality of complaints of patients of the main group about flies in front of the eyes.**

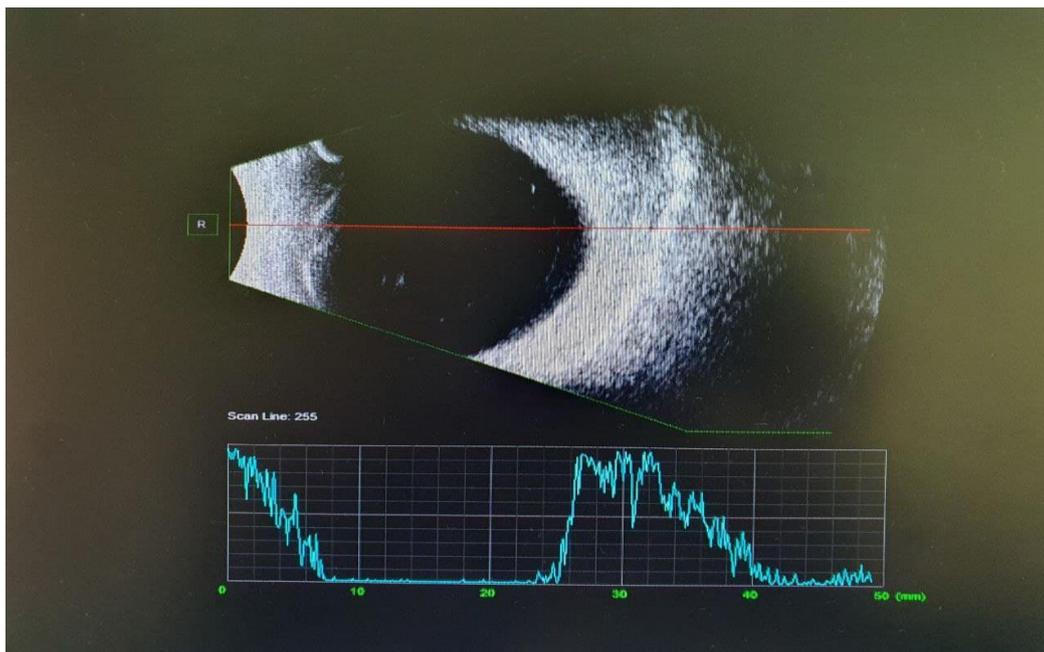
In patients of both groups, at the end of the course, according to the combined A- and B-scanning, the topographic characteristics were constant: in 82% of cases, the opacity decreased.



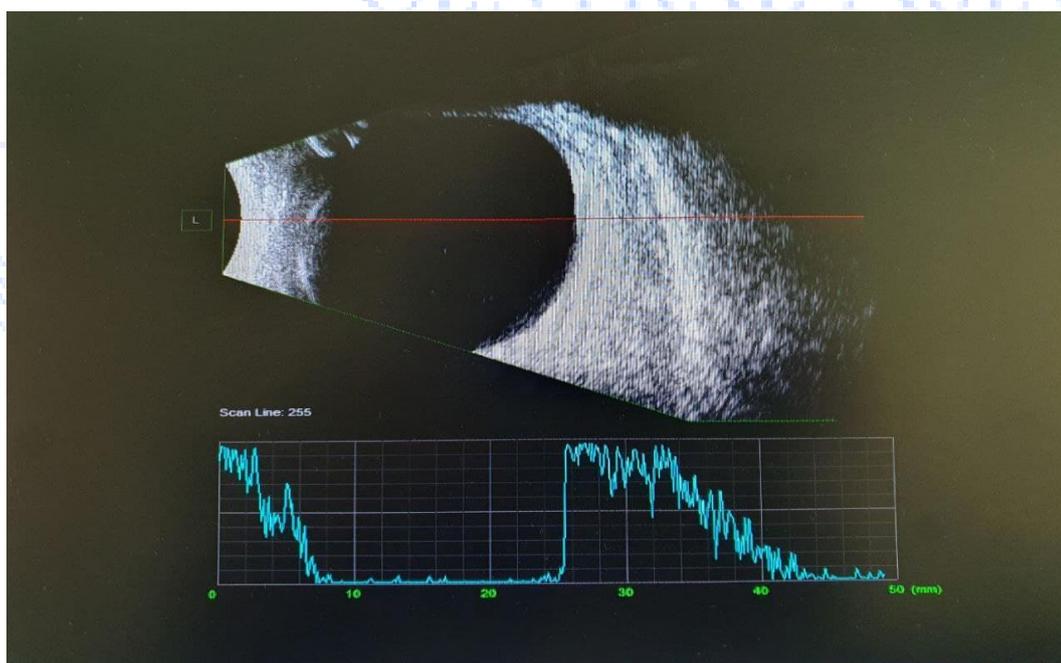
**Rice. 3.** A- and B-scanning of patient A. at the initial visit. B-scan: in the transverse projection along the meridian 6 hours - a moderate amount of opacity in the vitreous body.



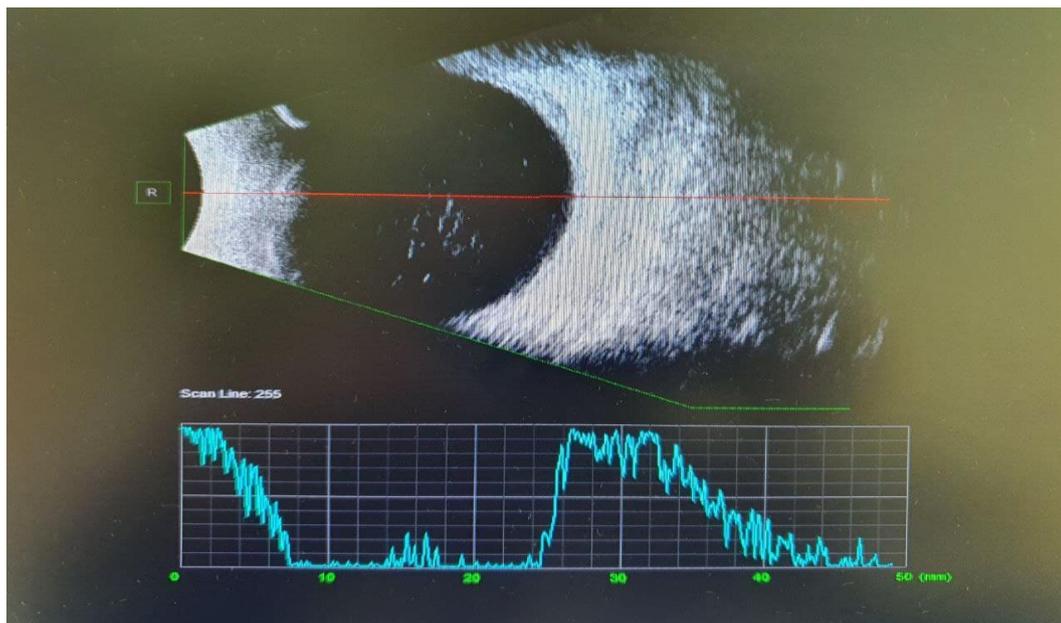
**Rice. 4.** A- and B-scanning of patient A. after a course of the drug "Seavit" (after 3 months). B-scan: in the transverse projection along the meridian 6 hours - single floating opacities in the vitreous.



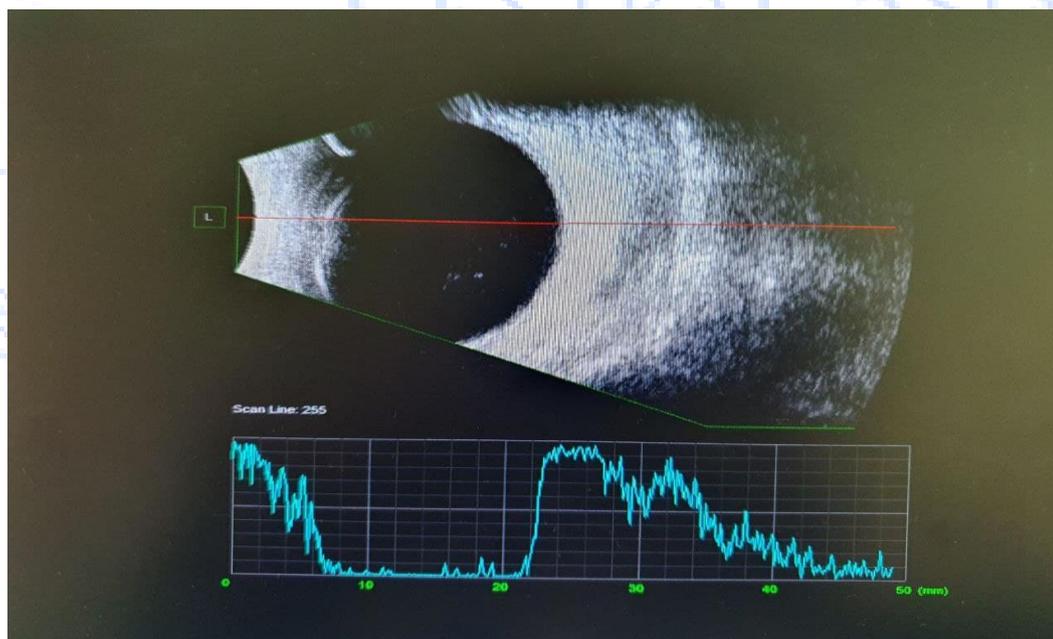
**Rice. 5. A- and B-scanning of patient A. at the initial visit. B-scan: in a transverse projection along the meridian at 9 o'clock - a moderate amount of opacity in the vitreous body.**



**Rice. 6. A- and B-scanning of patient I. after the course of the drug "Seavit" (after 3 months). B-scan: in the transverse projection along the meridian at 9 o'clock - single floating opacities in the vitreous body.**



**Rice. 7. A- and B-scanning of patient U. at the initial visit. B-scan: in a transverse projection along the meridian at 9 o'clock - multiple opacities in the vitreous body.**



**Rice. 8. A- and B-scanning of patient I. after the course of the drug "Seavit" (after 3 months). B-scan: in a transverse projection along the meridian at 9 o'clock - moderate floating opacities in the vitreous body.**

Our observations confirm that the active substances of the drug "Seavit" (LLC "ASEPTICA" help to partially "dissolve" the existing opacities of CT, and also prevent the formation of new ones.

In the control group, no significant changes in the topographic and quantitative characteristics of the echographic examination were observed ( $p > 0.05$ ).

### Conclusion

1. The drug "Seavit" (LLC "ASEPTICA", Uzbekistan) increases the level of vision comfort and in most cases reduces subjective complaints of flies before the eyes, therefore it can be used in the clinical practice of an ophthalmologist.
2. According to objective data of ultrasound combined A- and B-scanning after one course of the drug "Seavit" (LLC "ASEPTICA", Uzbekistan), a tendency to a decrease in the amount of opacities in CT, as well as to a change in their quality characteristics, was revealed.
3. Drug therapy ("Seavit" LLC "ASEPTICA", Uzbekistan) helps to reduce the severity of behavioral reactions in patients with DST, since the process of treatment itself has a beneficial effect on their emotional state.
4. The drug "Seavit" (LLC "ASEPTICA", Uzbekistan) can be recommended for use in patients with non-inflammatory destruction of the vitreous body of any degree of severity.

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