Current trends in the diagnosis and treatment of opisthorchiasis M.V. Goryacheva, M. V. Sorokina, T. Yu. Travnikova (Altai State Medical University, Barnaul, Russia)

Problems of diagnosis and treatment of opisthorchiasis continue to lead in the epidemiology of helminthiasis in the West Siberian region. Taking into account the complexity of diagnostics, the variability of syndromic manifestations, the severity of the prognosis and the massiveness of infection (from 60% to 90% of the population in various regions of the Ob and Irtysh basins), opisthorchiasis continues to occupy the undisputed first place for doctors of all specialties of the region with regard to alertness when diagnosing various nosologies. In addition to syndromes typical for opisthorchiasis (gastrointestinal, hepatotoxemic, asthenovegetative, etc.), opisthorchiasis can provoke the development of calculous hepatocholecystitis, bronchospastic syndrome, asthenic syndrome, significantly allergize the human body and change the typical course of a number of diseases of various nosological groups (according to the data accumulated in the region), and the causative agent of opisthorchiasis is classified by the International Agency for Research on Cancer as a human carcinogen of the first group.

## Examination and treatment methods

The surveyed group was a group of persons with clinical suspicion of opisthorchiasis and a negative result of scatological examination for the presence of helminth eggs.

Diagnosis of opisthorchiasis carried out in three ways:

- 1. Electropuncture diagnostics (EPD) by the method of R. Voll with using the nosodes of helminths available in the medication selector hardware and software complex "IMEDIS-FALL".
- 2. Inverse bioresonance diagnostics withusing micropreparations of helminths.
- 3. ART with the use of potentiated preparations of helminths from medication selector. (For a detailed description of the survey options, see the materials of the IV and VIII International Conference on BRT, Moscow, 1998, 2006).

In all cases, antibodies to opisthorchiasis were determined in patients by enzyme-linked immunosorbent assay (ELISA) and, after appropriate preparation, scatological examination for opisthorchiasis was carried out by flotation.

Opisthorchiasis was treated:

- frequency programs F394, F395, with preliminary testing;
- with GREENEM at the rate of 2 capsules (100 mg) 3 times a day, as recommended by the manufacturer (the drug is certified in the Russian Federation as a biologically active additive, (Dabur Pharmaceuthics)), also with preliminary testing for drug sensitivity.

The effectiveness of treatment was assessed by a set of criteria: the absence of subjectively presented complaints, manual clinical examination, scatological examination, testing for the presence of a parasite by the above methods.

## Results and its discussion

According to modern medical standards, verification of the diagnosis of opisthorchiasis in the presence of clinical and epidemiological data is possible only by methods of direct helminthic or ovoscopy, which gives the right for chemotherapeutic treatment of this helminthiasis - the drug of choice is currently biltricide (praziquantel). But the effectiveness of direct parasitological methods depends on many objective and subjective factors: the cyclicity of helminth egg production at the time of the study, the qualifications of laboratory doctors used in the clinical diagnosis of scatological techniques, the state of the patient's bile ducts: their patency, preservation of evacuation function.

The enzyme-linked immunosorbent assay (ELISA) allows detecting the presence of antibodies specific to opisthorchis antigens in the blood serum of the subjects. The sensitivity of the method is sufficient for the detection of antibodies to opisthorchus antigens both in the preimaginal and imaginal periods of invasion, but with long periods of the disease (after 2 years from the moment of infection), patients have a significant decrease in the level of specific antibodies - to values below the threshold level, which is not can be determined by modern methods. The disadvantages of ELISA are also the possibility of cross-reactions with antigens of helminths from the group of trematodes and the possibility of false positive results. In the group of patients examined by us, who applied for a more precise diagnosis (580 patients over 12 years of observation), 482 (83%) had positive tests for opisthorchiasis. In each survey, all three of the above test methods were used. In all patients, the test results were completely correlated. In the group of patients with positive tests for opisthorchiasis, only 29% had a positive result according to ELISA, which indicates a long period of invasion in the remaining 71% of the subjects. But in all the examined patients, a positive test for opisthorchiasis was verified by scatological methods, carried out after appropriate preparation of the bile ducts.

The second problem of nosology is the chemotherapeutic method for the treatment of opisthorchiasis. Biltricide is the drug of choice and the recommended standard of use for trematodes. But one cannot ignore the highest toxicity of the drug in relation to the human body. At the same time, the limited efficacy of the drug is known. According to the results of testing, we revealed the insensitivity of the drug in relation to helminthic invasion in 52% of cases of infection with opisthorchiasis. At the same time, biltricide caused a sharp decrease in CTI indices on the meridians of the small intestine, liver, nervous degeneration in all examined patients and in 16% of cases on the meridians of epithelial degeneration and the large intestine. In the region, they are trying to use registered herbal preparations for the treatment of opisthorchiasis: ecorsol, populin, also beguiled the aspen bark and the hill hodgepodge that are part of them. According to testing, their efficacy is not uniform in patients, and therefore it is difficult to standardize the method of treatment. According to our

data, none of these drugs gave complete deworming in relation to opisthorchis. Therefore, we investigated a new drug - Greenim (GREENEM), certified in the territory of the Russian Federation. The preparation contains crushed leaves of the neem tree (NEEM). In traditional medicine in India, Greenim is used as a skin remedy, and in certificates for the European Union, the USA and the Russian Federation, the manufacturer also indicates its anthelmintic effect. When testing the drug by the above methods, we found its effectiveness in relation to opisthorchia in all patients without exception (100% of the examined). At the same time, on none of the meridians, the drug itself did not cause a sharp decrease in the CTI indices, and, what is especially important, the CTI indicator remained normal on the meridian of nervous degeneration in all examined patients. Recently, cases of deliberate refusal of patients from standardized treatment of opisthorchiasis with chemotherapy or herbal medicine have become more frequent due to the high toxicity and, often, allergenicity of the latter, as well as the far from 100% effectiveness of their use. Patients chose treatment with resonant frequencies or a dietary supplement - Greenim, as an alternative to ineffective and dangerous methods.

We carried out the treatment: 32 patients were treated with the frequency programs F394 and F395, 56 patients chose the Greenim treatment. In all cases, patients were necessarily informed about the standards of treatment and were recruited into the group only when they categorically and consciously rejected the accepted standards. Treatment with frequencies was carried out after preliminary drainage preparation of the biliary tract in 2–3 courses of 7–10 sessions lasting 1 hour. Treatment with greenim was 1 or 2 courses of 30 days in the above dosage.

After each course of treatment, the patients were tested for opisthorchiasis. They were also advised to undergo a scatological examination after standard training. In all cases, the patients noted an improvement in their general condition, the disappearance of concomitant symptoms; according to the data of a clinical and manual examination, the size of the liver returned to normal.

In 4 patients treated with the frequency programs F394 and F395, after 3 courses of treatment, with a subjective improvement in their condition, a positive test for opisthorchiasis remained. They were offered to undergo an additional course of treatment with the frequency programs F394 and F395 and to repeat the examination. In the rest of the patients, opisthorchiasis was not tested at the end of treatment. After the first course of therapy with Greenim, in 17% of patients, opisthorchiasis was tested on the meridians of the lymph and endocrine system, which can be explained by the high intoxication of their organisms by helminths. After a second course of treatment, opisthorchiasis in this group of patients was not tested on any of the meridians. None of the subjects were treated with biltricide.

In a coprological examination of patients for opisthorchiasis after treatment with each of the methods, opisthorchiasis was not detected in any case. At present, the dynamic observation of the patients continues and we are awaiting the completion of the coprological examination of the subjects (since the choice of the timing of the examination remains with the patient).

Despite the modestness of our forecasts, observations led to the following conclusions:

one. Electropuncture diagnostics is an highly specific, informative and promising in screening studies for helminthiasis, including opisthorchiasis.

- 2. High degree identifying helminthiasis electropuncture diagnostics compared with laboratory and clinical methods research forces a more thorough approach to the analysis of laboratory and clinical data and requires persistent behavior of the doctor and patient in the process of verifying the diagnosis.
- 3. Frequency therapy according to programs F394 and F395 (carried out for 3-4 courses 7-10 sessions each) can be used as a method of choice at the request of the patient for the treatment of opisthorchiasis.
- 4. According to the results of our research, the use of the preparation Greenim can be effective for the treatment of opisthorchiasis and safe for the body.

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