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КЛИНИЧЕСКИЙ СЛУЧАЙ ДИРОФИЛЯРИОЗА В ГОМЕЛЬСКОЙ ОБЛАСТИ

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Аннотация

В последнее время количество случаев дирофиляриоза у пациентов, не выезжавших за пределы страны, увеличивается. В данной статье описан клинический случай дирофиляриоза у пожилой женщины с нетипичной локализацией паразита. Пациент обратился по месту жительства к врачу общей практики с жалобами на мигрирующую боль, местный отек, гиперемию, гипертермию и «ощущение ползания мурашек под кожей». В течение последнего года пациент за границу не выезжал, а только посещал загородный участок. Домашние животные у пациента отсутствовали. В последующем пациент был направлен к врачу-хирургу. Ультразвуковое исследование выявило инфильтрат в правой подвздошной области и небольшое количество свободной жидкости между петлями кишечника. Общий анализ крови показал повышенный уровень лейкоцитов, эозинофилов, эритроцитов и повышенную скорость оседания эритроцитов (СОЭ). Сопутствующие заболевания пациента – жировая дистрофия печени, атеросклеротический кардиосклероз, артериальная гипертензия 2-й степени, риск 3. Во время диагностической лапароскопии в брюшной полости был обнаружен паразитический червь, который был удален и в дальнейшем идентифицирован как *Dirofilaria repens*.

Ключевые слова: *Dirofilaria repens*, дирофиляриоз, гельминт, зооноз

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A CLINICAL CASE OF DIROFILARIASIS IN THE GOMEL REGION

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Abstract

Recently, the number of cases of dirofilariasis among patients who have not traveled abroad has been increasing. This article describes a clinical case of dirofilariasis in an elderly woman with an atypical parasite location. The patient visited her general practitioner at her place of residence with complaints of migrating pain, local swelling, hyperemia, hyperthermia, and a "crawling sensation under the skin." The patient did not travel abroad for the past year, but only visited her country house. The patient had no pets. Subsequently, the patient was referred to a surgeon. Ultrasound examination revealed an infiltrate in the right iliac region and a small amount of free fluid between the intestinal loops. A complete blood count revealed elevated leukocytes, eosinophils, erythrocytes, and an elevated erythrocyte sedimentation rate (ESR). The patient's concomitant diseases were fatty liver syndrome, atherosclerotic cardiosclerosis, and stage 2 hypertension, risk level 3. During diagnostic laparoscopy, a parasitic worm was found in the abdominal cavity; it was removed and subsequently identified as *Dirofilaria repens*.

Keywords: *Dirofilaria repens*, dirofilariasis, helminth, zoonosis

Introduction. Dirofilariasis is primarily a tropical disease, occurring in tropical countries, but nowadays many cases have been reported in Europe [1, 2], Belarus, and also in Russia except for its northern regions. Vectors of dirofilariasis are mosquitoes of the genera *Aedes, Anopheles*, and *Culex*.

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The disease is caused by two significant nematodes of the family Filariidae: *Dirofilaria immitis* and *Dirofilaria repens.*

Representatives of the canine family are the main hosts of *Dirofilaria* spp. *D. repens* invasion is much more difficult than *D. immitis* to diagnose and control in the reservoir population (microfilaremic dogs). Examination of the blood for circulating microfilariae is one of the diagnostic methods strongly suggested for both *Dirofilaria* infections.

Recent research indicates humans can no longer be considered accidental hosts, in which *Dirofilaria* spp. rarely reach sexual maturity. There are scientifically documented cases of microfilariae detected in humans, including in subcutaneous tumor aspirates and histological sections. Parasite can reach sexual maturity in the human body, suggesting that humans may serve as a genuine source of infection for vectors. Despite advances in understanding the biology and pathology of *D. immitis* and *D. repens* in different hosts, many aspects of dirofilariasis remain poorly understood. Global climate change continues to significantly affect the distribution and infection rates of dirofilariasis and its various forms. All this confirms the need for scientific research in this area. Objective of this study: to present a clinical case of visceral dirofilariasis, illustrated by a patient from Gomel.

Materials and methods. This study is based on a detailed study and analysis of the medical history of a patient (2025) of State Healthcare Institution "Gomel Central City Clinical Polyclinic".

Results. On February 4, 2025, a 67-year-old female pensioner presented to her local general practitioner with complaints of local edema (2.5 cm in diameter), hyperthermia, and hyperemia in the lower third of her right forearm. Her medical history revealed no pets, the use of mosquito nets on windows, and no recollection of insect bites, despite frequent visits to the countryside. She had not traveled abroad in the past year. She was diagnosed with contact dermatitis and prescribed anti-inflammatory drugs. The swelling persisted for approximately one week; during this period, the patient applied pressure to the swollen area to relieve soreness, which subsequently elicited sensations of "crawling under the skin" and vibration. The patient reported experiencing distressing thoughts that she was "losing her mind." Two weeks later, local edema developed in her epigastric region, accompanied by local hyperthermia, hyperemia, and soreness resembling severe bloating. The patient self-medicated with NSAIDs and did not seek medical attention. To manage the pain, she periodically pressed on the area and assumed a fetal position until the discomfort subsided. By March 24, 2025, the soreness

had migrated to her right iliac region. On March 28, 2025, she consulted a general practitioner at the State Healthcare Institution "Gomel Central City Clinical Polyclinic" with complaints of pain in the iliac region, nausea, a fever of up to 37 °C, and a lack of appetite, though no vomiting was reported. Diagnosed with an "acute abdomen," she was referred to a surgeon. The abdominal local status revealed no muscular tension, moderate pain on palpation in the right iliac region, and painless palpation elsewhere. The Shchetkin-Blumberg sign was negative, and no hernias or rectus abdominis diastasis were detected. Deep sliding palpation was painless throughout the intestines. An ultrasound visualized an infiltrate in the right iliac region and a small amount of free fluid between the intestinal loops; the appendix was not reliably identified, and slight hyperpneumatization of the intestinal loops was noted, leading to the conclusion of "Small hydroperitoneum." A complete blood count revealed elevated levels of leukocytes (10.73×109/L) with twice the normal eosinophils level (10.6%), a little bit elevated level of red blood cells (4.82×10^{12}/L) and an ESR of 31 mm/h, while platelets (290×109/L), and hemoglobin (139 g/L) were within normal ranges. A urinalysis showed significant abnormalities in leukocytes amount (9 or more cells per field), squamous epithelial cells (more than 10 cells per field), and upper limit for ketones (0.5 mmol/L). On the same day, with a diagnosis of acute catarrhal appendicitis, she was hospitalized at the surgical department of the Gomel City Clinical Hospital for Emergency Medical Care. A repeat complete blood count at the hospital was consistent with the polyclinic's findings. An abdominal ultrasound confirmed the presence of two liver cysts, fatty hepatosis, right nephroptosis, diffuse pancreatic changes, and a small amount of free fluid in the right iliac region; the appendix remained unlocated. Her concomitant conditions included fatty hepatosis, atherosclerotic cardiosclerosis and grade 2 arterial hypertension, risk level 3.

The patient underwent a diagnostic laparoscopy with laparoscopic drainage of the abdominal cavity. During the procedure, a white worm measuring 110 mm by 0.3 mm was extracted. Subsequent clinical and microscopic analysis identified the parasite as *D. repens*. The identification was carried out by specialists from the regional center of hygiene and epidemiology in accordance with established criteria.

The patient was discharged on April 4, 2025, due to positive dynamics. Her postoperative course was uneventful, with the stitches removed and the wounds healing by primary intention.

Conclusion. This case depicts a number of interesting peculiarities of dirofilariasis. First, the rare type of the abdominal localization of parasite

D. repens. Second is a migratory pattern of the parasite between the possible initial bite site on the forearm and the abdominal cavity that emphasizes the capability of the parasite to translocate through the tissue planes. The atypical location of the parasite in the abdomen made the diagnostic process of this new zoonosis even more challenging. The early signs of paresthesia and migrating sensations were confused by the patient herself with neurological or mental conditions. The abdominal picture was looked like the usual "acute abdomen" case, and invasive diagnostic measures like laparoscopy were required to perform diagnosis and therapy. The epidemiological history of the patient is also noteworthy and underscores the role of recreational exposure history in non-endemic regions especially in elderly adults.

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