

# DIAGNOSTIC DIFFICULTIES IN HUMAN TRICHINELLOSIS – A CASE REPORT

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**Abstract:** *Trichinosis is a parasitic disease caused by the larvae of Trichinella spp. (mostly Trichinella spiralis), introduced into the body through the consumption of undercooked infected meat. Gastrointestinal symptoms are most common in early disease. Clinical picture is completed quickly with myalgia, facial edema, fever, fatigue, headache. Leukocytosis and eosinophilia are characteristic biological changes. Positive diagnosis can be difficult, the disease can be confused with many other diseases (gastroenteritis, myopathies, other parasitic diseases, hipereosinophilic syndrome, febrile disease, skin allergies etc.), especially in the absence of epidemiological suggestive data. We present the case of a patient admitted in the Infectious Diseases Hospital of Brasov in January with acute nonspecific enterocolitis, superimposed over a trichinosis in evolution, diagnosed after admission based primarily on changes in laboratory tests (leukocytosis and eosinophilia) and then on a recent acute febrile dyspeptic episode identified in the history of the patient and on epidemiological data suggestive of trichinosis (consumption of pork infested with larvae of Trichinella spiralis). The conclusion that emerges is that trichinosis diagnosis can be difficult and complete medical history of the patient, especially epidemiological data, is essential.*

**Key words:** *trichinellosis, diagnostic difficulties.*

## 1. Introduction

Trichinosis is a parasitic disease caused by parasites of the genus *Trichinella* (the most commonly *Trichinella spiralis* in Romania). Digestive route of transmission is through the consumption of meat (mostly pork), infected with *Trichinella* larvae, insufficiently cooked. The disease is more common in winter, when traditional slaughter pigs. The clinical course of the disease has several stages:

intestinal, characterized by nausea, vomiting, abdominal pain, sometimes diarrhea; invasion phase, with fever, myalgia, edema (facial, leg, generalized), allergic skin rashes; muscle phase with myalgia and sometimes fever. Diagnosis is based on epidemiological data (consumption of pork meat uncontrolled, later identified as infested with *Trichinella spiralis* larvae, presence of symptoms in many people who ate the same meat),

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clinical data (dyspeptic episode onset, then fever, edema, myalgia), and biological data (leukocytosis with eosinophilia). Positive diagnosis can be difficult, the disease can be confused with many other diseases (gastroenteritis, myopathies, other parasitic diseases, hipereosinophilic syndrome, febrile disease, skin allergies etc.), especially in the absence of epidemiological suggestive data. Treatment is with antiparasitic medication (Mebendazole, Albendazole) over a period of 7-14 days [1], [2], [3], [4], [5], [6], [7], [8].

## 2. Case presentation

We present a case report of a woman, 40 years old, admitted in the Infectious Diseases Hospital of Brasov in January for diarrhea with mucus and blood, abdominal pain and rectal tenesmus. On admission afebrile, with relatively good general condition, abdomen with depression, with moderate diffuse pain, blood pressure 120/70 mmHg. Anamnesis performed at admission shows a febrile episode one week ago, associated with eyelid edema, nausea, vomiting, treated at home with anti-allergic, anti-pyretic and antibiotic (Augmentin), with partially favorable evolution.

Stage diagnosis : Acute enterocolitis. Suspicion of dysentery.

After collect sample of stool for culture the patient starts treatment with antibiotic (Ciprofloxacin) and antidiarrheal. Laboratory tests performed the next day show elevated white blood cells (16,140 / mm<sup>3</sup>) and eosinophils (4842 / mm<sup>3</sup>). It rises suspicion of a parasitic disease. The medical history of the patient was resumed. She reported that one month ago, after Christmas, she ate pork meat, possible uncontrolled for trichinosis and incomplete thermal cooked.

**Stage diagnosis:** Acute nonspecific enterocolitis. Suspicion of trichinellosis.

We conducted an investigation of all the people who ate the same meat and we identified another 4 people with symptoms suggestive of trichinosis. The suspect meat was analyzed in veterinary service and was found to be infested with larvae of *Trichinella spiralis*.

On the third day of hospitalization the patient presented again febrile state, eyelid edema and discrete myalgia.

**Stage diagnosis:** Acute nonspecific enterocolitis. Trichinellosis in evolution.

The treatment with Ciprofloxacin was stopped (diarrheal stools were normalized and stool-culture was negative) and the patient started treatment with Albendazole 400 mg - 2 times/day for 10 days, anti-inflammatory (Ketoprofenum) and antiallergic (Loratadinum). Disease progression was favorable, with remission of fever and facial edema and improvement of myalgias. Control analyzes showed lower WBC count (7740/mm<sup>3</sup>) and eosinophils (2700/mm<sup>3</sup>). ALT and AST enzyme levels were normal but we found mild hypoproteinemia (6 g%) and moderate hypoalbuminemia (41,4%).

The patient was discharged after 16 days of hospitalization, without fever, with good general condition, without complications, with recommendations for diet and regular monitoring.

**Final diagnosis:** Acute nonspecific enterocolitis. Trichinellosis - moderate clinical form.

## 3. Discussion

We presented the case of a patient admitted in hospital with clinical picture of acute enterocolitis, appeared shortly after a recent acute febrile dyspeptic episode associated with eyelid edema, treated in outpatient with antibiotic and antiallergic

drugs, without having to perform an accurate and complete history of the disease. Treatment initiated on admission and the next day was antibacterial (Ciprofloxacin) for possible bacterial etiology of enterocolitis. Orientation towards a possible diagnosis of a parasitosis was made in the hospital on the basis of associated leukocytosis and eosinophilia. Afterwards were added the patient's history information of recent consumption of undercooked and uncontrolled pork meat, the specific clinical manifestations of trichinosis (febrile state, eyelid edema and myalgia), the evidence of infestation meat and the presence of the same symptomatology to all the people who ate the same meat and based on this information we could establish the diagnosis of trichinosis, besides the independent acute enterocolitis. It is possible that if the patient was not admitted to the hospital for treatment of the acute nonspecific enterocolitis the diagnosis and the treatment of trichinosis would be further delayed. Febrile episode dyspeptic previously described by the patient and treated at home with antibiotics and anti-allergic can be considered as a manifestation of intestinal stage of trichinosis. The literature states that the onset of trichinosis is not characteristic for this parasitosis and requires differential diagnosis with many diseases, but a properly anamnesis can quickly orient toward the correct diagnosis [3], [7].

Basic elements of clinical diagnosis in trichinosis remain fever, edema and myalgia [3], [7]. Evolution of trichinosis was favorable under appropriate treatment.

#### 4. Particularity of the case

Diagnosis of a parasitic disease (trichinosis) in a patient admitted in hospital for an episode of acute

independent nonspecific enterocolitis, based primarily on laboratory abnormalities (leukocytosis with eosinophilia) and rapid association of characteristic clinical symptoms and then on identifying, retrospective, certain epidemiological data.

#### 5. Conclusions

The diagnosis of trichinosis can be difficult and should be considered in the presence of a clinical picture of febrile dyspepsia associated with edema, especially in winter.

Leukocytosis and eosinophilia are suggestive for a parasitic disease.

Complete medical history, especially epidemiological data, is essential in the diagnosis of trichinosis.

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