

CLINICAL RESEARCHES IN HUMAN TRICHINOSIS

Czirják, T. Zs. *

* University of Oradea, Faculty of Environmental Protection, 26 Gen. Magheru St., 410048 Oradea; Romania, e-mail: drcziri@yahoo.com

Abstract

Trichinosis is a parasitic disease common to man and animals. In Romania, trichinellosis has been reported throughout the country, especially in the form of a family nature, outbreaks caused by the consumption of pork in individual households. Outbreaks occur throughout the year, but the period of maximum frequency is the winter season, especially at Christmas, as a result of culinary traditions from this period.

Key words: Trichinella spiralis, human, simptomatology, treatment.

INTRODUCTION

Aim of this work was to study and analyze the existence of trichinosis nowadays. The period for which this study was made of four years, from 2009 to 2012. Even though we live in a civilized and developed world, trichinosis even today has a very wide spread worldwide, caused by a nematode worm *Trichinella spiralis*, reaching the human body after consumption of infected meat.

Man infested by consumption of pork, mainly, but also the horse, nutria or game (boar, bear), containing live larvae or viable cysts.

In humans most infections are asymptomatic, but there are clinical forms of disease evolution can cause death by severe complications which they produce.

The following clinical signs are suggestive of diagnosis: digestive disorders (abdominal pain, diarrhea, nausea, vomiting), occurring in 1-2 days after eating infected meat, fever, eyelid and facial swelling accompanied by conjunctivitis, muscle aches and adynamic.

Though now we see a downward trend of incidence over the last 10 years, Romania ranks second among incidents recorded in EU countries, which raises serious questions on the application of preventive measures (public education) and control.

To reduce the number of cases of illness with Trichinosis must take seriously the preventive measures, veterinary measures and be aware of the danger that it has major eating of meat or pork products, bear, boar, horse, nutria etc., uncontrolled by a veterinarian.

MATERIALS AND METHODS

To achieve researches of this work we conducted a retrospective study, which includes a number of 211 hospitalized cases of Trichinosis in 2009-2012 at the Infectious Diseases Hospital in Oradea. Study is the observation charts data source archive in the hospital, being considered in all cases in the file, including 115 women and 96 men, patients are of all ages. Patients were followed only during hospitalization in most cases not necessary to control rehospitalization. Mostly the patients were hospitalized between 1-7 days, receiving necessary treatments.

The criteria that were studied cases are: symptomatology, treatment, drugs, hospitalization period.

RESULTS AND DISCUSSIONS

Symptoms and treatment

Table 1.

The symptoms most commonly found in Trichinosis

Simptoms	Nr. of patients	Procent
Headache	156	73.9%
Myalgia	154	72.9%
Abdominal pain	124	58.76%
Nausea, vomiting	96	45.49%
Diarrhea	89	42.18%
Facial and palpebral edema	89	42.18%
Asthenie	88	41.7%
Fever	75	35.54%

In table 1. the symptoms most commonly found in patients admitted to the Infectious Diseases Hospital in Oradea with the diagnosis of trichinosis. As can be seen in a percentage of the patients are over 70 headache and myalgia. Abdominal pain, vomiting, diarrhea, palpebral edema that occur in approximately 40 of the patients and in a fever of over 35 percent.

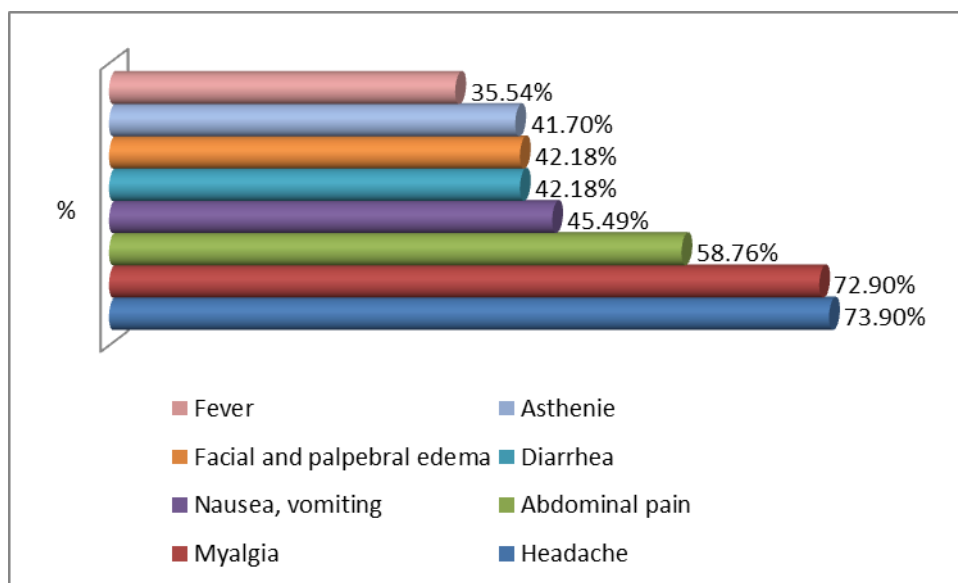


Fig. 1. The percentage representation of the most common symptoms caused by *Trichinella spiralis* in patients in the Hospital for Infectious Diseases in Oradea in the period 2009-2012

In a disease as Trichinellosis evolving so different clinical manifestations and with so many and varied, the diagnosis is difficult but not impossible.

In the diagnosis of trichinosis is possibly a positive diagnosis by identifying the adult parasites parasitological or by identifying the parasite larvae. Definitive diagnosis is based on muscle biopsy, microscopic examination (the discovery of parasite-host cell) or specific *Trichinella* DNA Discovery.

Table 2.

Medications used to treat Trichinosis

Drug	Doses
Vermox (Mebendazole)	2 tablets/100 mg per day
Loxuran, Notezine	200-400 mg per day (6mg/kg/day)
Mintezol	25 mg/kg x 2/day (3g/day)

In the treatment of intestinal phase of the disease it is recommended Vermox (Mebendazole) at a dose of two tablets of 100 mg daily for three days. In the second phase of the disease, are used diethylcarbamazine (Loxuran, Notezine) and especially thiabendazol (Mintezol).

Loxuran (Notezina or Hetrazan) are administered in doses of 200-400 mg daily (6 mg/kg/day) for 10 days. Mintezole is administered at a dose of 25 mg/kg x 2/day (3 g/day) for five days.

As a result of treatments administered to patients, the disease has taken a favourable evolution for each of them, meaning that each patient has been discharged from the hospital after a shorter period of time or long. In the period 2009-2012 have not registered deaths due to the disease Trichinosis.

Period of hospitalization

Tabel 3.

Distribution of cases of Trichinosis registered in the Hospital for Infectious Diseases in Oradea in the period 2009-2012 depending on length of stay

Nr. of days	1 - 7	8 - 14	15 - 21
Nr. of cases	160	46	5
Procent	75,83%	21,8%	2,37%

I highlighted in table 3 the total number of recorded cases of Trichinosis in Hospital for Infectious Diseases in Oradea according to period of hospitalization.

A total of 160 patients have required medical care for 1-7 days. 46 patients had needed hospital admissions for two weeks, and the most serious cases were hospitalized for three weeks.

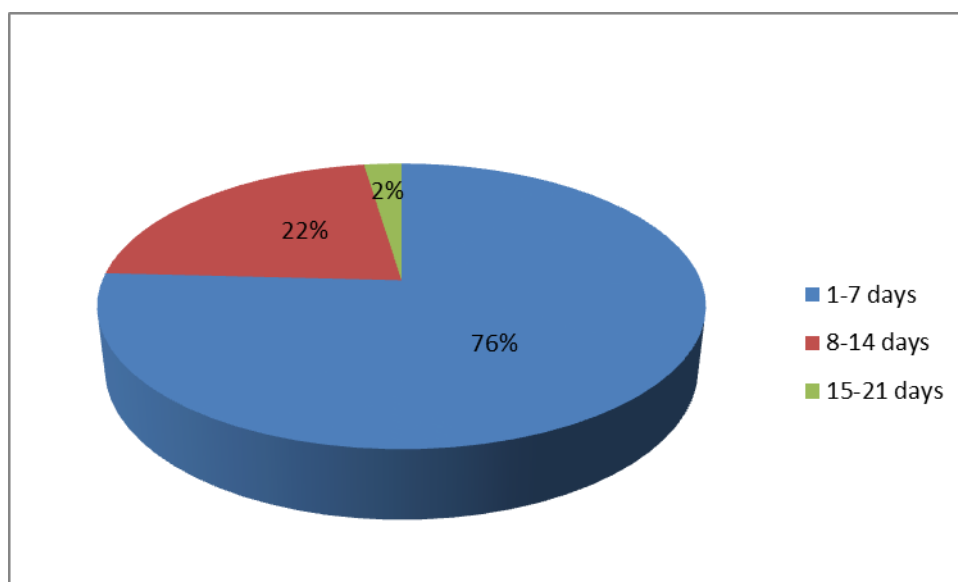


Fig. 2. Distribution of cases of Trichinosis in Hospital for Infectious Diseases in Oradea in the period 2009-2012 depending on the period of hospitalization

The result of the study shows that depending on the time of hospitalization most patients require inpatient for about a week, representing 76 of the total number of cases. 22 of the patients have been hospitalized for a longer period of time, between 8-14 days. Stopped by 2 percentage (15-21 days) represents the extreme cases that required a longer period of hospitalization, and from the observation sheets show that in these patients the disease had a more serious and have suffered and other diseases which required longer treatment and more rigorously.

CONCLUSIONS

Following researches based on observation sheets can draw the following conclusions:

From the multitude of symptoms that occur in the case of infestation with *Trichinella spiralis*, myalgia noted that the headache, and abdominal pain are occurring in the majority of patients. The other symptoms mentioned appear only about 50 % of the patients. Altogether that there have been no deaths as a result of infestation with *Trichinella spiralis*, several measures are recommended for prophylaxis and control aimed at both protecting consumers and preventing the infestation of pigs, the main source of human illness.

In order to prevent the population of disease control of trichineloscopic is recommended for pig carcasses in a private household or in game meat authorised centres of health authorities and follow their recommendations.

Engaging in advisory actions with all means possible of our information for the general public of all ages, that they might know the danger and consequences of infestation with *Trichinella spiralis* and know how to protect themselves from illness; the public will become aware, at the same time, to be sure, a trusted ally and active in the fight for prevention, reduction and control of trichinosis in humans and animals.

REFERENCES

1. Andriuță, C., Pântea, V., Holban, T. Rodica Gâlcă (2001): Patogenia, tabloul clinic, diagnosticul și tratamentul helmintiazelor, Centrul-Poligrafic Medicina al USMF.
2. Cironeanu, I., A.T.Ispas, (2002): Totul despre Trichineloză, Editura MAST.
3. Cristea, Gh., (2011): Trichineloză la animale și riscul îmbolnăvirii omului, Editura CERES.
4. Dulceanu, N., (1986): Parazitozele animalelor de fermă, Editura CERES.
5. Enache, Gh., (2005): Trichineloză la om, Editura Viața Medicală Românească.

6. Ionescu, V., (1995): Trichineloză, Editura Medicală Veterinară, București.
7. Lupașcu, Gh., Cironeanu, I., Alice Hacıg, (1970): Trichineloză, Editura Academiei R.S.R.
8. Măgureanu, E., Busuioc Carmen, Bocârnea, C. (1988): Practica Epidemiologică în Bolile Transmisibile, Editura Medicală.
9. Nitzulescu V., Gherman I., Feldioreanu T.(1964): Parazitologie clinică. Editura Medicală. București.
10. Nitzulescu, V., Gherman, I., (1986): Parazitologie clinică, Editura Medicală, București.
11. Panaitescu, D., (1994): Cercetări asupra eozinofiliei în trichineloză, Rev. Rom.
12. Rotaru, O., S.D.Dan, (2005): Examenul Trichineloscopic și sănătatea publică, Editura RISOPRINT.
13. *** http://www.edubolirare.ro/content/biopsia_musculara.
14. ***<http://www.esanatos.com/boli/bolile-infectioase/Trichineloză-la-om-manifestari51419.php>.
15. ***<http://www.eurolab.md/ro/medicilor/algoritmi-de-diagnosticare/diagnosticul-de-laborator-%C3%AEn-gastroenterologie/patologie-intestinal%C4%83/patologia-intestinal%C4%83-parazitar%C4%83/>.
16. ***<http://www.medicina-informativa.com/2012/10/trichineloză-trichinoză-cauze-simptome-tratament.html>.
17. ***<http://sanatate.acasa.ro/boli-7/trichineloză-de-ce-trebuie-analizată-carnea-161349.html>.
18. ***<http://www.scrigroup.com/sanatate/ETIOLOGIE-TRICHINELOZA53661.php>
19. ***<http://www.scrigroup.com/sanatate/Trichineloză-in-Romania94628.php>.
20. *** <http://www.sun1001.com/ro/1364.html>.
21. ***<http://www.vetonline.ro/trichineloză.html>.