Analele Universităţii din Oradea, Fascicula Ecotoxicologie, Zootehnie şi Tehnologii de Industrie Alimentară, 2014

EPIDEMIOLOGICAL 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, epidemiology.

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: sex, age, area of origin, seasonal incidence, distribution of the number of cases per month.

RESULTS AND DISCUSSIONS

Gender distribution of the number of cases caused by Trichinella spiralis in the period 2009-2012 shows that of a total of 211 cases, 138 were women and 96 men.

.

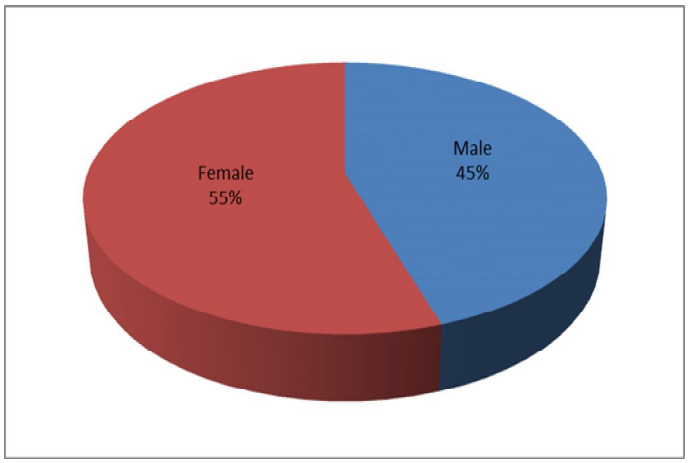

Fig. 1. Representation of the gender percentage of the total number of cases of Trichinosis in 2009-2012 in patients hospitalized at the Infectious Diseases Hospital in Oradea

From Figure 1. shows that the number of cases of diseases of trichinosis at women in 2009-2012 was 10% higher than in men. Percentage of disease in women is 55% and for men 45%.

Table 1.

Distribution of the total number of cases of Trichinosis by age group admitted to the Infectious Diseases Hospital in Oradea during 2009-2012

Age (Year)	0-2	3-6	7-10	11-20	21-30	31-40	41-50	51-60	>60
No. of cases	9	17	19	37	38	29	28	20	13

Analyzing Table 1. which includes distribution of the number of cases of Trichinosis by age group admitted to the Infectious Diseases Hospital in Oradea during 2009-2012 can be seen that the most affected were patients in the groups aged 11-20 and 21-30 years.

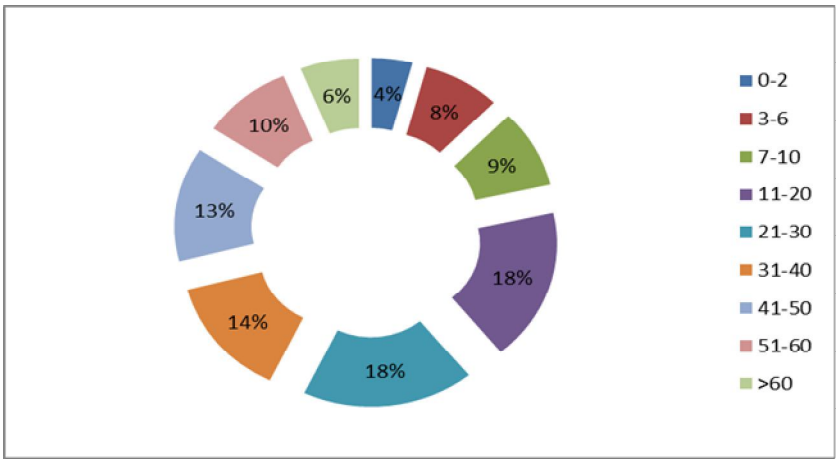

Fig. 2. Distribution of the total number of cases of Trichinosis by age group admitted to the Infectious Diseases Hospital in Oradea during 2009-2012

Analyzing Figure 2. it is found that in 2009-2012 most cases trichinosis occurred in people between 11 to 20 (18%) and 21-30 (18%) years, the disease is linked to certain dietary habits, consumption of uncooked meat / prepared insufficient heat.

Table 2.

Distribution by area of origin of cases of Trichinosis recorded at Infectious Diseases Hospital in Oradea during 2009-2012

	Nr. of cases	**Percentage**
Rural	129	61%
Urban	82	39%
Total	211	100%

The analysis of the backgrounds incidence of trichinosis cases there is a higher proportion of cases in rural areas than in urban areas. In the period 2009-2012 in rural areas reported 129 illnesses and 82 urban disease.

The proportion of 61% affected by Trichinosis were patients from rural areas. This may be a direct consequence trichinoscopic not tested the meat from their own households or game related habits of cosume uncooked meat / inadequately cooked as dried sausages, ham or smoked.

Table 3.

Seasonal incidence of trichinosis in patients registered at the Infectious Diseases Hospital in Oradea during 2009-2012

Season	No. cases male	No. cases female	Total
Spring	21	14	35
Summer	2	6	8
Autumn	51	70	121
Winter	22	25	47
Total	96	115	211

Looking at Table 3 we can see the total number of women and men sick of Trichinosis in 2009-2012 in each season. Most illnesses were recorded fall: 121 cases, of which 51 men and 70 women. Lowest number of illnesses was recorded in the summer, a total of 8 cases, including 2 men and 6 women.

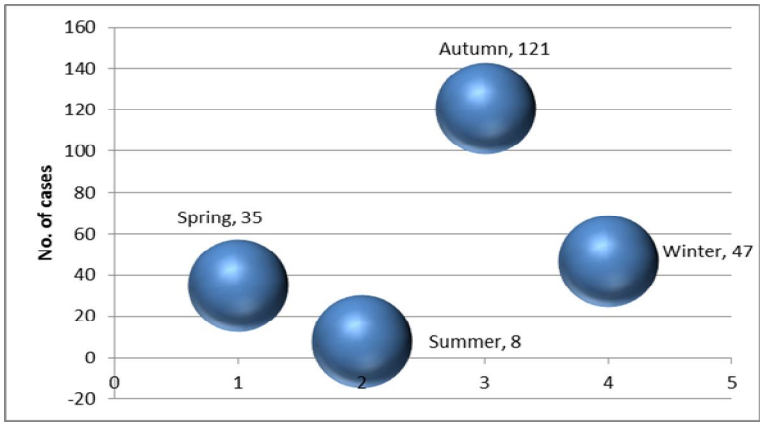

Fig. 3. Seasonal incidence of trichinosis in patients registered in the Infectious Diseases Hospital in Oradea during 2009-2012

On cases of illness caused by Trichinosis in 2009-2012 is noted that there is a seasonal occurrence of the disease. Increased share of the fall was recorded 57.34%. This high percentage is the result of an outbreak in the locality Chet, 2010, a Gipsy community who purchased and ate pork

trichinosis unverified. The winter has been a share of 22.27%, indicates that in this time of year most pigs are slaughtered and therefore increase the risk of infection with Trichinosis.

Analyzing Figure 4. we see that in 2009-2012, the Infectious Diseases Hospital in Oradea were recorded cases of Trichinosis in all months of the year highlighting the professional character of the disease, but remains seasonality for the autumn-winter, the largest number of cases were recorded in November, that after an outbreak of infection in the town Cheţ, with 107 people infected. In January and February there is an increased frequency of illness due to the tradition of cutting the pigs in this period.

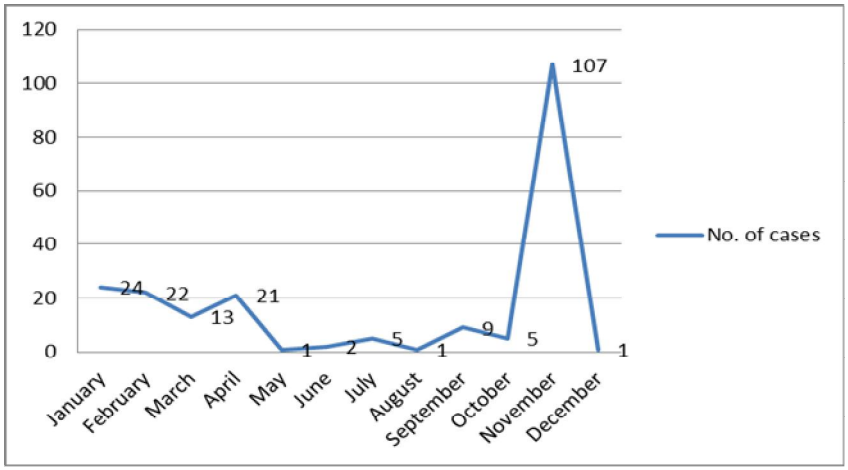

Fig. 4. Distribution of the total number of cases of Trichinosis on months, registered in Infectious Diseases Hospital in Oradea in 2009-2012

CONCLUSIONS

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

From epidemiological analysis of cases that there is a greater receptivity to disease that is based on gender, age, social status or urban or rural origin.

In Trichinosis in the country from us, we can notice a seasonal incidence, meaning that the disease is more frequently recorded in the winter season, on the eve of the holidays, it is done in private households, most slaughter pigs.

REFERENCES

1. Andriuţă, C., Pântea, V., Holban, T. Rodica Gâlcă (2001): Patogenia, tabloul clinic, diagnosticul şi tratamentul helmintiazelor, Centrul-Poligrafic Medicina al USMF.
2. Cironeanu, I., A.T.Ispas, (2002): Totul despre Trichineloză, Editura MAST.

3. Cristea, Gh., (2011): Trichineloza la animale şi riscul îmbolnăvirii omului, Editura CERES.
4. Dulceanu, N., (1986): Parazitozele animalelor de fermă, Editura CERES.
5. Enache, Gh., (2005): Trichineloza la om, Editura Viaţa Medicală Românească.
6. Ionescu, V., (1995): Trichineloza, Editura Medicală Veterinară, Bucureşti.
7. Lupaşcu, Gh., Cironeanu, I., Alice Hacig, (1970): Trichineloza, Editura Academiei R.S.R.
8. Măgureanu, E., Busuioc Carmen, Bocărnea, C. (1988): Practica Epidemiologică în Bolile Transmisibile, Editura Medicală.
9. Nitzulescu V., Gherman I., Feldioreanu T.(1964): Parazitologie clinică. Editura Medicală. Bucureşti.
10. Nitzulescu, V., Gherman, I., (1986): Parazitologie clinică, Editura Medicală, Bucureşti.
11. Panaitescu, D., (1994): Cercetări asupra eozinofiliei în trichineloză, Rev. Rom.
12. Rotaru, O., S.D.Dan, (2005): Examenul Trichineloscopic şi sănătatea publică, Editura RISOPRINT.
13. *** http://www.edubolirare.ro/content/biopsia_musculara.
14. ***http://www.esanatos.com/boli/bolile-infectioase/Trichineloza-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/trichineloza-trichinoza-cauze-simptome-tratament.html.
17. ***http://sanatate.acasa.ro/boli-7/trichineloza-de-ce-trebuie-analizata-carnea-161349.html.
18. ***http://www.scrigroup.com/sanatate/ETIOLOGIE-TRICHINELOZA53661.php
19. ***http://www.scrigroup.com/sanatate/Trichineloza-in-Romania94628.php.
20. *** http://www.sun1001.com/ro/1364.html.
21. ***http://www.vetonline.ro/trichineloza.html.