

**SUMMARIES IN ENGLISH OF THE PUBLICATIONS CONNECTED WITH THE
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Outbreak of Trichinellosis in Elin Pelin, January – March 2011

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Abstract: The local hospital authorities in Elin Pelin city reported an outbreak of trichinellosis on 10 March 2011 to the Regional Health Inspectorate (RHI). An epidemiological investigation was carried out in order to determine the extent of the outbreak, identify the source and to propose control measures. The National Diagnostic Scientific Research Veterinary Institute (NDSRVI) in Sofia conducted a veterinary investigation. The source of infection was minced meat and row sausages prepared from domestic pork and horse meat. The animals were bought alive from an Elin Pelin citizen.

An active search for cases was conducted by RHI in Sofia region among medical laboratories, general practitioners and hospital physicians. Two patients with high temperature, facial oedema and muscle pain in the limbs were admitted in Elin Pelin Hospital. 34 more cases were found and registered after that. 24 of them had manifested clinical signs – 17 were treated in hospital and 7 were treated in outpatient conditions.

Key words: trichinellosis, outbreak, *Trichinella spiralis*, *Trichinella britovi*

Introduction

Trichinellosis is a parasitic infection with annual outbreaks in Bulgaria. For the past 10 years 60 outbreaks of trichinellosis were reported; the annual number varied from 2 to 12 (Fig. 1). Since 2005 a decrease trend of the annual number of epidemics has been observed although there were peaks in 2006 and in 2009. This indicates for a lack of tendency for a steady decrease (KURDOVA *et al.* 2006, KURDOVA *et al.* 2010, KURDOVA *et al.* 2011a, KURDOVA *et al.* 2011b).

In the past 10 years (2002-2011) 2895 people consumed infected meat or meat products, and 1285 of them were with outstanding clinical manifestations (Fig. 2). Till now most of *Trichinella* outbreaks were associated with consumption of pork meat as well as of wild and domestic pigs (Fig. 3). 51% from the outbreaks are due to the consumption of unverified meat from wild boar, 40 % – from domestic pig and in 9% the source is not identified (Fig. 4).

The aim of the present report was to monitor

the development of *Trichinella* outbreak in the town of Elin Pelin in 2011 and to review certain epidemiological aspects of trichinellosis.

Materials and Methods

Materials

Cards for epidemiological investigation of *Trichinella* case, including: passport Part onset of symptoms, place of hospitalization, parasitological studies, clinical symptoms, treatment, source of infection.

Records of the examinations of infected meat products conducted by NDSRVI – Sofia

Methods

To confirmation the cases are used the following serological methods:

Indirect haemagglutination (IHA) – Bul Bio NCIPD Ltd., Bulgaria;

Cystic echinococcosis in Bulgaria 1996–2013, with emphasis on childhood infections

Eur J Clin Microbiol Infect Dis (2015) 34:1423–1428

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Abstract The objective of this study was to determine some features of cystic echinococcosis among children and adolescents, such as epidemiology, diagnosis, organ localization, treatment, and social and environmental factors favoring transmission of the disease. The 18-year study period (1996–2013) includes officially registered primary cases treated surgically, and/or with drug therapy, and/or with the puncture, aspiration, injection, reaspiration technique. Organ localization of the cysts and the most common diagnostic procedures were studied from the patients' medical records. Groups of diseased and healthy children were surveyed to outline some of the environmental and social factors influencing morbidity. From 1996 to 2013, the average annual incidence of cystic echinococcosis in the country was 6.7 per 100,000, but with significant variations in the incidence between different age groups. The hydatid cysts in children aged 0 to 9 years may most frequently be found in the lungs, in contrast to patients from other age groups. Almost 90 % of the affected children had sustained contact with dogs. At present, among the countries of the European Union, Bulgaria holds the highest incidence and prevalence of cystic echinococcosis. Childhood echinococcosis remains a serious health problem for the country. Therefore, the study of cystic echinococcosis in children has important epidemiological significance concerning the intensity of transmission.

Study of Toxocara seroprevalence among patients with allergy and healthy individuals in Bulgaria
Parasite Immunology, 2015, 37, 505–509

E. KANEVA, I. RAINOVA, R. HARIZANOV, G. NIKOLOV, I. KAFTANDJIEV, I. MINEVA

SUMMARY

Data in the literature addressing the ability of Toxocara infection in humans to induce development of atopic disease are controversial. The aim of our study was to determine the seroprevalence of anti-Toxocara antibodies in three groups of people: subjects with allergic symptoms and presence of allergen-specific IgE, subjects with allergic symptoms and absence of allergen-specific IgE, and clinically healthy blood donors. Serum samples from all subjects were tested by ELISA and Western blot for presence of specific antibodies against Toxocara canis. The results of our study did not support the link between toxocariasis and allergic manifestations in atopic patients. Among subjects with allergic symptoms and absence of atopy was found seroprevalence of 2_2% in Western blot. Same index in patients with atopy was 0_8%, and in clinically healthy blood donors 4_0%. Our study gives us grounds to consider that it is appropriate persons with allergic reactions, without evidence of atopy to be tested for presence of anti-Toxocara antibodies in the course of their diagnostic evaluation. Data from clinically healthy persons suggest that there is a ‘hidden’ infection among the population, which is not clinically manifested.

SPECIFYING CLINICAL FORMS OF TOXOCAROSIS AFTER TESTING SEROLOGICALLY SUSPECTED PATIENTS

LRainova, R. Kurdova
Probl Infect. Parasit. Dis., 2007, 35 (1),

SUMMARY

Toxocarosis is helminthic disease with various clinical pictures. Few years ago the main clinical forms were visceral and ocular. Recently some authors separated neurological, skin form and toxocarosis of mussels and disseminated in immunocompromised patients. The aim of the study was to determine clinical forms of toxocarosis in Bulgaria after testing sera samples from suspected patients in ELISA and Western blot. The results showed that in suspected patients from our country is possible to obtain all described clinical forms of toxocarosis. Patients with visceral form were the largest number while tested patients from groups with other clinical features were not sufficient for radical conclusions. When the results were confirmed by Western blot the number of positive patients from all tested groups was significant lower than tested in ELISA. These differences could be explained with cross reactions due to other helminthic diseases.

DYNAMICS OF ANTI-*TRICHINELLA* IgG ANTIBODIES IN
SERA OF GUINEA PIGS INFECTED WITH *TRICHINELLA*
SPIRALIS LARVAE

Eleonora Kaneva, Iskra Rainova

(Submitted by Corresponding Member O. Poljakova-Krusteva on April 26, 2011)

Abstract

Trichinellosis (trichinosis) is a zoonosis acquired by consumption of infected with *Trichinella* larvae meat. Investigation of the immune response in trichinellosis is not easy since it depends on different factors and studying it in various hosts (natural and experimental) provides important information for the development of infection. Levels of anti-*Trichinella* antibodies and their dynamics were investigated many times, but results are hardly comparable, because differences exist in the various testing conditions. In our experiment set up we decided to investigate the dynamics of IgG antibodies in infected with *T. spiralis* larvae guinea pigs. Follow up testing was performed in definite periods (from 3rd week to one year after infection) with ELISA reaction, implemented with excretory/secretory antigens obtained from in vitro cultivated muscle larvae.

In the ELISA reaction sera from infected with *T. spiralis* guinea pigs, tested within the period of 3 to 48 weeks after infection, were displayed changes in the optical density (OD) in the course of the infection. In accordance with most data published in literature appearance of specific anti-*Trichinella* antibodies was observed during the fourth week after infection. In the next period (week 6) the OD levels of sera progressively raised and reached their maximum value at week 8. By week 10 the levels of OD were relatively high, but at week 16 they slowly decreased and after week 20 reached values below the cut off of the reaction.

Key words: antibody response, excretory-secretory antigens, *Trichinella spiralis*, ELISA, IgG, guinea pigs

OUTBREAKS OF HUMAN TRICHINELLOSIS, STILL A CHALLENGE FOR THE PUBLIC HEALTH AUTHORITIES IN BULGARIA

J Public Health

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Aim: Human trichinellosis is an important food-borne zoonotic disease that causes financial losses and health problems for the population. Sporadic cases and outbreaks of different intensities are recorded each year in Bulgaria. With this work we attempt to clarify the main reasons leading to outbreaks of trichinellosis in the country and to compare the recorded incidence with that in other European countries. **Subjects and methods** In the present study, the epidemiological, clinical, and laboratory data of the trichinellosis outbreaks recorded in the country from 2008 to 2014 were analyzed. Epidemiological data based on a standard protocol with full case descriptions were collected for each region of the country and analyzed at the National Center of Infectious and Parasitic Diseases in Sofia. **Results** Between 2008 and 2014, 29 outbreaks were recorded in Bulgaria. Of 1670 people who consumed meat or meat products contaminated with *Trichinella* larvae, 710 were infected. The annual incidence of human trichinellosis for the period varied from 0.22 to 5.82 per 100,000 population. Studies using the polymerase chain reaction technique identified *Trichinella spiralis* and *Trichinella britovi* as the causative agents of trichinellosis among humans in Bulgaria. **Conclusions** Of all food-borne parasitic diseases, trichinellosis has the most pronounced negative effect on human health in the Republic of Bulgaria, and the country is still one of the European Union member states with a high human morbidity rate from trichinellosis.

STUDY OF ELISA DIAGNOSTIC FEATURES FOR DETECTION OF SPECIFIC IGG2 ANTIBODIES IN PATIENTS WITH TOXOCARIASIS

Comptes rendus de l'Académie bulgare des sciences: sciences mathématiques et naturelles 65(11):1563-1568

Iskra Rainova, Eleonora Kaneva

Toxocariasis is a disease in humans caused by the larvae of dog and cat nematodes - *Toxocara canis* and *Toxocara cati*. The clinical signs of this parasitosis are nonspecific, so the main diagnostic methods are serological for detection of specific anti-toxocara IgG antibodies. In recent years, for improving the diagnosis of toxocariasis specific subclasses antibodies - IgG1, IgG2, IgG3 and IgG4, whose role in various parasitic diseases is still under investigation were examined. The aim of the study was to investigate the level of IgG2 antibodies in patients with toxocariasis in ELISA, follow up their dynamics in the course of infection and determine the potential of the reaction for the diagnosis of the disease.

**TREATMENT OF HEPATIC CYSTIC ECHINOCOCCOSIS IN PATIENTS FROM
THE SOUTHEASTERN RHODOPE REGION OF BULGARIA IN 2004-2013:
COMPARISON OF CURRENT PRACTICES WITH EXPERT
RECOMMENDATIONS**

The American journal of tropical medicine and hygiene 2016, 94(4)

DOI: [10.4269/ajtmh.15-0620](https://doi.org/10.4269/ajtmh.15-0620)

Marin Muhtarov, **Iskra Rainova**, Francesca Tamarozzi

Cystic echinococcosis (CE) is a clinically complex chronic parasitic disease, management options for which include surgery, percutaneous treatments, and treatment with albendazole (ABZ) for active cysts, and the "Watch-and-Wait" approach for uncomplicated, inactive cysts. We examined, retrospectively, the clinical management of 334 patients with hepatic CE from the southeastern Rhodope region of Bulgaria between 2004 and 2013. Cysts were reclassified according to the World Health Organization Informal Working Group on Echinococcosis (WHO-IWGE) on the basis of ultrasound reports and images. The majority (62.3%) of uncomplicated cysts were CE1, 66% of which were treated surgically. Of all interventions, 5% were performed on inactive uncomplicated CE4-CE5 cysts. About half (47.6%) of these cysts were therefore treated inappropriately, exposing patients to unnecessary treatment-related risks and the health system to unnecessary costs. No management change was observed after the publication of the WHO-IWGE Expert Consensus recommendations in 2010. In Bulgaria, ABZ is still used in interrupted cycles as this is reimbursed, and peri-interventional chemoprophylaxis was not administered in the majority of surgical patients. Efforts are needed to introduce the WHO-IWGE classification and management recommendations and to encourage reception of state-of-the-art practices by public health regulatory bodies to improve patient quality of care and optimization of health resources.

HUMAN PARASITIC DISEASES IN BULGARIA 2013-2014 (OPEN ACCESS)

BALKAN MEDICAL JOURNAL 2017, 35(1)

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Iskra Rainova, Rumen Harizanov, Iskren Kaftandjiev, et al.

Background: In Bulgaria, more than 20 autochthonous human parasitic infections have been described and some of them are widespread. Over 50 imported protozoan and helminthic infections represent diagnostic and therapeutic challenge and pose epidemiological risk due to the possibility of local transmission. Aims: To establish the distribution of autochthonous and imported parasitic diseases among the population of the country and to evaluate their significance for the public health system. Study design: Retrospective epidemiological analysis of the prevalence of human parasitic diseases in Bulgaria over the two-year period: 2013 - 2014. Methods: We used the annual reports by Regional Health Inspectorates and data from the National Reference Laboratory at the National Centre of Infectious and Parasitic Diseases on all individuals infected with parasitic diseases in the country. Prevalence was calculated for parasitic diseases with few or absent clinical manifestations (oligosymptomatic or asymptomatic infections), and incidence per 100 000 was calculated for diseases with overt

clinical picture or requiring hospitalization and specialized medical interventions (i.e. surgery). Results: During the research period parasitological studies were conducted on 1 441 244 persons, and parasitic infections were diagnosed in 22 039 individuals. Distribution of various parasitic pathogens among the population displayed statistically significant differences with higher prevalence for some intestinal parasites (enterobiasis 0.81%, giardiasis 0.34%, blastocystosis 0.22%). For certain zoonotic diseases such as cystic echinococcosis (average incidence of 3.99 per 100 000) and trichinellosis (average incidence of 0.8 per 100 000), the incidence exceeds several times the annual incidence recorded in the European Union. Conclusion: Parasitic diseases still pose a problem with social and medical significance for the country. It is essential to provide constantly the public health system with improved efficiency to deal with autochthonous and imported parasitic diseases. Attention should be directed to some imported vector-borne parasitic diseases (e.g. malaria and cutaneous leishmaniasis) for which the country is potentially endemic.

MOLECULAR CHARACTERIZATION OF ECHINOCOCCUS GRANULOSUS ISOLATES FROM BULGARIAN HUMAN CYSTIC ECHINOCOCCOSIS PATIENTS

Parasitology Research, 2017, 116(3)

DOI: [10.1007/s00436-017-5386-](https://doi.org/10.1007/s00436-017-5386-)

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Although cystic echinococcosis (CE) is highly endemic in Bulgaria, there is still scarce information about species and/or genotypes of the *Echinococcus granulosus* complex that infect humans. Our study tackled the genetic diversity of *E. granulosus* complex in a cohort of 30 Bulgarian CE patients. Ten animal *E. granulosus* isolates from neighboring Greece were additionally included. Specimens were comparatively analyzed for partial sequences of five mitochondrial (mt) (*cox I*, *nad I*, *rrnS*, *rrnL*, and *atp6*) and three nuclear (nc) genes (*act II*, *hbx 2*, and *ef-1 α*) using a PCR-sequencing approach. All 30 Bulgarian isolates were identified as *E. granulosus sensu stricto* (s.s.) and were showing identical sequences for each of the three examined partial nc gene markers. Based upon concatenated sequences from partial mtDNA markers, we detected 10 haplotypes: 6 haplotypes (H1-H6) clustering with *E. granulosus* s.s. (G1) and 4 haplotypes (H9-H13) grouping with *E. granulosus* s.s. (G3), with H1 and H10 being the most frequent in Bulgarian patients. The haplotypes H1, H4, and H11 were also present in Greek hydatid cyst samples of animal origin. In conclusion, *E. granulosus* s.s. (G1 and G3 genotypes) is the only causative agent found so far to cause human CE in Bulgaria. However, further studies including larger sample sizes and other additional geographic regions in Bulgaria will have to be performed to confirm our results.

AFFINITY CHROMATOGRAPHY PURIFICATION OF SOMATIC AND EXCRETORY-SECRETORY ANTIGENS ISOLATED FROM TRICHINELLA SPIRALIS MUSCLE LARVAE AND TESTING OF THEIR ACTIVITY IN ELISA

I. Rainova, L. Rupova - Popjordanova, R. Kurdova, P. Petrov, A. Tchernov

Problems of Infectious and Parasitic Diseases, 1998, 26, 2

SUMMARY

Cross-reactions with various nematodes are frequently observed in the serological diagnosis of trichinosis. The obtaining of purified *T. spiralis* antigens opens an opportunity for improving the specificity of such diagnostic kits. With this purpose an affinity chromatography purification with Mab as a ligand of somatic and E/S antigens from *T. spiralis* larvae was performed. The antigen specificity of the isolated peaks was assayed by ELISA. The results indicated that after affinity chromatography purification the specificity of the somatic antigens increased significantly.

TOXOCARIASIS AND A PRESENTATION OF A CASE WITH FAMILIAL TOXOCARIASIS

V. KALEVA, I. RAINOVA

PEDIATRIA, 2005, 3

Toxocariasis is zoonotic disease caused by the infection of humans with second-stage larvae of *Toxocara species*. Four clinical forms have been recognized in humans: (I) systemic forms: classical visceral larval migrans (VLM) and incomplete VLM; (II) compartmentalized forms: ocular and neurological toxocariasis; (III) covert toxocariasis; and (IV) asymptomatic . toxocariasis. This paper describes the occurrence of familial toxocariasis in three close relatives: 2-years boy with systemic VLM and his sister and mother with asymptomatic toxocariasis. Medical history in the boy included geophagia, fever, anorexia, abdominal pain, urticaria, hepatomegalia, leukocytes, hypergammaglobulinaemia and X-rays pulmonary involvement. The cases with asymptomatic toxocariasis included only eosinophilia. The diagnosis was confirmed by ELISA. The patients received oral *albendazole* - two 10-days courses in the boy and one 5-days course in the rest. In the posttreatment follow-up, clinical improvement and a decrease in eosinophilic count were observed. Authors conclude that eosinophilias in children should be examined serologically for toxocariasis. Authors concluded also hematological and serological screening to be proceeded in all members of families where cases of toxocariasis were found.

ISOLATION AND CHARACTERIZATION OF EXCRETORY/SECRETORY ANTIGENS FROM TOXOCARA CANIS AND TRICHINELLA SPIRALIS

Problems of Infectious and Parasitic Diseases, 2007, 35(2):46-48

Iskra Rainova, R. Kurdova M. Ivanova

Toxocarosis and trichinellosis are parasitic diseases registered in humans and caused by the larval forms of *Toxocara canis* and *Trichinella spiralis* nematodes. For the diagnosis of these parasitic diseases different serological tests are used, which demonstrate the presence of specific antibodies in the serum specimens of suspected patients. In recent years the development of the different immunological methods provided the increased use of excretory-

secretory (E/S) antigens from cultivated in vitro parasitic larvae. The aim of the present work was to isolate E/S antigens from *T.canis* and *T.spiralis* larvae and characterize these two antigens using SDS-electrophoresis and Western blot. The results showed that by electrophoretic separation in SDS-PAGE E/S antigens from *T.canis* larvae yielded 2 polypeptide fractions with MW 83 and 28 kDa while these from *T.spiralis* larvae yielded 3 fractions with MW 45, 50, 55 kDa. The analysis by W.B. assay with sera from patients which reacted positive for toxocarosis showed 8 protein bands in E/S antigen isolated from *T.canis* larvae and confirmed the presence of 3 bands in E/S antigen from *T.spiralis* larvae.

CLINICAL CASES OF TOXOCARIASIS
INFECTOLOGIA, 2004, 2, 31-33

Rumen Harizanov, G. Filipov, **Iskra Rainova**

The visceral larva migrans syndrome (Toxocariasis) is an infection caused by *Toxocara canis* and less frequently, *Toxocara cati*, which are intestinal nematodes in dogs and cats. In humans, disease is considered an aberrant infection because humans are incidental hosts, and the parasites cannot completely mature in the human body. In the article we reported five cases of visceral larva migrans, three of which may be described as "covert" form. The diagnosis is based on the clinical signs, count of Eo- cells in the blood and presence of the specific antibodies. All our cases were treated with Albendazole, 15mg/ kg b.w. for 10 days. The effect of the therapy was considered as excellent in a 100%.

**AFFINITY CHROMATOGRAPHY PURIFICATION OF SOMATIC AND
EXCRETORY-SECRETORY ANTIGENS ISOLATED FROM TRICHINELLA
SPIRALIS MUSCLE LARVAE AND TESTING OF THEIR ACTIVITY IN ELISA**

Problems of Infectious and Parasitic Diseases, 1998, 2, 23-25

Iskra Rainova, L. Rupova-Popjordanova, R. Kurdova et al.

Cross-reactions with various nematodes are frequently observed in the serological diagnosis of trichinosis. The obtaining of purified *T.spiralis* antigens opens an opportunity for improving the specificity of such diagnostic kits. With this purpose an affinity chromatography purification with Mab as a ligand of somatic and E/S antigens from *T.spiralis* larvae was performed. The antigen specificity of the isolated peaks was assayed by ELISA. The results indicated that after affinity chromatography purification the specificity of the somatic antigens increased significantly.

**ANALYZING AND EVALUATION OF VARIOUS ANTIGENS FROM
TRICHINELLA SPIRALIS LARVAE USING WESTERN BLOT**

Problems of Infectious and Parasitic Diseases, 2008, 36(1):35-36

Iskra Rainova, M. Ivanova, R. Kurdova

The accurate diagnosis of trichinellosis depends largely on the antigens used in serological tests. Nowadays there are two kinds of antigens, isolated from *T. spiralis* larvae which are used in diagnostic methods. One kind is crude extract from *T.spiralis* larvae and the other-excretory/secretory products from *T.spiralis* larvae, cultivated in vitro. The aim of the present study was to analyze these two kinds of antigens, obtained from *T. spiralis* larvae by SDS-

PAGE and Western blot. Electrophoresis was performed in 4% stacking and 12% separating gel under reducing conditions. Western blot was performed in Towbin's buffer on nitrocellulose paper. The results obtained showed a very complex antigen profile. Crude extract (CE) yielded in Western blot 7-11 bands with molecular weight (MW) between 28-198 kDa, while excretory/secretory antigen (E/S) revealed bands with MW between 35-208 kDa. The presence of antigen fractions with molecular weight 45-55 kDa corresponds with the opinion of most authors who consider that these fractions are specific for *Trichinella spiralis*. These results implicate that the antigens examined in our study are suitable for evaluation of antibody response in trichinellosis.

HUMAN CYSTIC ECHINOCOCCOSIS - CURRENT DIAGNOSTIC METHODS AND THERAPEUTIC APPROACHES

General Medicine, 2015, 17(1):46-54

Marin Muhtarov, **Iskra Rainova**, I. Marinova, et al.

Cystic echinococcosis (unilocular hydatid disease) is a serious parasitic disease in humans with a chronic course, has poor prognosis and high mortality if not promptly diagnosed and adequately treated. It is caused by the larval stage of the tapeworm *Echinococcus granulosus* of the genus *Echinococcus*, family Taeniidae. It is widely spread, more often among people in countries with developed pastoralism and is the most common form of echinococcosis identified in 2 to 3 million cases worldwide. The diagnosis is complex and is established on the basis of the epidemiological history, clinical presentation, imaging methods (X-ray, ultrasound, CT, MRI), serological and parasitological tests. Treatment options include four approaches in clinical management of the hydatid cysts: surgery, percutaneous treatment, treatment with chemotherapeutic agents for active cysts and the "watch and wait" approach for inactive cysts. New highly sensitive and specific diagnostic methods and effective therapeutic approaches against echinococcosis have been developed over the past years. Although some progress in the epidemiological surveillance and control of echinococcosis has been achieved in the world, this zoonosis remains a major problem (veterinary and environmental) for the public health in Bulgaria.

ULTRASOUND CHARACTERISTICS OF HEPATIC CYSTIC ECHINOCOCCOSIS IN PATIENTS FROM DISTRICT KARDZHALI, BULGARIA

Bulgarian gastroenterology 2014, 1, 30-32

Marin Muhtarov, **Iskra Rainova**, Irina Marinova, Diana Jordanova

INTRODUCTION: Bulgaria reported the highest incidence of cystic echinococcosis (CE) in EU: 4.09/100000 in 2011 and 3.82/100000 in 2013. Kardzhali district, being an endemic region in Bulgaria, reported two times higher incidence than the national average in 2013 - 7.93/100 000. **AIM:** The aim of the study is to summarize the ultrasonographic characteristics of hepatic CE in an endemic area of Bulgaria in the period 2004-2013 - region Kardzhali. **MATERIAL AND METHODS:** Retrospective study of 222 CE patients of whom 192 had liver CE was carried out by a gastroenterologist, and it included epidemiological data from the Regional Health Inspection and abdominal ultrasonography results from hospital discharge records and outpatient saved data. The World Health Organization - Informal Working Group on Echinococcosis (WHO-IWGE) standardized classification was used for CE cysts. **RESULTS:** According to data collected from various sources the incidence of CE in Kardzhali District for 2013 was 13.94/100000 - higher than officially reported. Liver localization of CE was found in 86.48% of patients, lung and other organ localization in 8.11% and 5.41% respectively. The gender distribution showed significantly higher incidence in women, with male/female ratio 0.62. The highest incidence rate of primary CE was observed in the 60-69 age group followed by the age groups of 40-49 and under 19 years. Significantly higher percent of patients (81%) had lesions in the right hepatic lobe. The largest number of patients with primary CE had cyst size of 5-10 cm (53.12%) while in secondary CE the prevailing size of cysts was < 5 cm (41,46%). Group of active cysts or early stages of the disease predominate in both primary and secondary cystic echinococcosis were - CE1 – 57%, resp. 44%, and CE2 – 25%, resp. 34%. **CONCLUSIONS:** Clinical and imaging CE data is of major importance for the correct diagnosis in patients from endemic areas. Screening for CE with abdominal ultrasound should be performed in endemic areas and in risk groups.