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Case Report

Rare Case of Bilateral Renal Echinococcosis

Valeri Velev

University Hospital for Infectious and Parasitic Diseases "Prof. Iv. Kirov", Medical University of Sofia

E-mail: velev_md@abv.bg

Abstract

We describe the case of a 39-year-old man from Bulgaria with bilateral renal echinococcosis. The patient present with frequent urination and soreness in the lower abdominal area. Abdominal ultrasound and serology are directed to hydatid kidney cyst. After nephrectomy, the patient was instructed to continue the anti-recidivism treatment with Albendazole but did not appear on regular preventive examinations. After 22 years, the same patient was diagnosed with an echinococcal cyst of the only remaining kidney and liver.

Key words: Renal Echinococcosis, Nephrectomy, Albendazole

INTRODUCTION

Cystic Echinococus (CE) is a severe parasitic disease caused by *Echinococcus granulosus* larvae. Sheep are the most common intermediate host of the parasite, and wandering dogs are the source of infection and the most common reason to involve a person in the epizootic chain. This disease is spread mainly in areas with predominant sheep breeding in South America, Africa, Australia, China, Turkey. Europe's endemic countries are Bulgaria, Romania, parts of Italy and France (Eckert and Deplazes, 2004). Liver (75-80%) and lungs (15%) are most commonly affected. Other organs are rarely affected, with renal localization not more than 1-2%. There are also rare cases of multivisceral echinococcosis with severe course and serious prognosis. The most common in humans CE is absense of symptoms and cysts are found relatively late in imaging studies on another occasion. According to the current WHO standards, there are four options for therapeutic behavior: conservative treatment, PAIR, surgical treatment or waiting behavior (Eckert and Deplazes, 2004; McManus et al., 2003).

Case History

A 39-year-old man examined in an urology ward in July 1996 for frequent urination and soreness in the lower abdominal area for 3-4 months. The patient was without any other complaints, no history of chronic illnesses or serious surgical interventions. He lives with his family in a rural area in the Northwest of Bulgaria and he grows sheep and goats for private use.

Laboratory tests of blood and biochemistry showed only moderate hemoglobin 8.7 g/l and elevated amino transferases– ALT 95 UI/L and AST 91 UI/L. The urea and creatinine values were in the norm. When an abdominal ultrasound was performed, an enlarged left kidney was visualized, with a cystic formation of 18-20 mm in it, which occupied it almost entirely. The right kidney, liver, and other organs in the abdominal cavity were intact. Due to the technical impossibility, a computer tomography has not been performed in the unit. Due to the ultrasound view of the lesion and the epidemiological history of contact with sheep, it was suggested that the cyst was echinococcal.

The patient was sent to the University Hospital for Infectious and Parasitic Diseases, where a serological test for IgG antibodies was performed by ELISA, with a Ratio 1.1 limit score. Under hospital conditions preoperative chemotherapy with Albendazole 10 mg/kg and intravenous infusions was initiated.

After 7 days, the patient underwent nephrectomy in the Urology Clinic due to a non-functioning left kidney. From the organ was taken histological material under Hematoxylin and eosin stain (H&E). Light micro-scopy shows the typical avascular chitin and non-nuclear

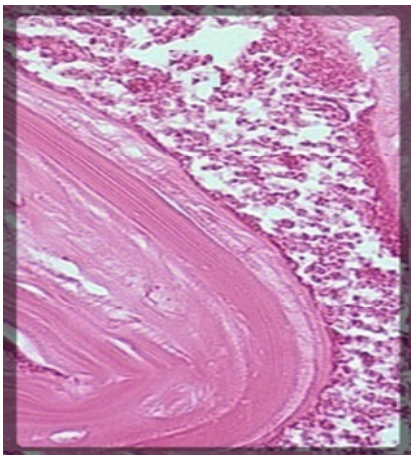

Figure 1. Microphotograph shows fibrocollagenous tissue and a cellular eosinophilic laminated structure (H&E).

membrane with inflammatory-cellular and eosin ophilicin filtration (Fig.1). Native cystic fluid was examined under a microscope, including by addition of methylene blue, with multiple invasible scolexes being visualized. The patient was instructed to continue the anti-recidivism treatment with Albendazole but did not appear on regular preventive examinations (Eckert and Deplazes, 2004; Gupta et al., 2017).

The same patient was referred to by the family doctor at the University Hospital for Infectious and Parasitic Diseases in February 2018 for adenoma, abdominal weights and intermittent hematuria. Two cystic formations were observed in abdominal ultrasound, one in the 10-12 mm right-handed liver of the CE2 and one of 6-8 mm in the right kidney. Blood and biochemical parameters only retained elevations of amino transferases– ALT 125 IU/L and AST 95 UI/L. The kidney function was preserved. There-serology for IgG antibodies was 1.4. Treatment with Albendazole 10 mg/kg and hepatoprotective therapy was started– 3 courses for 30 days with breaks of 10 days between courses.

DISCUSSION

Cystic echinococcosis is not a rare disease for Bulgaria, but the rare organ localization in this case, as well as the non-deliberately carried out anti-recidivism treatment after nephrectomy, is a diagnostic and clinical challenge (Gupta et al., 2017; Rainova et al., 2017). Typically, CE occurs asymptomatically, and rare cases of extra hepatic echinococcos is create even more serious diagnostic difficulties in non-specialized medical units (Brunetti et al., 2003). In the specific case, due to the size of the cyst, it is most likely a long-term primary echinococcosis of the left kidney. According to our available literature, this is the only case in which the second kidney is affected later, probably due to relapse due to not provided chemoprophylaxis. A similar case may lead to renal dysfunction and, to a certain extent, an urgent need for renal transplantation.

CONCLUSION

A similar case may lead to renal dysfunction and, to a certain extent, an urgent need for renal transplantation. Everyone with active echinococcal cysts needs antiparasitic treatment and active surveillance with imaging and serological methods.

Conflict of Interest

Theauthorsdeclaredthatthereisnoconflict of interest.

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