Echinococcal cyst of the left vas deferens – a case report

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Abstract

Introduction: Cystic echinococcosis or hydatid disease is an important public health issue, mainly in developping countries, due to its high prevalence. Echinococcus granulosus, a cyclophyllid cestode, the pathogenic parasite finds in humans their intermediate host in its way to the final host, the members of canidae familly.
Main sites of infection in humans are: the liver and the lungs. There have been recorded rare locations as: the heart; the spleen; muscles or retroperitoneal.
Materials and method: We present the case of 29 years old man, living in rural environment, who was admitted to our Clinic for a pelvic cystic tumor and intermittent ureterohydronephrosis. Blood work showed positive antibodies for Echinococcus granulosus.
We performed an urethrocystoscopy and the excision of the tumor.
Conclusions: Although rare, the involvement of the male genitourinary tract in cystic echinococcosis is possible and can pose important diagnostic challenges.

Key words: cyst, Echinococcus granulosus, vas deferens

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Introduction

Cystic echinococcosis is a parasitic disease, a real public health issue [1], caused by tape worms from the genus Echinococcus. The disease is provoked by the larval stage of Echinococcus granulosus, Echinococcus multilocularis – with an alveolae like pattern of growth, and very rare Echinococcus vogeli causing polycystic echinococcosis.

Even if it is one of the oldest acknowledged diseases by mankind, the Talmud having it mentioned and Hippocrates recognizing it, cystic echinococcosis is an important public health issue being endemic in some regions of the world.

The parasite's life cycle has an intermediate host before infecting its final host, belonging to the canidae family, mainly dogs but also wolves, dingoes and other carnivores. The humans act as an accidental intermediate host when handling products infected with parasite eggs. The disease is more common in pastoral regions but it is not unusual in urban settlements too. [2]

From its digestive port of entry the parasite passes into portal circulation and then passes through three capillary filters: liver, lung and systemic circulation. Then it can reach virtually any organ where it develops into cysts.

The cystic lesion has three layers: the pericyst, the laminated membrane and the endocyst which produces the infectious solices.

The main sites of infection are the liver and the lungs, recording more than 90 % of all cases. Other sites such as the genitourinary tract are uncommon [4].

The clinic of Cystic echinococcosis can be poor for a long period of time following the infection due to slow development rate. Symptoms may vary from jaundice to anaphylaxis [4, 5].

Diagnosing the disease must combine imagistic findings with serological tests and clinic.

Treatment for localized disease is multimodal and consists mainly in surgery in association with chemotherapy with albendazole [6]. In spite of incomplete notification of cases, Romania is considered a highly endemic territory [2].

Materials and method

N.N. a 29 years old male, living in rural environment was admitted to our Clinic for a pelvic retrovesical cystic tumor, intermittent ureterohydronephrosis, dysuria and mild lumbar pain.

The patient has no significant medical history and lives in rural environment and handles domestic animals frequently.

Abdominal ultrasound shows normal liver, kidneys, enlarged spleen and a homogenous prostate with a volume of 25 cubic centimeters. The urinary bladder has regular walls. Laterally, on the left side of the bladder there are described several cystic lesions, the largest measuring 72/106 millimeters (Fig. 1).

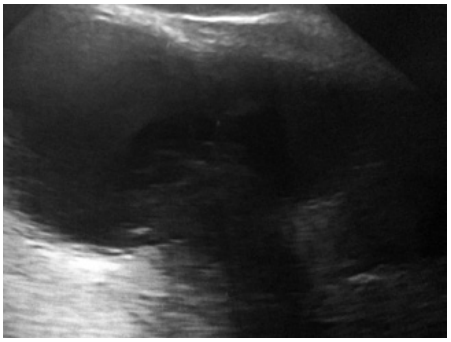


Fig. 1 Ultrasonographic aspect of the paravesical cystic lesions

The patient undergoes semen analysis which shows important oligospermia, asthenozoospermia and teratozoospermia.

A pelvic MRI scan shows a large cystic lesion measuring 85/67 mm axially and 75 mm cranio-caudally with adjacent smaller multicystic lesions situated superior and lateral of the bladder – daughter vesicles (Fig. 2).

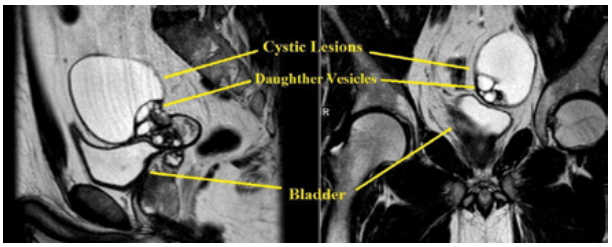


Fig. 2 MRI aspect of the cystic lesions

The left paravesical cystic lesion has no pathologic contrast enhancement (Fig. 3).

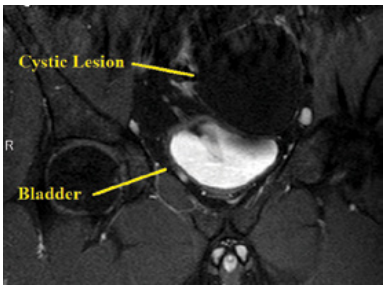


Fig. 3. No contrast enhancement in the cystic lesions

The prostate is homogenous and has a volume of 23 cubic centimeters with no pathological elements. There are several enlarged inguinal lymph nodes.

The patient tested positive antibodies for Echinococcus granulosus. The patient is referred to a parasitologist who confirms the diagnosis and recommends chemotherapy with albendazole prior and after surgery.

Combining the imagistic, clinic and serological findings the diagnosis was set as: left vas deferens hydatid cyst.

We decided to perform surgical treatment after several doses of albendazole.

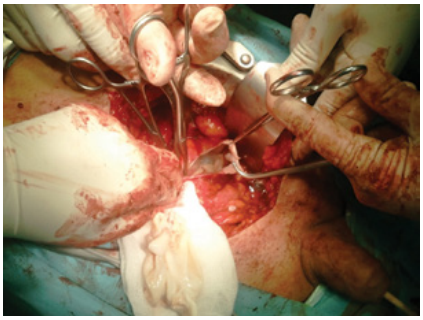


Fig. 4. Intraoperative aspect of the cystic lesion with daughter vesicles.

The hydatid cysts were excised, under general anesthesia and by mean of a subumbilical incision, as a whole with extreme caution in order not to spread the daughter vesicles.The integrity of the vas deferens and the left seminal vesicle was maintained. The patient was set on intense antiparasitic treatment, with albendazole, as recommended by the parasitologist. Five days after the surgery the patient was discharged with a good general status and satisfactory voiding.

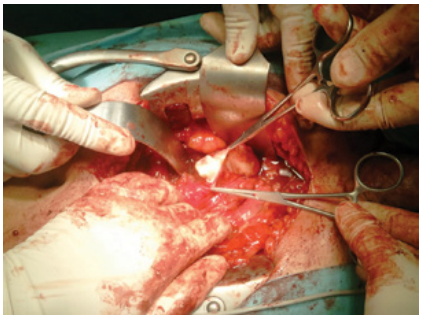


Fig. 5. Surgical extraction of a daughter vesicle

At three months no dysuria was present, no left urinary obstruction appeared at the intravenous urography and the semen analysis was improved.

Discussions

Although rare, vas deferens and seminal vesicles may become sites for echinoccocal infection. As our case shows, surgery combined with chemotherapy may cure the symptoms and prevent daughter vesicles from spreading and finally curing this parasitic disease,which by no means is declining in terms of prevalence.

The urologist should be aware of the possibility of dealing with a hydatid disease in the urogenital apparatus and must know that surgery and chemotherapy can restore almost or even entirely, as it happen in the case presented, the function of the affected organ.

Conclusions

Although rare, the involvement of the male genitourinary tract in cystic echinococcosis is possible and can pose important diagnostic challenges.

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