Clinical Case Reports International

Case Report
Published: 02 Dec, 2021

A Detected Case of *Echinococcus* in the Lumbar Region

Topcu Ismail C[1], Uras Hatice B[2*], and Yanık Keramettin[3]

[1]*Department of General Surgery, Erdem Hospital, Turkey*

[2]*Department of Neuroscience, Texas Christian University, USA*

[3]*Microbiology and Biochemistry Laboratories, Erdem Hospital, Turkey*

Abstract

Echinococcosis is considered to be a potentially lethal zoonotic disease that causes serious damage to hosts. In our case, we examined a rare case of echinococcosis localized in the gluteal region in a 36-year-old Turkish male and its treatment process. The patient without a chronic disease was admitted to our clinic with right lower quadrant abdominal pain, indigestion, and rapid weight loss complaints. According to the results of hydatid cyst hemagglutination, the patient was diagnosed with *Echinococcus*. After the surgery and the treatment with omnipaque, the patient's complaints disappeared.

Keywords: *Echinococcus*; Parasites; Surgery; Medication; Abdominal pain

Background

Echinococcus species are distributed globally and can be observed on every continent except Antarctica. Infections with these parasite species are mostly considered extremely serious since they result in significant morbidity, mortality and substantial economic losses in the livestock industry. *Echinococcus granulosus* and *Echinococcus multilocularis*, cause cystic echinococcosis and alveolar echinococcosis respectively, and they are the two most prevalent species of interest from the human and veterinary perspective [1]. When an infection leads to such diseases, the parasite is partially kept under control by the host's immune system: in a case of immunocompetence the normal alveolar echinococcosis or cystic echinococcosis situation, the metacestode grows gradually which eventually leads to the first visible clinical signs on the host, mostly years after the infection. It has been observed that in a case of impaired immunity, uncontrolled proliferation of the metacestode causes the disease to progress rapidly [2].

Adult cestodes are regarded apathogenic in hosts, while metacestode, the alveolar form, is high pathogenic for intermediate hosts. The alveolar cyst causes malign tumor-like lesions with infiltrative, proliferative, and destructive character. These lesions primarily originate in the liver, which then metastasize to other organs. If it is not treated in intermediate hosts, it can cause irreversible symptoms and death by targeting other vital organs such as lungs and brain [3].

Case Presentation

A 36-year-old Turkish male without a chronic disease was admitted to our clinic with a two-month history of right lower quadrant abdominal pain, indigestion, and rapid weight loss. The pain increased in severity over 36 h. Upon arrival, he was febrile and tachycardia.

In the physical examination, no deviations from the normal state were found. In laboratory tests, deviations from the normal state were not observed: BUN: 9 IU/ml (8-23), AST (SGOT): 25 IU/ml (0-31), ALT (SPGT): 57 IU/ml (0-65); HBsAg, Anti-HVC, and Anti-HIV results were negative. Abdominal cavity ultrasound results were also normal.

The CT scans showed that chest organs were normal. The scan of the chest, abdominal and pelvic regions was performed after intravenous contrast administration with a slice thickness of 5 mm. A well-circumscribed encapsulated mass lesion, approximately 100 mm × 55 mm in size, was detected in the adipose tissue in the gluteal region (Figure 1). The result of hydatid cyst hemagglutination was negative: 1/80 (<1/160). 45 ml daily dosage of omnipaque and surgery were prescribed.

Under sedoanalgesia, a 10 cm × 10 cm mass in the upper gluteal region located in the left lumbar region was reached bypassing the skin under the skin at the prone position. The mass was cystic inconsistency. By opening the cyst, many millimeter-sized cystic lesions were observed (Figure 2).

OPEN ACCESS

Correspondence:
Hatice Buse Uras, Department of Neuroscience, Texas Christian University, 2800 S University Dr, Fort Worth, TX 76129, USA, Tel: +1-210 935 6307;
E-mail: busehaticeuras@gmail.com

Received Date: *01 Nov 2021*
Accepted Date: *23 Nov 2021*
Published Date: *02 Dec 2021*

Citation:
Topcu Ismail C, Uras Hatice B, and Yanık Keramettin. A Detected Case of Echinococcus in the Lumbar Region. Clin Case Rep Int. 2021; 5: 1248.

Figure 1: Adipose tissue in the gluteal region.

Figure 2: Many millimeter-sized cystic lesions.

The inside of the cyst was washed with 3% NaCl, the bladder wall was excised, and a Hemovac drain was placed. The skin was primarily repaired. On the 5th day after the surgery, the patient was discharged from the hospital without complications and in good condition.

Discussion

Cystic echinococcosis is a complex disease. Even though it is considered to be in principle, preventable and treatable, it continues to be a major public health problem in many countries. There are various unanswered questions and is a clear need for research regarding to the disease and its diagnostics as well as development of prevention and control programs.

Hydatid disease is mostly observed in the right lobe of the liver. Pancreatic localization is described in the literature with a frequency of only 0.2% to 2% [4]. Among such cases, lesions are commonly located in the head of the pancreas (50% to 58%). Location in the body and tail of the pancreas is seen only in the 24% to 34% and 19% of such cases respectively [5]. Most patients (40% to 80% of cases) have a single cystic lesion located in a single organ. The liver is affected in 70% of the cases, the right lobe more commonly than the left. The lungs are the second most frequently affected organ and are affected in about 20% of the cases. Cysts can localize virtually in any organ and structure, such as abdominal or pleural cavities, kidney, spleen, bone, brain, eye, ovary, testis, and pancreas. Rare immune-mediated reactions such as urticaria, asthma, membranous nephropathy, and anaphylaxis have also been described in the literature [5]. While the *Echinococcus* cases are more common to develop in the liver or lungs, in our case, it developed in the lumbar region.

In the postsurgical course, medication should be administered for at least 2 years, and in many recurrent or inoperable cases, the complications and intolerance of treatment with Albendazole should be taken into consideration, which is, fortunately, not a frequent phenomenon.

Based on the exposure, clinical picture, imaging tests, and serological test results, *Echinococcosis multilocularis* can be diagnosed with the sensitivity of up to 90% to 100% and specificity of up to 95% to 100%. The most effective treatment is surgical treatment combined with Albendazole treatment.

Percutaneous drainage of a pancreatic echinococcal cyst is an alternative to surgical treatment for people with high intrasurgical risk. Surgical treatment can be radical or sparing. Radical procedures are associated with a lower risk of relapse but carry a greater risk of postsurgical complications. Postsurgical recurrence's frequency is around 2% to 5% and is most often caused by incomplete cyst excision, leaving undiagnosed cysts and the lack of protection from Albendazole.

Conclusion

The importance of early diagnosis in *Echinococcosis* cases in endemic regions such as Turkey is indisputable. It should be noted that with increasing awareness for early detection of echinococcal infestations in high endemic regions, the recovery rate of patients will be increased and complications will be significantly reduced.

Summary

Echinococcosis is considered to be potentially lethal zoonotic diseases that cause serious damage to hosts. In this case, we examined a rare case of echinococcosis localized in the gluteal region in a 36-year-old Turkish male and its treatment process. The patient without a chronic disease was admitted to our clinic with right lower quadrant abdominal pain, indigestion, and rapid weight loss complaints. Accordingly to the results of hydatid cyst hemagglutination, the patient was diagnosed with *Echinococcus*. After the surgery, the patient's complaints disappeared.

References

1. Woolsey ID, Miller AL. *Echinococcus granulosus* sensu lato and *Echinococcus multilocularis*: A review. Res Vet Sci. 2021;135:517-22.
2. Gottstein B, Wang J, Blagosklonov O, Grenouillet F, Millon L, Vuitton DA, et al. *Echinococcus* metacestode: In search of viability markers. Parasite. 2014;21:63.
3. Gürler AT, Bölükbaş CS, Acici M, Umur Ş. Overview of *Echinococcus multilocularis* in Turkey and in the world. Turkiye Parazitol Derg. 2019;43(Suppl 1):18-35.
4. Brunetti E, Garcia HH, Junghanss T, International CE Workshop in Lima, Peru, 2009. Cystic echinococcosis: Chronic, complex, and still neglected. PLoS Negl Trop Dis. 2011;5(7):e1146.
5. Ammann RW, Eckert J. Cestodes echinococcus. Gastroenterol Clin North Am. 1996;25(3):655-89.