



Hydatid cyst of perianal region in a man which present as anal abscess: a rare case report

Aghajanzadeh Manouchehr MD¹, Tozandajani Hadi MD¹, Mesbah Alireza MD², Taleby Pedram MD², and Hajipour Jafroudi Ehsan MD³

¹Department of Thoracic Surgery, Guilan University of Medical Sciences, Iran

²Department of pathology, Guilan University of Medical Sciences, Iran

³Department of Internal Medicine, Inflammatory Lung Diseases Research Center, Razi Hospital, Iran

*Corresponding author: Ehsan Hajipour Jafroudi Email: E-hjafroudi@alumnus.tums.ac.ir

Manuscript details:

Received: 24.02.2023
Accepted: 26.03.2023
Published: 25.04.2023

Cite this article as:

Aghajanzadeh Manouchehr, Tozandajani Hadi, Mesbah Alireza, Taleby Pedram and Hajipour Jafroudi Ehsan (2023) Hydatid cyst of perianal region in a man which present as anal abscess: a rare case report., *Int. J. of Life Sciences*, 11 (1): 1-5

Available online on <http://www.ijlsci.in>
ISSN: 2320-964X (Online)
ISSN: 2320-7817 (Print)



Open Access This article is licensed under a Creative Commons Attribution 4.0

International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license, and indicate if changes were made. The images or other thirdparty material in this article are included in the article's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this license, visit <http://creativecommons.org/licenses/by/4.0/>

ABSTRACT

Hydatid cyst is an infectious disease that is caused by *Echinococcus Granulosus* and can involve all organs and tissues that produce cysts. Liver is the most common organ of body which is infected by hydatid cyst (75%) and the second organ is lung (15%). We present a primary perianal hydatid cyst in this article. A 34-year-old male presented with a palpable, red and painful mass on the right side of anal region. The patient denied any past medical and drug history. Physical examination was normal. In rectal examination a bulging was palpated in right side of anal canal. Laboratory findings were unremarkable. With diagnosis of perianal abscess, drainage and irrigation was performed. The patient was discharged with medication. The patient was readmitted two months later with the complaint of pain and discharge. Pelvic CT-scan showed a cystic lesion in the right wall of lower rectum. We reoperated the patient and opened the cavity. With injection of methylene blue the cavity was explored and a lot of gelatin like material was extracted. Intraoperative diagnosis was perianal hydatid cyst and pathology result confirmed the diagnosis. The patient was discharged with 800 mg of Albendazole daily. After one month the wound was healed.

Keywords: Hydatid cyst; *Echinococcus granulosus*; Anal hydatidosis.

INTRODUCTION

Hydatid disease is endemic in most parts of Iran and is hyper endemic in some areas (Torabi *et al.*, 2021; Aghajanzadeh *et al.*, 2017). Hydatidosis is responsible for approximately 1% of admissions to surgical wards in Iran (Torabi *et al.*, 2021; Esmaeili Delshad *et al.*, 2016; Aghajanzadeh *et al.*, 2016). The endemic areas, include the Mediterranean region, Africa, South America, Australia, Middle East and India (Tarahomi *et al.*, 2016; Esmaeili Delshad *et al.*, 2016; Aghajanzadeh *et al.*, 2017). Hydatid cysts can be found in almost any

organ of the body but the most common sites are liver (50%-77%), lung (15%-47%), spleen (0.5%-8%), stomach and kidney (2%-4%) (Torabi *et al.*, 2021; Aghajanzadeh *et al.*, 2017; Aghajanzadeh *et al.*, 2016; pandya *et al.*, 2015 ; Torabi *et al.*, 2021). The rest of the sites include muscle, peritoneum, bone, pancreas, heart, and brain (Tarahomi *et al.*, 2016; Esmaeili Delshad *et al.*, 2016). Patients who have an extrahepatic hydatid cyst present mostly with abdominal pain and discomfort (Pandya *et al.*, 2015; Torabi *et al.*, 2021). Diagnosis can be challenging (Tarahomi *et al.*, 2016; Torabi *et al.*, 2021). We present here an unusual rare case of primary perianal hydatid cyst and as far as we know this is the second report of a primary perianal hydatid disease in the literature.

Case presentation

A 34-year-old male was admitted to the emergency department complaining of a painful mass located in right perianal area and progressed to the two-third of buttock his symptoms started two weeks before his admission. The patient seemed ill but not toxic. No history of fever, abdominal pain, digestive dysfunctions, chest pain, cough, hemoptysis and urticarial were found. The vital signs were in normal ranges and there was no family history of any illnesses. Physical examination showed that the skin over the mass was red and warm, and the size of the mass was

around 6 cm long. The blood tests showed leukocytosis (WBC=12000) and other lab data was in normal range. The rigid rectoscopy showed redness of the right side of lower rectal wall. With diagnosis of perianal abscess, by general anesthesia the abscess was incised and a lot of malodor pus and debris was drained. The wound was irrigated and dressed. The patient was discharged day four post operation with antibiotics (metronidazole and ciprofloxacin). During the weekly follow up visit the pain decreased and redness of buttock was disappeared. Because of pain and discharge the patient was readmitted after two months.

Abdominopelvic ultrasonography revealed a 6 cm solid-cystic mass on the right wall of lower rectum, other organs of abdomen were normal (Fig 1). Abdominopelvic CT scan showed 6 cm thickening of right wall of lower rectum (Fig 2). Which was suggestive of undrained abscess. The patient underwent second surgery to determine the extension of the fossa and direction of the tract, With Methylene blue injection the cavity and tract were identified. We opened the cavity (Fig 3), and lot of gelatin like material mixed with Methylene blue came out at the end of drainage (Fig 4). We removed all contents of the cavity and irrigated it with povidone-iodine mixed with normal saline.

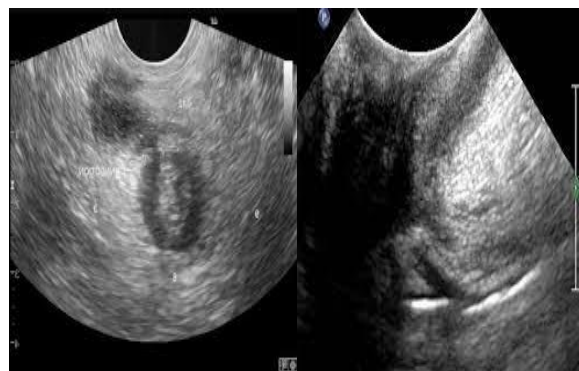


Fig.1 Ultrasonography of pelvic before second operation



Fig. 2 CT-scan of pelvic show abscess and fistulae



Fig. 3 intraoperative finding Fig. 4: Laminated membrane of cyst with mixed of methylene blue



Fig. 5 A,B: Microscopic findings of hydatid cysts.

The cyst includes three layers;

- 1: Outer acellular laminated fibrous membrane.
- 2: Germinal membrane (a transparent nucleated lining)
- 3: Protoscolices, attached to the membrane and budding from it.

The removed specimen was sent for histological examination with the first diagnosis of hydatid cyst (Aghajanzadeh *et al.*, 2016). Besides, Post-surgical thoracoabdominal ultrasonography screening was used to exclude recurrence. We prescribed albendazole 800mg daily for 14 days in 3 treatment

cycles with two week intervals. An 18-month follow-up demonstrated no reoccurrence or any other site of cystic hydatidosis. After a year of routine follow-up, the patient did not show any signs of recurrence or complications of surgery, and he was entirely well.

DISCUSSION

Hydatid cyst (HC) can cause Public health problem in some country, especially in endemic areas which including the Mediterranean region, Central Asia, South America, Africa, and China Also, the South American countries, Iceland, Australia, New Zealand, (Ewnte *et al.*, 2020; Ramos *et al.*, 2001). (HC) involve liver in 68.8–80% of cases and lungs 10–22.4% of patients (Aghajanzadeh *et al.*, 2016; Aghajanzadeh *et al.*, 2017). (HC) in endemic areas can involve rare parts of the body, including the inguinal canal, perineal region, spleen, skeleton, brain, kidney, ribs, Muscle and previous operation site of cysts {from head to toe} (Aghajanzadeh *et al.*, 2017; Esmaili Delshad *et al.*, 2016; Aghajanzadeh *et al.*, 2017; Pandya *et al.*, 2015; Ewnte *et al.*, 2020; Salamone *et al.*, 2016). Humans get infected by ingestion of contaminated food and water by feces of canines which containing eggs or ova parasites (Khare *et al.*, 2006). After ingestion of contaminated food, eggs turn to larva and penetrating the small intestinal wall, and enter the bloodstream and are Trapped in the liver and lungs and other organs (Torabi *et al.*, 2021; Tarahomi *et al.*, 2016; Aghajanzadeh *et al.*, 2017; Esmaili Delshad *et al.*, 2016; Aghajanzadeh *et al.*, 2016; Aghajanzadeh *et al.*, 2017). In our case, the hydatid cyst (HC) was involved in the perianal area, which is a rare location for the (HC). The mechanism of this unusual site of the cyst is unknown. But the distribution of the eggs to larva by blood circulation can cause cyst in this rare location (Karakol *et al.*, 2021; Haouas *et al.*, 2006). Growing of cystic mass in a soft tissue is slow, and in some cases, inflammatory symptoms and fistulization may be present (Karakol *et al.*, 2021; Haouas *et al.*, 2006). In 75% of cases a cyst may collapse and disappear or become calcify, cysts might grow extensively in healthy organs and tissues with compression (Hamdouni *et al.*, 2006).

Preoperative diagnosis of the (HC) is important because the cyst contains fluid which has antigens. If it is ruptured during the operation, It can cause type 3 hypersensitivity reaction (Pawlowski *et al.*, 1997). The symptoms of reaction may be urticaria, chills, fever or can be more severe and fatal symptoms as edema and anaphylactic shock (Ortona *et al.*, 2002; Pawlowski *et al.*, 1997). Therefore, (HC) must be in differential diagnosis with other cystic lesions, especially in the endemic areas. To prevent this phenomenon, Preoperative diagnosis is very important. The

diagnosis of a hydatid cyst (HC) is made by clinical examinations, Serology tests and ultrasonography (Sayek *et al.*, 2004). We usually don't use serologic tests for diagnosis of (HC) (Esmaili Delshad *et al.*, 2016; Aghajanzadeh *et al.*, 2016; Aghajanzadeh *et al.*, 2017). But some authors believe Serology tests can be helpful to diagnose and follow-up patient for reoccurrence or new cyst formation in another organ of the body (Salman *et al.*, 2018; Sayek *et al.*, 2004). Sensitivity of CT-scan and Histopathological findings are nearly 100% (Sayek *et al.*, 2004; Serbest *et al.*, 2016). Preoperative diagnosis of (HC), in non-endemic areas are difficult and can be misdiagnosed with an abscess and dermoid cyst (Torabi *et al.*, 2021; Tarahomi *et al.*, 2016; Esmaili Delshad *et al.*, 2016; Aghajanzadeh *et al.*, 2016; Serbest *et al.*, 2016). As our case the diagnosis was perianal abscess which was suspected during the surgery. Although the definitive diagnosis was achieved by pathological examination.

The treatment includes surgical and medical methods. The best treatment of a complicated cyst is a surgical intervention, because medication (Albendazole) only is not effective (Torabi *et al.*, 2021; Esmaili Delshad *et al.*, 2016; Aghajanzadeh *et al.*, 2016; Aghajanzadeh *et al.*, 2017; Saimot *et al.*, 2001; 25 Duygulu *et al.*, 2006). In our case after second operation, we used albendazole 800mg daily for 14 days in 3 treatment cycles with two week intervals (Torabi *et al.*, 2021; Tarahomi *et al.*, 2016; Esmaili Delshad *et al.*, 2016; Aghajanzadeh *et al.*, 2016; Aghajanzadeh *et al.*, 2017). Complete evacuation of the cyst along with medical therapy is the best treatment for solitary cysts (Ahmady-Nezhad *et al.*, 2022). Our policy for detection of recurrence in the primary site or in other parts of the body is follow of the patients with radiological imaging as CXR, ultraonography and CT-scan (Esmaili Delshad *et al.*, 2016; Aghajanzadeh *et al.*, 2016; Aghajanzadeh *et al.*, 2017). Some authors recommend serology tests, chest X-ray, hepatic ultrasonography, and ultrasonography of the primary site of involvement (Ewnte *et al.*, 2020; Hamdouni *et al.*, 2006).

CONCLUSION

We recommend all our colleagues to consider hydatid cyst in any patient complaining of a regional or rare site of body mass especially with slow growing and without pain. The best diagnosing modality is

ultrasonography and the best treatment is surgery with post-operative Albendazole.

Conflict of Interest: None of the authors have any conflicts of interest to disclose. All the authors approved the final version of the manuscript.

REFERENCES

- Aghajanzadeh M, Alavi CE, Asgary MR, Rimaz S, Massahnia (2016) Primary Hydatid Cyst of the Rib: Present as a Chest Wall Mass. *MOJ Surgery* 3(2): 00041.
- Aghajanzadeh M, Karimian M, Segatoleslami ZS, Manshori S, Hassanzadeh R, et al. (2017) Primary Isolated Hydatid Cyst in Trapezes Muscle: A Extremely Rare Site. *Annals of Clinical Pathology* 5(3): 1111.
- Aghajanzadeh M, Mehdi karimian, Bahareh Malekzadeh, Primary Hydatid Cyst of the Stomach: A Rare Case Report and Review of the Literature. *Journal of Liver Research, Disorders & Therapy* 2017, 3(6)
- Ahmady-Nezhad M, Ramin Rezainasab, Armin Khavandegar, Samaneh Rashidi and Sanaz Mohammad-Zadeh. Perineal and right femoral hydatid cyst in a female with regional paresthesia: a rare case report; *BMC Surgery* (2022) 22:64, Page 2 of 5
- Duygulu F, Karaoglu S, Erdogan N, Yildiz O. Primary hydatid cyst of the thigh: a case report of an unusual localization. *Turk J Pediatr.* 2006;48(3):256.
- Eamaeili Delshad MS, Aghajanzadeh M, Hossein Hemmati, Siamak Rimaz, Reza Shojaee (2016) Complicated primary Hydatid Cyst in brachioradialis muscle: An extremely unusual site. *Merit Res J Med Med Sci* 4(2): 76-78.
- Ewnte B. Hydatid cyst of the foot: a case report. *J Med Case Rep.* 2020;14(1):1-4.
- Hamdouni Y. Hydatid cyst of the spermatic cord diagnosed: like an inguinal hernia (a case report). *SAS J Surg.* 2021;2:41-30
- Haouas N, Sahraoui W, Youssef A, Thabet I, Sorba B, Jaidane M, et al. Hydatid cyst of the spermatic cord. *Progres en Urologie: Journal de L'association Francaise D'urologie et de la Societe Francaise D'urologie.* 2006;16(4):499-501.
- Karakol P, Tatar BE. Unexpected location of hydatid cyst. *Ann Med Res.* 2021;28(3):608-10. 12. 14.
- Khare DK, Bansal R, Chaturvedi J, Dhasmana JP, Gupta S (2006) Primary peritoneal echinococcosis masquerading as an ovarian cyst. *Indian J Surg* 68(3): 181-183.
- Ortona E, Vaccari S, Margutti P, Delunardo F, Rigano R, Profumo E, et al. Immunological characterization of *Echinococcus granulosus* cyclophilin, an allergen reactive with IgE and IgG4 from patients with cystic echino - coccus. *Clin Exp Immunol.* 2002;128(1):124-30.
- Pandya JS, Bhambare MR, Waghmare SB, Patel AR (2015) Primary hydatid cyst of peritoneum presented as abdominal lump: a rare presentation. *Clin Case Rep* 3(5): 331-333.
- Pawlowski Z. Compendium on cystic echinococcosis in Africa and in Middle East Countries with special reference to Morocco. Provo: Brigham Young University Print Services; 1997. p. 119-35
- Ramos G, Antonio Orduña M, Mariano García-yuste M. Hydatid cyst of the lung: diagnosis and treatment. *World J Surg.* 2001;25(1):46.
- Saimot AG. Medical treatment of liver hydatidosis. *World J Surg.* 2001;25(1):15.
- Salamone G, Licari L, Randisi B, Falco N, Tutino R, Vaglica A, et al. Uncommon localizations of hydatid cyst. Review of the literature. *Il Giornale di chirurgia.* 2016;37(4):180.
- Salman F, Khan MI, Hussain I, Abdullah HMA. Pathological fracture of femoral neck in a middle-aged woman: a rare presentation of primary hydatid cyst disease in humans. *Case Rep.* 2018;2018:bcr-2017
- Sayek I, Tirnaksiz MB, Dogan R. Cystic hydatid disease: current trends in diagnosis and management. *Surg Today.* 2004;34(12):987-96.
- Serbest S, Tiftikci U, Uludag A. Unusual localization of a primary hydatid cyst: scaphoid bone: a case report. *Medicine.* 2016;95(17):e3290.
- Tarahomi M, Otaghvar HA, Ghavifekr NH, Shojaei D, Goravanchi F, Molaei A, et al. (2016) Primary Hydatid Cyst of Umbilicus, Mimicking an Umbilical Hernia. *Case Reports in Surgery* 2016: 9682178.
- Torabi H, Shirini K, Haghdoost A and Ghaffari R. A Pelvis Hydatid Cyst Disease Presenting with Perforated Peptic Ulcer Symptoms, *Austin Surg Case Rep - Volume 6 Issue 1 - 2021*
- Torabi H, Kasra Shirini, Rona Ghaffari A Rare Simultaneous Occurrence of Splenic and Pelvic Cavity Hydatid Cyst 2021 ' *Cureus* 13(12).