ORIGINAL RESEARCH PAPER
Volume - 11 | Issue - 03 | March - 2022 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

CYSTIC LESION IN JEJUNUM- AN INIMITABLE CASE REPORT

Pathology

Madhumita Mukhopadhyay

ABSTRACT

Introduction: Hydatid disease is an endemic disease especially in the underdeveloped and developing countries. It is mostly caused by Echinococcus granulosus(dog tape worm). It produces cysts in the human body. Humans are accidental intermediate host. Most common sites are liver and lungs. Primary hydatid cyst in the small intestine is extremely rare and only a few cases have been reported in the literature. Intraperitoneal hydatid cyst usually occurs secondary to rupture of Primary hepatic hydatid cyst. Primary intraperitoneal hydatid cyst is rare(2%).

Case Report: We present a rare case of a 44-year-old male patient who presented with pain in the umbilical and periumbilical region, abdominal discomfort, nausea, early satiety and fever. Haematological investigations revealed neutrophilic leucocytosis with eosinophilia. Ultrasound scan revealed a well defined, complex solid cystic SOL measuring (75x48)mm in the left lumbar region with multiloculated cystic component. Exploratory laparotomy was done and the patient was treated with antihelminthic drugs.

Conclusion: The involvement of small intestine, more precisely jejunum as a primary localization of Hydatid cyst is a rare finding. Hydatid cyst should always be considered as a differential diagnosis in patients presenting with acute abdominal or intra abdominal cystic mass, mainly in the endemic areas.

KEYWORDS

Echinococcus Granulosus, Hydatid Cyst, Jejunum, Laparotomy, Small Intestine.

INTRODUCTION

Hydatid disease is a parasitic disease caused by the larval stage of Echinococcus granulosus[1], in which dogs are the definitive hosts, sheep are the intermediate hosts and humans are accidental intermediate hosts. They are infected by ingestion of water or food contaminated with dog faeces or with direct contact with animal hair that retains hydatid eggs or ova[2]. In villages people reside in the same house with domestic animals . There is lack of clean potable water.So human beings get infected accidentally[3]. Hydatid cysts may be found in any site of the body, either due to primary inoculation or via secondary spread. The liver and lungs are the most commonly affected sites, however other organs like spleen, brain, muscle, kidneys, adrenal glands, bones, heart, pancreas can also be affected[3-4]. It is endemic in the cattle grazing areas mainly Middle east, India, Newzealand, Australia, South America, Turkey and Africa. This disease may result in morbidity and mortality in the different parts of the world, mainly due to traumatic or spontaneous rupture of the cyst, thereby putting the patient's life at risk due to anaphylaxis by the cyst contents. Even if the patient survives, the treatment of this condition becomes difficult due to the development of new hydatid cysts[5].

Cases of Primary Hydatid cysts involving small intestine are extremely rare[6]. We present here a rare case of primary jejunal hydatid cyst.

Case report

A 44-year-old male patient, resident of rural area , presented to the surgical out patient department with history of abdominal pain, discomfort, nausea, early satiety and intermittent fever since one month. The abdominal pain was localized in the umbilical and paraumbilical region, and was intermittent and colicky in nature. This dull aching pain continued for last one year. The pain used to aggravate after intake of heavy meals. He usually had nausea 2-3 hours after meals. The fever was mild, intermittent and not associated with chills and rigors. He was a tailor by occupation. His chest x-ray did not show any abnormlity. There were no past history of trauma, jaundice, alteration in the bowel and bladder habits. There was no history of surgical intervention. Family history was unremarkable. Patient was a non alcoholic, but addicted to smoking since childhood. As an inhabitant of rural area he used to come in contact with farm animals frequently.

.

Haematological investigations revealed leucocytosis with neutrophilia and eosionophilia.

Blood glucose, urea, creatinine, liver function tests were within normal limits.

Abdominal ultrasound revealed a (75x48)mm well defined, complex cystic SOL in the left lumbar region with multiloculated cystic component and iso to hyperechoic solid component with minimal internal vascularity (Fig.1). CECT(contrast enhanced computed tomography) of whole abdomen revealed a heterogenous SOL(57.8X47.3)mm in the umbilical and infraumbilical region which was solid cystic with predominantly cystic components, which abuts closely the adjacent gut loops, with some amount of oral contrast seen in the lesion suggesting communication with the adjacent gut loops. The patient was admitted and on examination a mass of (6x5)cm was revealed in the umbilical region extending into the infra umbilical region towards left. Then the exploratory laparotomy was done. During surgery intraoperative cystic lesions were identified in the Jejunum. The gut containing the cysts were removed and the cut ends were anastomosed. After surgery the specimen was sent to the Pathology department. The specimen of gut measured (21x8x4) cm . and six cystic lesions were present on the serosal aspect of the jejunum (Fig.2). The largest cyst measured (5x4x3)cm. After cutting the mucinous fluid came out and a white membrane like material was visible (Fig.3). The sections were taken and sent for processing and histopathological examination.

Histopathological examination from different areas of cyst wall showed laminated, hyaline, acellular layers (Fig.4). There was presence of fibrocollagenous tissue containing inflammatory cell infiltrate and granulomatous reaction. The diagnosis of Primary Hydatid cyst of jejunum was confirmed after clinico-radio-pathlogical correlation as no other cystic lesions were identified in the body.

Postoperative period was uneventful and the patient was discharged after 10 days. Albendazole 400mg orally twice daily was started after the surgery and continued for three months postoperatively. No recurrance was noticed during the 12 months follow up period.

DISCUSSION

Hydatid disease or Echinococcosis, which produces cysts in the human body is caused by the larva of the cestode Echinococcus. There are four species that can cause human infections: Echinococcus granulosus (cystic hydatid disease), Echinococcus multilocularis (alveolar hydatid disease), Echinococcus vogeli and Echinococcus oligarthrus (polycystic hydatid disease)[7]. Echinococcus granulosus is the most common and represents an important health problem in many countries. The life cycle of Echinococcus granulosus has dog as definitive host and sheep as intermediate host. The cestodes reside in the proximal small gut of infected dogs where they lay eggs which are passed outside in the faeces. Sheep ingest the eggs at the time of grazing and gets infected. If an infected sheep dies or gets killed and a dog eats the liver of that infected sheep , the cycle is completed. Humans are accidental intermediate hosts and they acquire infection either by coming in contact with a definitive host (usually domesticated dogs) or by ingestion of water or food contaminated by dog's faeces[8]. In humans the cyst is the endstage.

Hydatid cysts can occur in almost any site in the human body. The most common sites are- liver (59-75%), followed by lung(27%), kidney(3%), bone(1-4%), brain(1-2%). Peritoneal Echinococcosis is rare and is of two types, Primary and Secondary. Secondary intraperitoneal hydatid cysts are more common(13%) and occur due to spontaneous or traumatic or iatrogenic rupture of Primary liver cyst[9]. Primary intraperitoneal hydatid cysts accounts for 2% of all abdominal hydatidosis[9]. Balik et al. operated and reviewed 27 cases of abdominal extrahepatic cysts, out of which 19 patients had coexistent hepatic cyst (70.4%) while 8 patients (20.6%) had only extrahepatic cysts[10]. In our case no other lesion detected by abdominal USG. His chest X-ray was also normal. Majority of these cases occurs in the rural areas where humans are more in close contact with farm animals. Most of the people develop the disease during their childhood but they remain asymptomatic till adulthood because of the slow growing nature of the cysts[11]. The clinical presentation of intra abdominal hydatid cyst is variable and it depends on the location, the diameter and the mass effect of the abdominal enlarging abdominal cyst. Most patients seem to tolerate the infection for long periods without development of any symptoms or they may suddenly show acute symptoms[12]. Our patient is also an inhabitant of rural area. Hydatid disease occurs in human beings with no predilection for age or sex. Carter et al described a case of hydatid cyst affecting stomach, liver, diaphragm, spleen in a 57 year old man. Tunisian Surgical Association conducted a study on 2013 patients of Hydatid cyst and the mean age was 32 year[12]. In this case the patient's age is 44 years.

Pain is found to be the most common symptom of hydatid disease and may be of acute onset if the cyst ruptures or it may be continuous, dull aching in nature. Fever may be associated if there is presence of secondary infection[13]. In our case the patient complained of a dull aching pain since one year and presented with a history of intermittent colicky abdominal pain associated with discomfort, nausea and intermittent fever. The combination of clinical, laboratory and radiological findings help in a preliminary diagnosis.

Ultrasonography (USG) has very high sensitivity(88% to 98%) and specificity (93% to 100%) in the diagnosis of hydatid disease[14]. However, CT scan has become an useful and valuable diagnostic tool in the management of patients with hydatid disease and evaluation of the morphology of liver cysts and hydatid disease. CECT gives more precise information regarding the morphology(size, location, neighbourhood and number) of the cyst.

Commonly used serological tests in the diagnosis of hydatid disease are the Enzyme linked immunosorbent assay (ELISA), Indirect haemagglutination assay (IHA)and others[14]. Most of the time these are nonspecific. Here only USG was done. USG is an economic,simple and easily available method which can be done in all the cases.The differential diagnosis includes all abdominal cystic lesions e.g mesenteric cyst, pancreatic cyst, gastrointestinal duplication cyst, Ovarian cysts and lymphangioma[15]. The treatment of choice is surgical excision of the cyst alone or en block with a part or whole of the involved organ with adjuvant therapy to prevent recurrence[16]. In this case the cyst was removed along with small intestine(jejunum) because of adhesions. There was no history of spillage. The cyst along with excised part of jejunum was then sent to the Department of Pathology for histopathological diagnosis and confirmation. Medical treatment with albendazole was used postoperatively to prevent recurrence.

CONCLUSION

The involvement of small intestine especially as a primary location of hydatid cyst is rare and should be kept in mind for patients with an intra abdominal mass. Clinical, radiological assessment is important before any invasive procedure. The complications of the disease can be potentially devastating. Education regarding personal hygiene and sanitation are important. The disease imparts a continuous challenge to the public and health professionals because of its rare presentation.

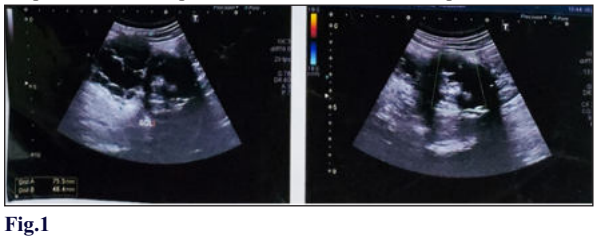

Fig.1

Fig.2

Fig.3

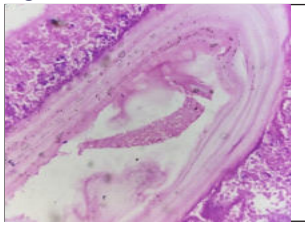

Fig.4

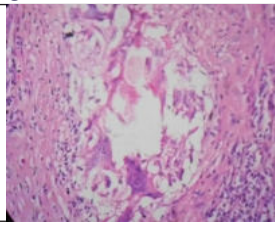

Fig.5

Legends

1. USG - Well defined solid cystic Sol in left lumbar region with multiloculated cystic component
2. Specimen of small intestine with cyst
3. Cut surfce of cyst showing white membrane like material
4. Inflammatory granulomatous reaction in the pericyst (H&E-400X)

Acellular laminated layers of ectocyst (H&E- 400X)

REFERENCES

1. Naila Nadeem, Hassan Khan, Saulat Fatimi, Mohammed Nadeem Ahmad. Giant multiple intra–abdominal hydatid cysts: a case report. J Ayub Med Coll Abbottabad 2006;18(4):71–3.
2. Eckert TJ, Deplazes P. Biological, epidemiological and clinical aspect of echinococcosis, a zoonosis of increasing concern. Clin Microbiol Rev. 2004;17(1):107-35.
3. Frider B, Larrieu E, Odriozola M: Long-term outcome of asymptomatic liver hydatidosis . J Hepatol. 1999, 30:228- 231.
4. Ruiz-Rabelo JF, Gomez-Alvarez M, Sanchez-Rodriguez J, Rufian Peña S: Complications of extrahepatic echinococcosis: fistulization of an adrenal hydatid cyst into the intestine. World J Gastroenterol. 2008, 14:1467-1469.
5. Teke Z,Yagci AB,Atalay AO,Kabay B. Splenic hydatid cyst perforating into the colon manifesting as acute massive lower gastrointestinal bleeding: an unusual presentation of disseminated abdominal echinococcosis. Singapore Med J 2008;49(5):e113–6.
6. Suleyman Caglar Ertekin , Tolga Ozmen, Primary Hydatid Cyst of the Small Intestine: A Rare Case Report and Brief Review of the Literature.,. Cureus 8(7): 1-5.
7. Khuroo MS. Hydatid disease: current status and recent advances. Ann Saudi Med. 2002;22:56-64.
8. Yuksel M, Demirpolat G, Sever A, Bakaris S, Bulbuloglu E, Elmas N. Hydatid disease involving some rare locations in the body: a pictorial essay. Korean J Radiol. 2007;8:531-40.
9. Singh RK. A case of disseminated abdominal hydatidosis. J Assoc Physicians India. 2008;56:55
10. Balik AA, Celebi F, Başglu M, Oren D, Yildirgan I, Atamanalp SS. Intra-abdominal extrahepatic echinococcosis. Surg Today. 2001;31(10):881-4
11. Ayadi– Kaddour A, Mlika M, Yahyaoui M, et al. Intestinal hydatidosis: uncommon location of hydatid cysts. Surg Infect (Larchmt). 2008;9(5):541–543.
12. Kusaslan R, Sahin DA, Belli AK, Dilek ON. Rupture of a mesenteric hydatid cyst: a rare cause of acute abdomen. Can J Surg 2007;50(5):E3–4
13. Mohammed Najih,AliChabni,Gilles Attoulou, etal. Isolated primary hydatid cyst of small intestinal mesentery: an exceptional location of hydatid disease. Pan A fricanmedical Journal2012;13:17.
14. Wuestenberg J, Gruener B, Oeztuerk S, et al.: Diagnostics in cystic echinococcosis: serology versus ultrasonography. Turk J Gastroenterol. 2014, 25:398-404.
15. Nagarekha Kulkarn, Intestinal hydatidosis in unusual location: A case report , IJCRI, 2013; 4(2): 103-107.
16. Teke Z, Yagci A B, Atalay A O, Kabay B A ,Splenic hydatid cyst perforating into the colon manifesting as acute massive lower gastrointestinal bleeding: an unusual presentation of disseminated abdominal echinococcosis, Singapore Med J 2008; 49(5) : e113