Medical Journal of South Punjab
www.mjsp.com

Case Report

CYSTOBILIARY FISTULA IN HEPATIC HYDATID CYST DISEASE; A CASE REPORT AND LITERATURE REVIEW

Ashar Ahmad Khan, Tania Mahar, Abdul Manan, Irfan Ahmad, Saim Athar

1. Assistant Professor surgery, Nishtar Medical University, Multan Pakistan.
2. Consultant general Surgeon Nishtar hospital Multan
3. Consultant General Surgeon Nishtar hospital Multan
4. Resident General Surgery Nishtar hospital Multan
5. Resident General Surgery Nishtar hospital Multan

Correspondence Address:
Type your text
Ashar Ahmad
ashar12@hotmail,com
+92 308 7728070

Objectives: To evaluate the level of physical activity among menopausal women in Nawabshah. **Methods:** This cross-sectional study was conducted during November 2019 to January 2020 among menopausal women in Nawabshah. Participants were approached through convenience sampling technique, and comprised of 200 menopausal women. Data was collected from houses, hospitals and OPDs from different areas of Nawabshah. Data was collected through standardized questionnaire that is related to physical activity. Moreover, a demographic proforma was used to obtain demographic information of all participants. **Result:** Among the population of 200 menopausal women in Nawabshah, 98 (49%) were inactive and 102 (51%) were active. Moreover, 17.5% were engaged in vigorous activity, 40% were engaged in moderate physical activity, while 41% were engaged in walking. It was found that the mean age is 54.32 years (age range 45-70 years). Majority of women were married 73.5% and unemployed (77%).
Conclusion: On the basis of results, we found that the level of physical activity among menopausal women is higher than the physical inactivity.

Keywords: Cystobiliary fistula, Hepatic hydatide cyst

Article Citation: Hiraj MR, Khan AA, Mahar T, Manan A, Ahmad I, Qadir A et al. Cystobiliary fistula in hepatic hydatid cyst disease; A case report and literature review. Med J South Punjab. 2021;2(1):44-47.

INTRODUCTION

Hydatid disease is rare but still endemic in many countries. It is caused by parasite name Echinococcus granulosus. Primary carriers are dogs and wolves and intermediate hosts are sheep, cattle and deer[1]. Humans get infected by ova present in contaminated water or vegetables or uncooked meat. Hydatid cyst may develop in any part of the body. Most frequent sites are liver (55%), lungs (35%), Spleen (1.8%), kidneys (1.4%), bones (0.1%) and 1.7% in other sites[2]. Multiple simultaneous sites are involved in 25% cases. Complications of hydatid cyst includes rupture, infection, allergy and anaphylaxis[3]. Liver hydatid cyst can rupture in any part of the biliary tree but most common site is hepatic duct. Hydatid cyst rupture can be divided in to three categories. First is when only endocyst ruptures and contents are confined within the pericyst. Second is communication and drainage of contents in to biliary ducts. Third is when both endocyst and pericyst rupture and contents released in to pleural or peritoneal space[4]. Helpful investigations are Ultrasound abdomen, CT Scan abdomen and Magnetic resonance cholangiography (MRCP). Endoscopic retrograde cholangiography (ERCP) is both diagnostic and therapeutic and is gold standard in the management of cystobiliary fistula in hepatic hydatid cyst disease[5]. Rupture of hydatid cyst in to the biliary channels is difficult to diagnoseand treat. If

missed during the surgery, biliocutaneous fistula develops. We are presenting a rare but interesting case of cystobiliary fistula in hepatic hydatid cyst disease.

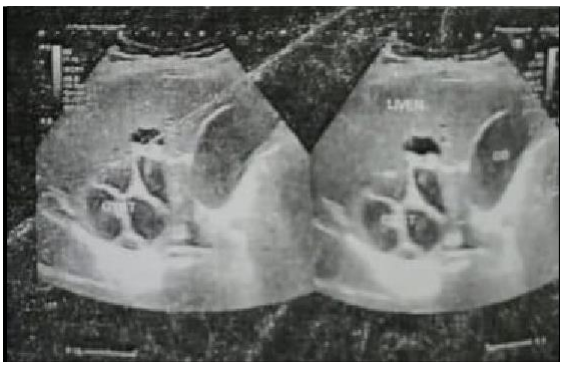
Case Presentation:

A 52 year old female presented in the OPD, department of Surgery, Nishtar Medical University/ hospital, Multan on 16-01-2021. She gave historyof pain epigastrium and Rt. upper quadrant for last 3 months. She also gave history of vomiting and jaundice for 2 months. She was having high grade fever for last 05 days. Jaundice was gradual in onset and associated with dark coloured urine and clay coloured stool. There was no history of weight loss. She belonged to lower middle class family and having sheep and cow at home.

On examination, she was deeply jaundiced. Pulse= 81/Min, BP= 110/70 mm of Hg, Temp= 38.5^0Cand R/R = 16 / Min. Abdominal examination was normal. No viscera were palpable.Lab investigations were Hb= 14.3Gm/dl, WBC= 18000/mm^3. Bilirubin= 15.2mg /dl , AST= 69 U/L, ALT=90 U/L , ALP= 1158 U/L, INR= 2.6.

Screening test for Hepatitis B and C were negative. Ultrasound abdomen showed two liver hydatid cysts in Rt. Lobe of liver with thick internal septations (collectively measures 16.7×10 cm) communicating to intrahepatic biliary channels. CBD has 11 mm diameter. There is thick echogenic material in CBD and gallbladder. CT Scan abdomen showed 7.2×6.6 cm cyst along liver segment 5, 7 and 6. Another cyst of 5.6×7.7 cm along segment 7 with internal septations. Exploratory laparotomy was performed and de roofing of the hydatid cysts was done with repair of cystobiliary fistula. All the daughter cysts were removed and cavity was packed with omentum. Cholecystectomy was performed. CBD was explored and daughter cysts were identified. All the cyst material was removed and T-Tube was placed. Postoperative course was uneventful. Patient recovered well and discharged home on 3rd postoperative day in good health and condition. She was discharged on oral Albendazole. Patient was followed in OPD after 7 days and 14 days. She was in good condition of health.

Fig-1: USG:Showing hydatid cyst with internal Septations.CT Scan: Showing 2 hydatid Cyst



Discussion:

Potential sites of hydatid cyst rupture are peritoneum, bile ducts, pleural space, thorax and viscera such as stomach or duodenum[4]. Marcello Di Martino from Madrid, Spain mentioned a bronchobiliary fistula due to giant hydatid cyst in his study[6]. Intrabiliry rupture can present in two different ways. Occult communication (10-37%) and frank intrabiliary rupture (3-

17%). Occult rupture is usually silent but can progress to frank rupture. Frank rupture leads to escape of daughter cysts and membranes in to the biliary tree causing obstructive jaundice, cholangitis or septicemia[2]. Preoperative diagnosis is difficult in many cases. Even during surgery it is difficult to identify the fistulous communication and patients end with postoperative external biliary fistulae and suppuration of the residual cavity. Aymen Trigui mentioned advanced age and cyst size greater than 8.65 cm as predictive factors for occult cystobiliary fistula[7]. Heikal Bedioui mentioned cyst size greater than 9 cm, cyst located in dome of the liver and cyst ruptured in to the bile ducts as main predictive factors to develop above mentioned postoperative complications[8]. ERCP has a key role in the diagnosis and treatment of cystobiliary fistula[9]. If patient has obstructive jaundice alongwith hydatid cyst, ERCP can confirm the diagnosis. Same time sphincterotomy, evacuation of membranes with or without stent placement can relieve the jaundice. In case of cystobiliary communication, surgical intervention is mandatory. Options are partial cystectomy with primary closure or drainage, cystotomy with drainage, segmental or lobar hepatic resection and omentoplasty along with suturing of cystobiliary fistula. CBD exploration and T-Tube placement after removal of cyst membranes and material should be done if preoperative ERCP was not done. Same was done in our case also where ERCP machine was out of order and patient cannot wait due to sepsis. Biliary fistulas formation is common after hydatid cyst operation. Cuneyt Kayaalp from Inonu University, Malatya, Turkey in his study mentioned identification of biliary orifices with the bile leakage test and suturing of cystobiliary communications reduces postoperative biliary leakage[10].Surgery of hepatic hydatid cyst with or without intrabiliary communication has high frequency of postoperative complications like biliocutaneous fistula, Biloma and bile peritonitis (4-28%). External biliary fistulae following hydatid cyst surgery tend to close spontaneously. In a review of 304 cases by Balik AA[11], all the 10 external biliary fistula closed spontaneously over a period of 2-4 months. In some cases these fistulae persist and again ERCP plays a key role in their management. ERCP, sphincterotomy and either biliary stenting or nasobiliary drainage reduces the high intrabiliary pressure and promote early closure of these fistulae[12].

References:

1. *Mehmet Yilmaz, Sami Akbulut, Aysegul Kahraman, Sezai Yilmaz. Liver Hydatid Cyst Rupture Into the Peritoneal Cavity After Abdominal Trauma: Case Reportand Literature Review. Int Surg 2012;97:239–244.*
2. *Nickolaos Michalopoulos, Styliani Laskou,Theodossis S.Papavramidis,Ioannis Pliakos, Eustathios Kotidis et al. Rupture of Right Hepatic Duct into Hydatid cyst. J Korean Med Sci 2012; 27: 953-956.*
3. *Serhat Avcu, Ozkan Unal, Halil Arslan. Intrabiliary rupture of liver hydatid cyst; A case report and review of the literature. Cases Journal. Volume 2, Article number:6455, 2009.*
4. *Sparchez Z, Osian G, Onica A, Barbanta C, Tantau M, Pascu O: Ruptured hydatid cyst of the liver with biliary obstruction; Presentation of a case and review of the literature. Rom J Gastroenterol. 2004, 13: 245-250.*
5. *Imtiaz Wania, c, Younis Bhata, Naveed Khana, Farooq Mirb, Saima Nandaa, Omar J Shaha. Concomitant Rupture of Hydatid Cyst of Liver in Hepatic Duct and Gallbladder: Case Report. Gastroenterology Research • 2010;3(4):175-179.*
6. *Marcello Di Martino, Claudio Laganá, Jesús Delgado Valdueza and Elena*

Martín-Pérez. A bronchobiliary fistula due to a giant hydatid cyst. Rev Esp Enferm Dig. 2017: Vol. 109, N. º 6, pp. 462- 463.

7. *Aymen Trigui, Haitham Rejab, Amira Akrout, Sami Fendri, Nozha Toumi et al. Predictive factors of occult cystobiliary fistula after conservative surgical treatment of the hepatic hydatid cyst; A retrospective study of 105 patients.*
8. *Heikal Bedioui, Khouloud Bouslama, Houcine Maghrebi,&, Jokho Farah, Hichem Ayari, Hamadi Hsairi. Predictive factors of morbidity after surgical treatment of hepatic hydatid cyst.Pan African Medical Journal.2012; 13:29.*
9. *Murat Akaydin, Fazilet Erozgen, Yeliz E. Ersoy, Selim Birol, Rafet Kaplan. Treatment of hepatic hydatid disease complications using endoscopic retrograde cholangiopancreatography procedures.Can J Surg 2012; 55(4): 244-248.*
10. *Cuneyt Kayaalp,I Cemalettin Aydin,I Aydemir Olmez,I Sevil Isik,II Sezai YilmazI.Leakage tests reduce the frequency of biliary fistulasfollowing hydatid liver cyst surgery. CLINICS 2011;66(3):421-424 DOI:10.1590/S1807-59322011000300010*
11. *Balik AA, Basoglu M, Celebi F, Oren D, Polat KY, Atamanalp SS, et al: Surgical treatment of hydatid disease of the liver. Arch Surg.1999, 134:166-169. 10.1001/archsurg.134.2.166.*
12. Barjesh C Sharma, Ravisankar S Reddy, Vishal Garg. Endoscopic management of hepatic hydatid cyst with biliary communication. Dig Endosc 2012 Jul; 24(4): 267-70. DOI: 10.1111/j.1443-1661.2011.01225.x