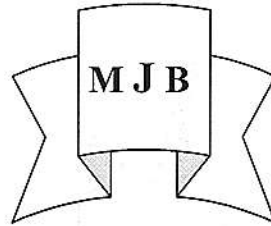


Obstructive Jaundice Due to Intra-Biliary Rupture of liver Hydatid Cyst

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Abstract

Of 78 causes of obstructive jaundice treated in a three years period form (1/6/1998 – 1/6/2000), 7 were due to the intrabiliary rupture of hydatid cysts of the liver. Eosinophilia of more than 10%, raised alkaline phosphatase, positive in direct haemagglutination test were noted in all 7 causes. Plain X-ray of the abdomen, ultrasound, endoscopic retrograde cholangio-pancreatography and CT scan were useful modalities for definite preoperative diagnosis. All patients had operative treatment which consisted of cyst drainage, partial pericystectomy, curettage of the remaining cavity which was stitched with tube drain, cholecystectomy, pericystectomy and T-tube drainage. They all recovered satisfactorily and without complication in a follow-up period of one year.

الخلاصة

من 78 حالة من حالات اليرقان الانسدادي تم علاجها بفترة ثلاث سنوات من (1998/6/1 الى 2000/6/1) سبع حالات منها كانت انفجار الاكياس المائية الى القنوات الصفراوية . ارتفاع نسبة كريات الدم البيضاء الحبيبية الصفراء الى (10%) . مع ارتفاع كافة وظائف الكبد في كل السبع حالات وكان لاجراء اشعة البطن وتنظير القنوات الصفراوية والمفراغ ذات مساعدة كبيرة في التشخيص . كل المرضى خضعوا للعلاج الجراحي المتكون من بذل الكيس المائي ، قشط الكيس المائي ، استئصال المرارة واستئشاف القنوات الصفراوية وبذل القنوات الصفراوية . كل المرضى تحسّنوا بصورة جيدة بدون أي مضاعفات وخلال مدة المتابعة والبالغة سنة واحدة .

Introduction

Obstructive jaundice is a common surgical problem, the investigation of which attempts to define its precise cause before operation. Intra-biliary rupture (IBR) of hydatid cyst of the liver accounts for 10% of obstructive jaundice in our series. Many reports have been published that emphasize the relative rarity of this condition which is estimated to occur in 12-17% of

patients with hydatid cyst of the liver. The management of obstructive jaundice due to IBR of hydatid cyst of the liver in a district hospital during a period of three years is discussed. A modified drainage technique is described.

Material And Methods

78 causes of obstructive jaundice were treated in the surgical Department

of general teaching Hella hospital (Babylon) during a three years period (1/6/1998-1/6/2000) 7 of these were due to intrabiliary rupture (IBR) of hydatid cyst of the liver (Tible1) and occurred in 3 females and 4 males whose ages ranged form 25-45 years, eith an average age of 28.

The clinical features encountered in the 7 patients with IBR included colicky pain, high temperature, jaundice , tenderness and rigidity in the right hypochondrium Hepatomegaly was found in 2 causes and a gallbladder mass was felt in 2 other cause. All cause showed eosinophilia of over 10% elevated alkaline phosphatase and positive indirect haemagglutination test. Three patients had raised serum glutamic oxalacetic transaminase and serum glutamic pyruvic transaminase and one had raised serum amylase. Plain abdominal radiographs and ultrasound were used in all cause and endoscopic retrograde cholangio-pancreatogram in one case and computed tomography in 3 cases.

All patients were given gentamycin and lincomycin except **Table 1** 78 cases of obsstrutive jaundice

patient who was pregnant and received ampicillin and metronidazole. These drugs were administered pre-opreatively and continued post-opreatively. The antibiotics were changed only according to the sensitivity results of hydatid fluid material . The culture showed growth of E . coil in all cases . All patients had exploratory laparotomy ; the location of the hydatid cysts found and the operations performed are detailed in (Table 2) . As the gallbladder was tense , cholecystectomy was performed in all cases and these contained hydatid material . The common - bile - duct (CBD) was distended with hydatid material and was evacuated gently , flushing with 10% saline . The patency of the sphincter of Oddi was checked and the T - tube inserted through choledochotomy .

The cavitogram and T- tube cholangiogram on the 10 th post - operative day indicated no residual daugther cyst and the day flowed freely to the duodenum . The drainage from the the cavity decreased gradually and the drains were removed in 10 - 14 days .

Diagnosis	No. of Cases
Stones in common bile duct	50
Carcinoma of head of pancreas	16
Carcinoma of gallbladder	1
Cholangiocarcinoma	2
Injury to common bile duct	1
Stricture of common bile duct	1
IBR of hydatid cyst liver	7
Total	78

Results

All cases were followed – up for 1 year . The post – operative course was satisfactory and there were no complications noted during the period .

Table 2 Operative treatment of 7 patients with IBR.

No. cases	Age	Sex	Location of cyst liver	Treatment
1	26,3months pregnant	F	Right lobe superficial	Pericystectomy and drainage of cyst + cholecystectomy + evacuation and T-tube drainage of CBD
2	22	F	Right lobe deep	Evacuation of mother cyst through CBD , and T- tube drainage
3	25	F	Right lobe superficial	Pericystectomy and drainage of cyst + evacuation and T – tube drainage of CBD
4	25	M	Left lobe superficial	Left lobectomy + cholecystectomy + evacuation and T – tube drainage CBD
5	45	M	Right lobe superficial	Pericystectomy and drainage of cyst + cholecystectomy + evacuation and T-tube drainage of CBD
6	26	M	Right lobe superficial	Pericystectomy and drainage of cyst + cholecystectomy + evacuation CBD
7	35	M	Right lobe superficial	Pericystectomy and drainage of cyst + and T- tube drainage CBD

Discussion

Intrabiliary rupture (IBR) of hydatid cyst of the liver is an important cause of obstructive jaundice in areas where parasitic infestation is endemic . In the past cases of IBR were diagnosed intra – operatively , the provisional diagnosis being cholelithiasis . In the present study the incidence of jaundice due to IBR of hydatid cyst of the liver was 10% among 78 patien over three years in a District Hospital.

In 1936 , Dew reported intrabiliary rupture in the right hepatic duct 55-60% and in the left 25-30% and unusually in to the common hepatic duct 7-9%.In our series, the right hepatic duct was involved in 6 cases and the left in only one case .All our patients had lived

in the center of Iraq where hydatid diseases of the liver is endemic.

Plain X-ray of the abdomen may show circumscribed hepatomegaly, white line,curvilinear calcification in the liver area,intrahepatic gas bubble or raised copulaof the diaphragm.4Three of our cases showed calcification in the liver area ,of these ,one was intrahepatic.Ultrasound examination indicated the diagnosis in all cases a noted in oter report .(5,6)Endoscopic retrograde cholangio-pancreatogram is valuable to confirm thr presence of daughter-custs in the CBD and to exclude any pathology in the ampulla of vater,7 the diagnosis in one of our patients was confirm with endoscopic

retrograde cholangio-pancreatogram .CT scan is very valuable to confirm the diagnosis ,8 and was used in one case .Percutaneous transhepatic cholangiogram should not be performed in these cases as it may lead to intraperitoneal leakage with dissemination of the disease and anaphylactic shock. 4 Angiography is not needed as it is an avascular lesion but may show a "helo sign" , Antibiotics should be started as the hydatid cysts are infected and there is an element of cholangitis. We used gentamycin and lincomycin except for one patient who received ampicillin and metronidazole.

The scoliocidal agents used locally are formalin , hydrogen peroxide , silver nitrate , piodine and hypertonic saline and hypertonic glucose . Formaline should never be used as it may enter the CBD and induce fibrosis and recurrent jaundice . We used 10 % saline as scoliocidal in our series . The mother cyst after isolation was injected with 10 % saline , evacuated and partial pericystectomy performed . The remaining cavity was curetted gently to remove the necrotic tissue and stitched with tube drain . No attempt was made to close the communication with biliary tree as the tissues were friable ; moreover we believe these communications act as internal drainage for the residual cavity . In case of a big cyst occupying the whole lobe of our patients . The other methods recommended to deal with the residual cavity are marsupialisation , omental graft , and total cystectomy , cysto – jejunostomy . But we found our technique simple with good results and no morbidity . It should be evacuated through the CBD as was successfully done in one of our patients .

Choledochotomy should be performed to evacuate the debris gently washed with 10% saline and drained with a T – tube . The sphincter of Oddi is usually dilated due to the passage of daughter-cyst , so routine sphincteroplasty or bypass operation is not necessary , but its patency should be checked . Rough handling and use of formalin may cause fibrosis and recurrent jaundice or biliary fistula .

Cholecystectomy was performed in 5 cases and the gallbladders removed contained hydatid material . The average stay in the hospital was 10 – 16 days and the patients were followed up for one year with no recurrence .

The role of adjuvant chemotherapy of echinococcosis such as mebendazole and albendazole is undetermined and still awaiting definition of the optimal dose and duration of therapy . 12 However it is given on trial when dissemination of hydatid material is suspected during surgery and in deep seated cyst not completely evacuated . Our patients did not receive medical .

Conclusion

Obstructive jaundice due to IBR of hydatid cyst is common in endemic areas . A definite pre-operative diagnosis can be established with plain X-ray , US,ERCP and CT scan . It can be treated successfully with simple drainage , partial pericystectomy and curettage of the remaining cavity without closing the communication of the cyst to the biliary passages and drainage of CBD with cholecystectomy . The place of specific parasitic chemotherapy is undetermined .

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