BILIARY ASCARIASIS IN CHILDREN

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Background: Ascariasis is very common in this part of the world. Biliary Ascariasis is rare but is the commonest extra-intestinal complication. ***Methods:*** This study was conducted at Ayub leaching Hospital, Abbottabad, a tertiary' care hospital. Five cases of biliary Ascariasis were studied from December 1999 to January 2001. History of passage of worms in stool or vomiting and abdominal pain was taken. After clinical evaluation. Stool Examination, Serum amylase, LFTs, and complete blood picture (CP) were done. Ultrasound abdomen was done as a basic tool for diagnosis. All cases were given Piperazine. Spasmolytics were also given to relax sphincter of oddi to release the worms. Surgical opinions were also taken for each case. *Results:* About 80% Children were above 10 years of age. One case was 1 % years old. Most common symptom was right upper quadrant abdominal pain. Previous history of passage of worms in stool and vomitus was also present. Two children developed complications of Biliary Ascariasis i.e., Cholecystitis and Portal empyema and responded to antibiotics. All children became symptom free in about 48 hours of treatment. Ultrasound was found to be a reliable, non-invasive, and quick tool for diagnosis and follow up.

INTRODUCTION

Infection with Ascaris Lumbricoides is most prevalent human helminthiasis causing estimated one billion cases word wide[8] Infection is most common in children of pre-school and early school age. Each female Ascaris worm has a life span of 1-2 years and is capable of producing 200,000 eggs/24 hours. Biliary Ascariasis is a rare condition, but is the most common extra-intestinal complication of Ascariasis. Clinical presentations could be acute pain, with colicky abdominal pain, nausea and fever. Most cases of Biliary Ascariasis are reported from China, Philippines and also from India[2]. The likelihood of the condition increases in heavily infected children.

The diagnosis can be made by ultrasound[3-] Endoscopic Retrograde cholangiopancreatography (ERCP) and MR1 Imaging. Although MR1 imaging is not considered to be the primary imaging technique yet it can show the parasites in the biliary tree[5]. Aim of our study was to raise the level of awareness about biliary Ascariasis in children in this part of country with the help of simple noninvasive use of ultrasound.

MATERIALS AND METHODS

All cases of biliary Ascariasis diagnosed in Paediatrics 'A' Unit of Ayub Teaching Hospital. Abbottabad from December 1999 to January 2001 were included in this study. The detailed history about passage of worms in stool and vomiting or previous history of abdominal pain was taken. Complete examination was done. The patients were specially investigated for anemia, jaundice and fever. A detailed abdominal examination with special focus on liver and upper abdomen was done and important examination findings were recorded. Stool Examination, Serum amylase. Liver function tests, and complete blood picture (CP) were done. I Ultrasound abdomen was done in all cases as a basic tool for diagnosis (ERCP was not available) because I it is cost effective, rapid, and non-invasive test. Among various appearances of worms in biliary tract described by different studies[6- 7], the most sensitive appearance described as "Inner-tube Sign" i.e. the round worm may be seen as a thick echogenic stripe with a central anechoic tube (gastrointestinal tract of 1 worm).

All cases were treated with Piperazine I administered orally in a daily dose of 50-75 mg/kg for 2 days[8]. As this drug causes neuromuscular paralysis of parasite and relatively rapid expulsion of worms. Spasmolytics were also given to relax § sphincter of oddi to release the worms[9]. Surgical opinions were also taken for each case.

RESULTS

In our study, five cases of biliary Ascariasis were found. Among these five cases, four children were above 10 years of age and one was of l Vi years old, three were male and two were females. All children had right upper abdominal pain, but liver enlargement and tenderness was noticed in 2 patients. These 2 children had fever and vomiting in addition to colicky abdominal pain. One was diagnosed as secondary Cholecystitis, and the other had portal empyema. LFT's were raised in three children, while serum amylase was normal in all children (Table-2).

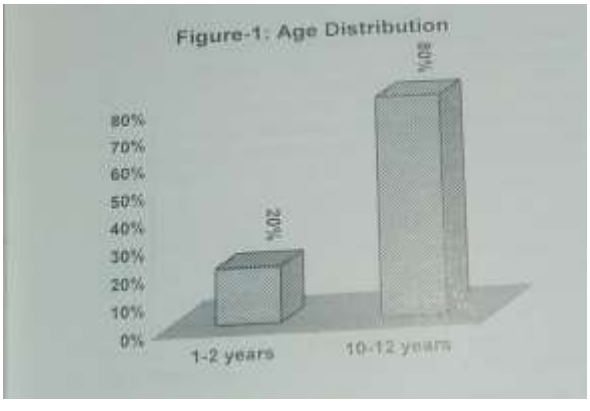
On ultrasound worm was seen in common bile duct in three cases and in two they were in left and right hepatic ducts. Two children were started on antibiotics all children become symptoms free in about 48 hours with spasmolytics, piperazine, and passed several worms in stool. Ultrasound repeated on third day was normal in four cases, but in one case only one worm was seen out of two, child was symptoms free and repeat ultrasound after six days was normal.

Table-1: Presenting complaints of the patients with biliary ascariasis

Clinical Presentations	No.	Percentage
Abdominal Pain	5	100
Vomiting	4	80
History of worms in stool	3	60
Worms in vomitus	2	40
Fever	2	40
Enlarge tender liver	2	40

Table-2: Laboratory investigations in the patients with biliary ascariasis

Tests Case	Results					Normal Value
	I	II	III	IV	V	
SGPT (u/l)	62	70	N	60	N	7- 46
ALK Phosphates (u/l)	570	641	N	750	N	145-420
S. Bilirubin (mg/dl)	0.8	1	N	0.8	N	0.1-1
Serum Amylase	N	N	N	N	N	-----
Stool R/E (Ovas of Ascaris)	+	-	-	-	+	



DISCUSSION

In these cases of biliary Ascariasis, abdominal pain was most common symptom. In a retrospective study[10] of Biliary Ascariasis, 98 % of patients had abdominal pain. Ascaris lumbricoides enters the common bile duct via Ampulla of Vater and usually only proximal 1/3 lies in Duct[11,13]. Bacteria introduced by worms may cause suppurative cholangitis, liver abscesses and pancreatitis[10,12] We had two cases of complications of biliary Ascariasis. In our study no surgical intervention was done, as patients improved quickly on conservative management otherwise worms can be removed with help of a Dormia basket after endoscopic sphincterotomy[13. 14].

In three out of five patients of our study had worms in common bile duct, while two in hepatic ducts. In another study[15], 42 cases were diagnosed, on established ultrasound criteria; worms were most commonly present in common bile duct and then in intrahepatic ducts and gallbladder. Although treatment of choice is endoscopic removal of worms as reported from Lady Reading Hospital Peshawar and other studies[16], but piperazine was effective in our cases as well as well reported in other studies[17],[18], should be used where endoscopic facility is not available. Real time sonography represents an efficient reliable, noninvasive and relatively inexpensive modality. It must be used in patients presenting with acute cholecystitis, pancreatitis, cholangitis or liver abscess, in order to rule out biliary Ascariasis as a possible underlying cause.

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