

A Retro-prospective Study of Various Clinical Presentations of Isolated Left Sided Hepatolithiasis.

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Abstract:

Objective: To study various clinical presentations and other related problems in left sided hepatolithiasis in a tertiary care centre at SKIMS, Srinagar.

Material and Methods: The present Retro-prospective study was conducted in the Department of Surgical Gastroenterology and Medical Gastroenterology of Sher- I – Kashmir Institute of Medical Sciences, Srinagar from May 2003 to December 2011. A total number of 80 cases were included in this study. Patient's data was analysed for their age and sex distribution, presenting symptoms, duration of disease and biochemical profile.

Results: A total of 80 cases were studied in this series. Out of which, 51 cases were females and 29 cases were males. Male to female ratio was 1: 1.76. Their age at presentation was in range of 19-60 years with mean age at presentation being 38.08 years in males and 37.75 years in females. Abdominal pain was the principal presenting complaint experienced by 70% of patients. Other presentations were cholangitis (13.75%), liver abscess (5%), jaundice (3.75%), incidental (3.75%), cholecystitis (2.5%) and acute pancreatitis (2.5%). Associated clinical conditions seen were choledocholithiasis (17.5), cholelithiasis(22.5%), splenomegaly (3.75%). Duration of illness was <1 month in 13.75%, 1 month – 1year in 32.5% and > 1 year in 53.75%. Cases in present study had significantly raised serum bilirubin, serum alkaline phosphatase and alanine aminotransferase preoperatively. Hemoglobin, serum proteins, serum albumin and prothrombin levels were not significantly deranged.

Conclusion: Hepatolithiasis is endemic in Kashmir. Ascariasis is a common attributable risk factor in the present study. In endemic areas of ascariasis measures like improvement in personel hygiene, sanitation and regular deworming may lower the incidence of biliary ascariasis which inturn will reduce the occurrence of hepatolithiasis.

Key words: Hepatolithiasis, Ascariasis, Risk factor, Clinical presentation.

I. Introduction

Hepatolithiasis, also known as Recurrent pyogenic cholangitis(RPC), Oriental biliary obstruction syndrome and Oriental cholangiohepatitis (OCH) refers to concretions existing in intrahepatic duct proximal to confluence of right and left hepatic ducts¹, irrespective of co-existence of choledocolithiasis and/or cholecystolithiasis². Hepatolithiasis most commonly affect the left hepatobiliary system because left hepatic duct has a more acute angle than the right hepatic duct³.

Intrahepatic stones are prevalent in South East Asia, Korea, Malaysia and Japan⁴ and in patient's undergoing surgery for gallstones; incidence is reported to be around 20-30%⁵. The disease is characterized by its intractable nature and frequent recurrences; requiring multiple operative interventions.

Etiology of intrahepatic stones is still a widely debated topic. In Western world, intrahepatic stones are regarded as secondary to the stones originating in gallbladder or primarily resulting from benign strictures, sclerosing cholangitis, choledocal cyst or malignant biliary tumours⁴. In East, however. majority of cases are associated with recurrent pyogenic cholangitis(RPC)⁶ seen primarily in regions with prevalent parasitic infestation especially clonorchis sinensis and ascariasis lumbricoides⁷. Biliary ascariasis is a common cause of biliary and pancreatic disease in an endemic area like ours⁸.

“Charcot’s triad” of jaundice, right upper quadrant pain and fever with chills is the commonest presentation, seen in 2/3rd of cases. Other complaints include abdominal discomfort and vomiting. About 16% cases remain asymptomatic. Patients can present with complications including sepsis, recurrent cholangitis and intra-hepatic abscess. Some patients may develop devastating complications like liver atrophy and secondary biliary cirrhosis and can even progress to epithelial dysplasia and cholangiocarcinoma^{9,10,11}.

II. Material And Methods

The present Retro-prospective study was conducted in the Department of Surgical Gastroenterology and Medical Gastroenterology of Sher- I – Kashmir Institute of Medical Sciences, Srinagar from May 2003 to December 2011. A total number of 80 cases were included in this study. Patient’s data was analysed for their age and sex distribution, presenting symptoms, duration of diseases and biochemical profile.

III. Results

Table 1: Age and Gender Distribution of the 80 patients who underwent left hepatic resection for isolated left hepatolithiasis.

Age	Male		Female	
	n	%	n	%
18 to 20	2	6.89	4	7.84
21 to 30	3	10.34	7	13.72
31 to 40	10	34.48	16	31.37
41 to 50	8	27.58	13	25.49
51 to 60	6	20.68	11	21.56
Total	29	36.25	51	63.75
mean ± SE	38.08 ± 12.12		37.75 ± 11.92	

Table 1. A total of 80 patients were studied in this series, 51 were females and 29 males. Male to female ratio was 1:1.76. Their age at presentation was in the range of 19-60 years with mean age at presentation being 38.08 years in males and 37.75 years in females.

Table 2: Clinical Profile of the Studied Subjects

Clinical Profile		n	%
Mode of Presentation	Abdominal pain	55	68.7
	Cholangitis	11	13.7
	Liver Abscess	4	5
	Jaundice	3	3.7
	Incidental	3	3.7
	Cholecystitis	2	2.5
	Acute Pancreatitis	2	2.5
Associated conditions seen	Clolelithiasis	18	22.5
	Choledocholithiasis	14	17.5
	Splenomegaly	3	3.7
Duration of illness	< 1 month	11	13.7
	1 month-1year	26	32.5
	>1 year	43	53.7

Table 2. Abdominal pain was the principal presenting complaint experienced by 70% of patients. Other presentations were cholangitis (13.75%), liver abscess (5%), jaundice (3.75%), incidental (3.75%), cholecystitis (2.5%) and acute pancreatitis (2.5%). Associated clinical conditions seen were choledocholithiasis (17.5), cholelithiasis(22.5%), splenomegaly (3.75%). Duration of illness was <1 month in 13.75%, 1 month – 1year in 32.5% and > 1 year in 53.75%.

Table 3: Lab Parameters of the Studied Subjects

		n	%
DLC	Normal	73	91.3
	Eosinophilia	4	5.0
	Neutrophilia	3	3.7
TLC	Normal	72	90.0
	High	8	10.0
Urea	Normal	78	97.5

	High	2	2.5
Creatinine	Normal	75	93.8
	High	5	6.3
Bilirubin	Raised	23	28.8
	Normal	57	71.3
	Range	0.3 - 18.3	
ALT	Raised	23	28.7
	Normal	57	71.3
	Range	20 - 318	
AST	Raised	21	26.2
	Normal	59	73.7
	Range	19 - 340	
ALP	Raised	54	67.5
	Normal	26	26.5
	Range	125 - 983	
Total Protein	Low	31	38.7
	Normal	49	61.2
	Range	5.5 - 9.6	
Albumin	Low	32	40
	Normal	48	60
	Range	2.8 - 4.9	

Table 3. Patients in our study had significantly raised serum bilirubin, serum alkaline phosphatase and alanine aminotransferase preoperatively. Hemoglobin, serum proteins, serum albumin and prothrombin levels were not significantly deranged.

IV. Discussion

Hepatolithiasis most commonly affect the left hepatobiliary system because left hepatic duct has a more acute angle than the right hepatic duct³.

According to the literature, hepatolithiasis has equal distribution in both the sexes and usually affects 3rd to 7th decade of life⁵. But in our study male:female ratio was around 1:1.76 which is probably because of high prevalence of Ascariasis in the Kashmiri female population¹².

The presence of dead *Ascaris lumbricoides* within stones has shed further light on the pathogenesis of this disease in areas without clonorchiasis¹³. Not only do they lead to inflammation resulting in injury to biliary epithelium, the presence of parasitic fragments or their eggs can act as a nidus for intra-hepatic stone formation. In our study 7.5% of patients had ascaris lumbricoids fragments in intrahepatic ducts.

Abdominal pain either in right upper quadrant or in upper abdomen is the most common presentation. "Charcot's triad" (jaundice, right upper quadrant pain and fever with chills) is the form of presentation in about 2/3rd of cases. Abdominal discomfort and vomiting are the other associated complaints. Asymptomatic cases constitute about 16% of total cases. Patient can present with complications like recurrent cholangitis, sepsis, intrahepatic abscess and may develop liver atrophy and secondary biliary cirrhosis. Physical examination often reveals epigastric tenderness, rigidity, and enlargement of the liver and gallbladder. Icterus is present in 77% of patients¹⁴.

In the present study, abdominal pain was the principal presenting complaint experienced by 70% of patients. Other presentations were cholangitis (13.75%), liver abscess (5%), jaundice (3.75%), incidental (3.75%), cholecystitis (2.5%) and acute pancreatitis (2.5%). Associated clinical conditions seen were choledocholithiasis (17.5), cholelithiasis (22.5%), splenomegaly (3.75%). The results of clinical presentations shown by present study were comparable to the study conducted by O.J. Shah et al¹⁵; acute cholangitis(12.7%), abdominal pain(70.9%), jaundice((3.6%), acute pancreatitis(2.7), liver abscess(3.6%)' subphrenic abscess(0.9%), cholecystitis(2.7%), incidental(2.7) and other associated diseases seen were gall stones(20%), common bile duct stones(18.1%), ascariasis(7.3%), esophageal varices(2.7%), splenomegaly (3.6%). The present study showed duration of illness <1 month in 13.75%, 1 month - 1 year in 32.5% and > 1 year in 53.75% of patients.

V. Conclusion

Hepatolithiasis is endemic in Kashmir. Ascariasis is the common attributable risk factor in the present study. In endemic areas of ascariasis measures like improvement in personal hygiene, sanitation and regular deworming may lower the incidence of biliary ascariasis which in turn will reduce the occurrence of hepatolithiasis.

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