Original Research Article

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Profile and pattern of obstructive jaundice cases from a tertiary care teaching hospital of Uttar Pradesh

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ABSTRACT

Background: The common etiologies of obstructive jaundice have been reported to vary from one centre to another and from one individual to another. Only a very few studies have been conducted on this topic and none from the state of Madhya Pradesh, India. The present study was planned to study the profile and pattern of obstructive jaundice cases in the region of Madhya Pradesh, India.

Methods: A retrospective cohort of patients with obstructive jaundice admitted to SRMS Institute of Medical Sciences, Bareilly, Uttar Pradesh, India during past one year i.e. January to December 2014 formed the study population. In this study, all the eligible patients positively diagnosed as extrahepatic obstructive jaundice were included in this study. Study tools were records of the patients such as information/records from MRD department and clinical case sheets.

Results: Malignant causes (63.89%) were more frequent than benign causes (36.11%). More than 50% cases were in the age group of 55-75 years. Sex wise males outnumbered females. Among the malignant causes of obstructive jaundice, cancer head of pancreas (60.87%) and cholangiocarcinoma (17.39%) were common causes whereas among the benign causes of obstructive jaundice, choledocholithiasis (76.92%) and benign biliary strictures (15.38%) were common causes.

Conclusions: Jaundice (91.67%), loss of appetite (77.78%) and pain abdomen (75%) were three most common modes of presentation of obstructive jaundice cases.

Keywords: Clinical features, Pattern, Patients, Obstructive jaundice

INTRODUCTION

Obstructive jaundice is a common surgical problem that occurs when there is an obstruction to the passage of conjugated bilirubin from liver cells to intestine. It is among the most challenging conditions managed by general surgeons and contributes significantly to high morbidity and mortality. There is a discrepancy between the recognized causes of obstructive jaundice at various

centers and it is mandatory to determine pre-operatively the existence, the nature of obstruction because an ill-chosen procedure can lead to high morbidity and mortality.^{3,4}

The mortality and morbidity of biliary obstruction depend upon the causes of the obstruction.⁵ Better understanding of factors responsible for increased morbidity and mortality in these patients will better guide appropriate

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management. Late presentation of the cases associated with lack of modern diagnostic and therapeutic facilities are common scenario in developing countries.

The common etiologies of obstructive jaundice have been reported to vary from one centre to another and from one individual to another. Only a very few studies have been conducted on this topic and none from the state of Madhya Pradesh. Paucity of literature also warrants this study. Therefore the present study was planned to study the profile and pattern of obstructive jaundice cases in the region of Madhya Pradesh, India.

METHODS

The current retrospective study was conducted by the Department of General Surgery, SRMS Institute of Medical Sciences, Bareilly, Uttar Pradesh, India. A retrospective cohort of patients with obstructive jaundice admitted to this tertiary care center during past one year i.e. January to December 2014 formed the study population. In this study, all the eligible patients positively diagnosed as extrahepatic obstructive jaundice were included in this study. Patients below 15 years of age and patients with jaundice due to causes other than obstructive pathology like hemolytic or hepatocellular jaundice were excluded from this study.

Study tools were records of the patients such as information/records from MRD department and clinical case sheets. Clinical data was thoroughly reviewed. Following details were captured- history, clinical examination, laboratory investigations which included liver function tests for total bilirubin, conjugated bilirubin, alkaline phosphatase, hepatic trans aminases SGOT and SGPT, total serum proteins and serum albumin. Other laboratory investigations included hemoglobin estimation, total leucocyte count, differential leucocyte count, platelet count, prothrombin time, International normalized ratio (INR), blood urea, serum creatinine, serum electrolytes.

Abdominal ultrasound was done in all patients to look for the abnormality of intra and extra-hepatic biliary channels, the common bile duct and presence of causative factors like gall stones, tumors, lymph nodes, worms or any abdominal mass.

During the study period a total of 40 patients visited this tertiary care center but data of 4 patients was discarded from the analysis because it was found incomplete while data cleaning. Thus finally data of 36 patients was analyzed. Permission of Institutional ethics committee (IEC) was sought before the commencement of the study. All the proforma were manually checked and edited for completeness and consistency and were then coded for computer entry. After compilation of collected data, analysis was done using Statistical Package for Social Sciences (SPSS), version 20 (IBM, Chicago, USA). The

results were expressed using appropriate statistical methods.

RESULTS

Mean age of patients of benign and malignant cases of obstructive jaundice was 42.7 years and 68.5 years respectively. Malignant causes (63.89%) were more frequent than benign causes (36.11%). More than 50% cases were in the age group of 55-75 years. Sex wise males outnumbered females (Table 1).

Table 1: Baseline characteristics of study subjects.

Variables		N (percentage)	
Mean age	Malignant cases	68.5 years	
	Benign cases	42.7 years	
Causes of obstructive jaundice (n = 36)	Malignant causes	23 (63.89%)	
	Benign causes	13 (36.11%)	
Age group distribution (years)	15-25	2 (5.56%)	
	25-35	2 (5.56%)	
	35-45	4 (11.12%)	
	45-55	3 (8.33%)	
	55-65	10 (27.78%)	
	65-75	11 (30.56%)	
	>75	4 (11.12%)	
Sex	Male	20 (55.56%)	
SEX	Female	16 (44.44%)	

Among the malignant causes of obstructive jaundice, cancer head of pancreas (60.87%) and cholangiocarcinoma (17.39%) were common causes whereas among the benign causes of obstructive jaundice, choledocholithiasis (76.92%) and benign biliary strictures (15.38%) were common causes (Table 2).

Table 2: Causes of obstructive jaundice among study subjects.

Causes of obstructive jaundice cases		Number (percentage)
Malignant cause (n = 23)	Cancer head of pancreas	14 (60.87%)
	Cholangiocarcinoma	4 (17.39%)
	Periampullary carcinoma	2 (8.89%)
	Porta hepatic metastasis	2 (8.89%)
	Secondaries in liver	1 (4.35%)
Benign causes (n = 13)	Choledocholithiasis	10 (76.92%)
	Benign biliary strictures	2 (15.38%)
	Choledochal cyst	1 (7.69%)

Jaundice (91.67%), loss of appetite (77.78%) and pain abdomen (75.00%) were three most common modes of presentation of obstructive jaundice cases (Table 3).

*Clinical presentation	Malignant cause (n = 23)	Benign causes (n = 13)	Total (n = 36)
Jaundice	23 (100%)	10 (76.92%)	33 (91.67%)
Pain abdomen	18 (78.26%)	9 (69.23%)	27 (75.00%)
Itching	14 (60.87%)	10 (76.92%)	24 (66.67%)
Fever with chills	5 (21.74%)	10 (76.92%)	15 (41.67%)
Loss of appetite	20 (86.96%)	8 (61.54%)	28 (77.78%)
Loss of weight	19 (82.61%)	7 (53.85%)	26 (72.22%)
Steatorrhea	17 (73.91%)	6 (46.15%)	23 (63.88%)

Table 3: Pattern of clinical presentation of study subjects.

DISCUSSION

Dark urine

Mass per abdomen

In this study it was observed that malignant causes (63.89%) were more frequent than benign causes (36.11%). Another author from Pakistan6 studied 60 patients of obstructive jaundice and reported that there were 34 (56.6%) patients with malignant causes of obstruction and 26 (43.3%) patients with benign causes of obstructive jaundice. Sharma MP et al. in a study of 429 patients of obstructive jaundice found that 75.3% had malignant causes and 24.7% had benign causes of obstructive jaundice.^{4,7}

20 (86.96%)

17 (73.91%)

We observed that mean age of patients of benign and malignant cases of obstructive jaundice was 42.7 years and 68.5 years respectively. More than 50% cases were in the age group of 55-75 years. Two studies from Nigeria and Tanzania found that the patients with malignant causes of obstructive jaundice were older than the patients with benign causes of obstruction.^{8,9}

We found that among the malignant causes of obstructive jaundice, cancer head of pancreas (60.87%) and cholangiocarcinoma (17.39%) were common causes whereas among the benign causes of obstructive jaundice, choledocholithiasis (76.92%) and benign biliary strictures (15.38%) were common causes. Another study from Ethiopia reported choledocholithiasis as the most common benign cause of obstructive jaundice. ¹⁰

Another study from Abbottabad reported that cancer head of pancreas as the commonest malignant cause while choledocholithiasis as the commonest benign cause of obstruction. Yellow N et al. in a study of 71 patients of obstructive jaundice found Carcinoma head of the pancreas as the most common malignant cause and choledocholithiasis as the most common benign cause. Rahman GA et al. in a study of 64 patients of obstructive jaundice found that carcinoma head of pancreas is the commonest cause of obstructive jaundice. Sanctive jaundice.

In the current study it was observed that jaundice (91.67%), loss of appetite (77.78%) and pain abdomen (75.00%) were three most common modes of presentation of obstructive jaundice cases. This result correlates with study conducted by Warren et al. who studied 191 patients and reported that the presenting symptoms in malignant jaundice as abdominal pain in 82.8%, loss of weight in 90%, pruritus in 41.3%, fever in 4.9%, mass per abdomen in 64.4%. Wagensveld BA et al. who studied 126 patients and reported jaundice as a presenting symptom in 90%, loss of weight in 82%. 15

25 (69.44%)

20 (55.56%)

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Ethical approval: The study was approved by the

institutional ethics committee

REFERENCES

5 (38.46%)

3 (23.08%)

- 1. Mohamed S, Syed AI. Management of obstructive jaundice: experience in a tertiary care surgical unit. Pakistan J Surgery. 2007;23:23-5.
- 2. Ghaffar A, Buledi GQ, Imran M. Role of imaging in obstructive jaundice. J Surg Pakistan. 2004;9:24-6.
- 3. Khurram M, Durrani AA, Hasan Z, Butt AUA, Ashfaq S. Endoscopic retrograde cholangiopancreato- graphic evaluation of patients with obstructive jaundice. J Coll Physicians Surg. 2003;13(6):325-8.
- Russell RCG. The gall bladder and bile duct. In: Russell RCG, Williams NS, Bulstrode CJK. editors. Bailey and Love's Short Practice of Surgery. 24th ed. London. Arnold Publishers. 2004:1094-1095.
- Acalovschi M. Cholangiocarcinoma: risk factors, diagnosis and management. Rom J Intern Med. 2004;42:41-58.
- 6. Siddique K, Ali Q, Mirza S, Jamil A, Ehsan A, Latif S, Malik AZ. Evaluation of the aetiological spectrum of obstructive jaundice. J Ayub Med Coll. 2008;20(4):62-6.
- Sharma MP, Ahuja V. Aetiological spectrum of obstructive jaundice and the diagnostic ability of

^{*}Multiple responses permitted

- ultrasonography: A clinician's perspective. Trop Gastroenterol. 1999;20:167-9.
- 8. Lawal D, Oluwole S, Makanjuola D, Adekunle M. Diagnosis, management and prognosis of obstructive jaundice in Ile-Ife, Nigeria. West African J Med. 1998;17(4):255-60.
- 9. Phillipo LC, Emmanuel SK, Mabula M. Etiological spectrum and treatment outcome of Obstructive jaundice at a University teaching Hospital in northwestern Tanzania: a diagnostic and therapeutic challenges. BMC Res Notes. 2011;4:147.
- 10. Bekele Z, Yifru A. Obstructive jaundice in adult Ethiopians in a referral hospital. Ethiopian Medical Journal. 2000;38(4):267-75.
- 11. Khurram S, Qasim A, Shirin M, Aiza J, Aisha E, Sarmad L, Asif ZM. Evaluation of the aetiological spectrum of obstructive jaundice. J Ayub Med Coll. 2008;20(4):62-6.
- 12. Syed N, Mohammad SA, Umair UI, Shafiq UR. Etiological spectrum of obstructive jaundice. Medical Channel. 2010;16:299-301.

- 13. Rahman GA, Yusuf IF, Faniyi AO, Etonyeaku AC. Management of patients with obstructive jaundice: experience in a developing country. Nigierian Quarterly J Hospital Med. 2011;21(1):75-9.
- Warren KW, Christophil C, Armedariz R, Basu S. Current trends in the diagnosis and treatment of carcinoma of the pancreas. Am J Surg. 1983;145:813-8.
- 15. Wagensveld BA, Coene V, Gulik TM, Obertop RH, Gouma DJ. Outcome of palliative biliary and gastric bypass surgery for pancreatic head carcinoma in 126 patients. Br J Surg. 1997;84:1402-6.

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