ORIGINAL RESEARCH PAPER

General Surgery

CLINICAL STUDY OF OBSTRUCTIVE JAUNDICE AT YENEPOYA MEDICAL COLLEGE, MANGALORE, KARNATAKA

KEY WORDS:

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ABSTRACT

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.This study is being undertaken to describe our own experiences in the management of obstructive jaundice, outlining the etiological spectrum, investigation findings andtreatment modalities available in our hospital. **Material and Methods** The following tests would be carried out for patients diagnosed as "Obstructive Jaundice" under General Surgery care.A total number of 64 patients.The study period was for a period for 2 years from December 2019 to September 2021.The following tests were carried out for patients diagnosed as "Obstructive Jaundice" under General Surgery care. CBC, SERUM ELECTROLYTE, RFT, CRP, ESR, URINE ROUTINE, LFT, Ultrasonography of abdomen and pelvis, CECT ABDOMEN & PELVIS, MRCP/ ERCP/EUS, HIV, HBsAgand HCV status were taken. **Results** The most common age group affected are in 40-50 years.The tendency of disease is favoring Male about 56% of the affected patients are being male. Among the Malignant causes, Periampullary carcinoma appears to be the most common cause(18.8%). Choledocholithiasis + cholelithiasis accounts for about near 1/5th of the overall aetiology obstructive jaundice. Around42 patients were survived and alive, 11 patients under chemotherapy, 7 patients expired and 4 patients lost for follow up. **Conclusion** Obstructive jaundice was found to affect the male population most commonly and most commonly elderly age group with 40-50 years is 30% affected in my study.Malignancy was found most commonly affecting elderly male patients.The most common complaint was found to be abdomen pain followed by vomiting and jaundice. Abdominal pain was the most common complaint in benign stone disease which affected females more.

INTRODUCTION

One of the common problems that is seen in the surgical department is the obstructive jaundice. As the name suggests, surgical jaundice also referred to as the obstructive jaundice occurs a s a result of a blockage to the flow of the water-soluble conjugated bilirubin from the hepatic tissue to the enterocytes.obstructive jaundice can occur as a result of a variety of conditions of various etiologies both benign and malignant , most of which are amenable by surgery or some other form of intervention.[1]Thus , obstructive jaundice does not define a definitive diagnosis but rather a symptom and early investigation to elucidate the precise etiology of great importance because pathological changes (e.g. secondary biliary cirrhosis) can occur if obstruction is unrelieved.[2] The management of obstructive jaundice poses diagnostic and therapeutic challenges to general surgeons practising in resource-limited countries.[3]

One of the common clinical scenario that is seen by the surgeon and referred to the radiologist for evaluation is the obstructive jaundice.[4]Whenever there is an alleged case of biliary obstruction based on the clinical and laboratory parameters , the role of the radiologist is to confirm the existence of obstruction along with the probable cause and the site of the lesion.[5] The mortality and morbidity of biliary obstruction are dependent on the cause of the obstruction, and the assessment of any factors which influence the morbidity and mortality in patients with obstructive jaundice in each society is necessary.[6]

This study is being undertaken to describe our own experiences in the management of obstructive jaundice, outlining the etiological spectrum, investigation findings and treatment modalities available in our hospital.

MATERIAL AND METHODS

This is a observational study. Patients with clinical diagnosis of obstructive jaundice at YenopoyaMedical College Hospital, Mangalore were included for the study.A total number of 64 patients.The formula used for calculation is n=Zα2p(1-P)/e2 Where n= sample size Zα= 1.96 at 95% confidence interval and e= allowable error. The study period was for a period for 2 years from December 2019 to September 2021.The following tests were carried out for patients diagnosed as "Obstructive Jaundice" under General Surgery care. CBC, SERUMELECTROLYTE, RFT, CRP, ESR, URINE ROUTINE, LFT, Ultrasonography of abdomen and pelvis, CECT ABDOMEN &PELVIS, MRCP/ERCP/EUS, HIV, HBsAgand HCV status were taken.

RESULTS

Patients with clinical diagnosis of obstructive jaundice at the Department of Radio Diagnosis, Yenopoya Medical College Hospital, Mangalore were included for the study.

Table 1: Distribution of variables among the study participants (N=64)

Slno	Variable	Frequency	Percentage
1	Age		
	21-30	4	6.3
	31-40	10	15.6
	41-50	19	29.7
	51-60	10	15.6
	61-70	17	26.6
	>70	4	6.3
2	Gender		
	Male	36	56.3
	Female	28	43.8
3	Symptoms		
	Abdominal Pain	52	81.3
	Vomiting	39	60.9
	Jaundice	37	57.8
	Pruritus	21	32.8
	Pale Stool	8	12.5
	Fever	6	9.4

In the study we had 4 cases 6.3% (21- 30 years), 10 cases(15.60%) belonged to 31-40 years, 19 cases (29.7%) belonged to the age group 41-50 years, 10 cases (15.6%) belonged to the age group 51-60 years, 17 cases(26.6%) belonged to the age group 61-70 years, 4 case (6.3%) belonged to the age group more than 70 years.The most common age group affected are in 40-50 years.The Tendency of disease is favouring Male about 56% of the affected patients are being male (Table 1).

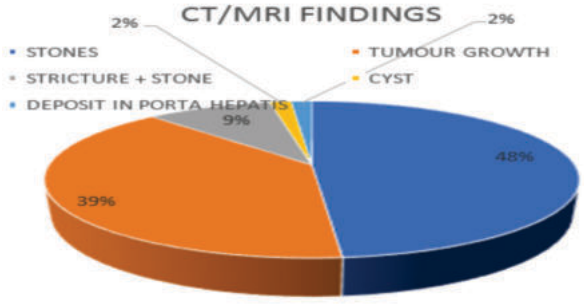

Fig 1: Distribution of The Subjects Based On Ct/mri Findings

Table 2: Distribution of subjects based on malignant etiology (N=64)

Diagnosis	Frequency	Percent
Carcinoma gall bladder	1	1.6
Carcinoma head of pancreas	9	14.1
Carcinoma terminal ileum	1	1.6
Cholangiocarcinoma	2	3.2
Neuroendocrine tumour of pancreas	2	3.1
Periampullary carcinoma	12	18.8

Among the Malignant causes, Periampullary carcinoma appears to be the most common cause(18.8%) (Table 2).

Table 3: Distribution of the subjects based on benign etiology (N=64)

Diagnosis	Frequency	Percent
Hydatid cyst of liver	1	1.6
CBD stricture + choledocholithiasis	2	3.2
CBD stricture + cholelithiasis	3	4.8
Choledocholithiasis	11	17.6
Choledocholithiasis with pancreatitis	1	1.6
Cholelithiasis + choledocholithiasis	17	22.2
Cholelithiasis + Mirizzi syndrome	2	3.2

Choledocholithiasis + cholelithiasis accounts for about near 1/5th of the overall aetiology obstructive jaundice (Table 3).

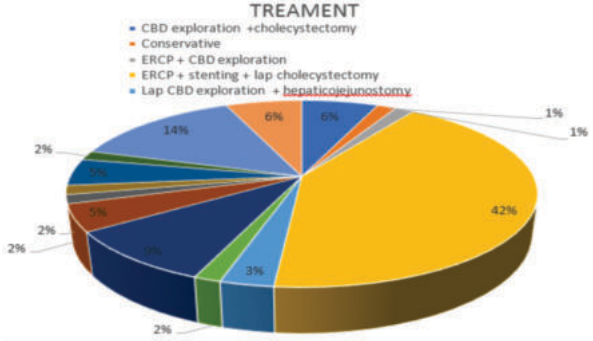

Fig 2: Distribution of the subjects based on benign etiology (N=64)

Out of 64 patients, 57(~90%) patients required intervention like surgery or Drainage procedure,6 (~9%) required chemotherapy and 1(1.6%) was managed conservatively, as it was case of passed out CBD calculi.Most common procedure was ERCP + Stenting + Laparoscopy Cholecystectomy account to ~43%, followed by Triple Bypass ~14% and thenwhipple's procedure ~6.3% (Figure 2).

Table 4: Distribution of the subjects based on follow up (N=64)

FOLLOW UP	Frequency	Percent
CHEMOTHERAPY	5	7.9
EXPIRED	7	10.9
LOST FOLLOW UP	4	6.3
SURVIVED	42	65.6
Survived + post op chemotherapy	6	9.4

42 patients were survived and alive, 11 patients under chemotherapy, 7 patients expired and 4 patients lost for follow up (Table 4).

DISCUSSION

This prospective study was carried out between October 2019 to October 2021 in Yenopoya medical college and Hospital on 64 patients with obstructive Jaundice. The most common age group affected in 40 to 50 years of age accounting to about 30% followed by 60-70 years and 50-60 years with 26% and 15% respectively. Thus, it appears to be a disease of the elderly age group.There is more male predominance accounting forabout 56%. The malignant disease appears to be most commonly affected in elderly males.The ratio of male:female appears to be1.2:1.

This is similar to the study of*S Verma et al*[7]*in* which the male: female ratio was 1.3:1 (56%:44%) and the most commonly affected age group were 50-60years.The commonest symptoms were appearing to be abdomen pain accounting for 81% of patients, which is similar to Wani NA et al[8], showing 94% of patients had pain in the right upper abdomen, followed by vomiting and jaundice.Abdominal pain is present in most cases with stone disease. This is similar to*Kurram Siddique et al*[9] study showing abdominal pain was the commonest in benign disease (~51.66%).Benign aetiology accounts for ~58%. In converse to the study of *Khurram Siddique et al*[9]who have stated that malignancy was the most common cause (accounting for 56.6% of the patients). Choledocholithiasis + Cholelithiasis is the common benign aetiology accounting for about 27% of the overall aetiology and ~50% of the benign aetiology. Among the 30cases with choledocholithiasis, secondary CBD calculi were more common followed by primaryperiampullary carcinoma is the commonest malignant aetiology, Accounting for 40% ofthe malignant aetiology and ~20% of the overall aetiology. This is followed by carcinoma head of the pancreas. Liver secondaries with porta hepatis nodes by small bowel malignancy were found to be the cause in 1 case accounting for 1.6%.

Among the 3 cases with biliary tree malignancy, 1 was treated with surgery (radical cholecystectomy) and the rest 2, one underwent palliative gastrojejunostomy and the second was for PTBD.37(58%) patients had clinical evidence of jaundice (icterus) because their total bilirubin values exceeded the clinical threshold of 2 mg%. The sensitivity of elevated bilirubin in predicting CBD stones in our study was 57%.This is less than the study done by Abboud et al[10] (1996) of 69%About 90% of patients required intervention like surgery or ERCP indicating the availability of surgical therapy for the disease. But some patients required direct chemotherapy and 1 patient was managed conservatively, as CBD calculi had passed out.Out of 64 patients, 7(~10%) patients expired and the rest 57(~90) patients survived, which is similar to a study conducted by *Abdul Ghafoor Dalwani et al.*[11]

CONCLUSION

Obstructive jaundice was found to affect the male population

most commonly and most commonly elderly age group with 40-50 years is 30% affected in my study.Malignancy was found most commonly affecting elderly male patients.The most common complaint was found to be abdomen pain followed by vomiting and jaundice. Abdominal pain wasthe most common complaint in benign stone disease which affected females more.

The commonest etiologywas foundto be benign affecting about ~60% of cases. choledocholithiasis with cholelithiasiswas the commonest benign condition affecting 24% of the overall aetiology. The most common malignant aetiology was periampullary tumour with 20.3% of overall aetiology.CECT Abdomen/ MRCP is reliable in confirming the diagnosis, determining the level of obstruction and details about the plane of the tumour for resectability. Surgery is the best modality of treatment in all operable cases at the time of presentation.

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