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Research Article

**FREQUENCY OF STONES, STRICTURES AND CARCINOMA
HEAD OF PANCREAS IN PATIENTS WITH OBSTRUCTIVE
JAUNDICE**¹Dr.Shireen Khan, ²Dr.Anam Nasim, ³Noor ul bashar¹Foundation University Medical College, ²Mohi ud Din Islamic Medical College Mirpur AJK, ³Gomal Medical college DIK/ Khyber Medical University Peshawar.**Article Received:** October 2020 **Accepted:** November 2020 **Published:** December 2020**Abstract:**

Objective: The target of this examination is to know the recurrence of choledocholithiasis, biliary injury and carcinoma head of pancreas among patients having obstructive jaundice.

Study Design: Cross-sectional, unmistakable examination

Duration and place of Study: This examination was directed at the Department of Gastroenterology, four Medical units and four Surgical units at Fouji foundation hospital islamabad from January 2019 to June 2019.

Materials and Methods: An aggregate of 201 patients determined as obstructive jaundice to have serum bilirubin level of more noteworthy than 3 mg/dl were incorporated. The Intra and Extra hepatic biliary channels, presence of nerve stones, regular bile conduit and any stomach mass were seen by ultrasonography mid-region. Endoscopic retrograde cholangiopancreatography likewise done in patients with obstructive jaundice. Information with respect to choledocholithiasis, carcinoma head of pancreas and biliary injury was gathered.

Results: This examination included age range from 40 to 70 years with mean period of 52.24 ± 5.34 years. A bigger number of the patients was between 51 to 60 years age bunches a mean of 57.8%. Dominant part of patients were females (62.7%). Mean weight was 78.78 ± 12.52 Kg and mean BMI was 26.293 ± 2.87 kg/m². The recurrence of choledocholithiasis was 33.3%, carcinoma of head of pancreas 30.8% and biliary injury was 7%.

Conclusion: The outcomes inferred that Choledocholithiasis is the commonest amiable etiology among patients with obstructive jaundice. It is more pervasive in females. This examination shows that early analysis and mediation has huge part for the forecast of patients with obstructive jaundice.

Key Words: Obstructive Jaundice, Choledocholithiasis, Carcinoma head of pancreas, Biliary stricture.

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INTRODUCTION:

The deposition of bilirubin colour in sclera, mucous layers and skin causes yellowish staining known as jaundice. [1] The biliary check at any level from liver up to gall bladder and small digestive system brings about obstructive jaundice. [2] Obstructive jaundice could be intra-hepatic or additional hepatic. The most well-known intrahepatic causes are cirrhosis, hepatitis and hepato-cell carcinoma. [3] The intra-ductal and extraductal hindrance are further region of the additional hepatic causes. Choledocholithiasis, biliary injuries, neoplasm, essential sclerosing cholangitis and worm invasion (parasites) can prompts intraductal deterrent. The biliary channels pressure remotely by pancreatitis, neoplasm and cystic conduit stones with nerve bladder distension therefore can cause extra ductal obstruction. [4-6]

Treatment of suggestive gallstone infection by laparoscopic cholecystectomy (LC) in late 1980's is related with high occurrence of BDIs than open cholecystectomy (OC). The frequency of BDIs shows an ascent from 0.1-0.2% to as high as 0.8-1.4% in various studies. [7] Although expectation to absorb information impact diminishes the rate of entanglements yet it is still at any rate twofold contrasted with OC. [8] Obstructive jaundice is concerning ordinarily with the conditions like: Tumours (Carcinoma head pancreas, cholangiocarcinoma), Parasitic Infections (Hepato-biliary confounded hydatid illness, Ascariasis), Benign Stricture, Acute irritation (cholangitis, Mirizzi disorder). Inborn infection (Choledochal cyst). [9]

Pancreatic tumours that cause biliary block normally emerge from the head and periampullary pancreatic locale because of the way that the bile conduit flows through the pancreatic head. The jaundice may show further developed stage illness because of malignancies in ampullary locale which prompts biliary obstacle in 64-77% of cases. [10,11] The limited basic bile conduit prompts bile pipe injury which may forestall the bile stream into the digestive tract. Chalya PL and his partners have discovered the recurrence of Choledocholithiasis by 62.5%, Biliary injury by 25% and Carcinoma head of pancreas by 64.7% in patients with obstructive jaundice.[12] Another examination revealed by Siddique K and his partners in patients with obstructive jaundice demonstrated that recurrence of Choledocholithiasis 35%, Carcinoma head of pancreas 30% and Biliary injury 5%. [13]

The information with respect to the recurrence of Choledocholithiasis, Biliary injury and Carcinoma

head of pancreas research in Pakistan is restricted. The various causes at different focuses shows a major error and it is imperative to know the idea of obstacle and its reality on the grounds that a terrible picked treatment can prompt high bleakness and mortality in local populace.

MATERIALS AND METHODS:

The investigation was Cross-sectional and completed in the Department of Medicine Fouji Foundation Hospital subsequent to taking ethical committee endorsement. The determined example size for the investigation at 95% degree of certainty, 5% wiggle room and 5% foreseen populace extent (biliary stricture)13 was 201. Male and female patients between 25-75 years old with clinical determination of obstructive jaundice and serum bilirubin level > 3mg/dl through non-likelihood sequential inspecting technique were used for our examination. Patients with liver cirrhosis and pregnant females were barred from the examination. Information was gathered by utilizing preformed, pretested data. Segment data of patients (name, age, sex, weight, BMI) were noted. Trans-stomach ultrasonography did for all patients to search for biliary channels, normal bile pipe, nerve stones or stomach mass. Endoscopic retrograde cholangiopancreatography (ERCP) was performed in patients of obstructive jaundice where it was shown. Patients with mass on ultrasound related to expanded bile pipes and serum bilirubin level >3 mg/dl were taken as instances of obstructive jaundice. The presence of echogenic adjusted concentration with size ranges between 2 to > 20mm in bile conduit on ultrasound was taken as choledocholithiasis. The short fragment Bile conduit with sporadic and bore edges alongside >1.5mm thickness and on blood vessel or potentially entryway venous stage upgrade of channel dividers on ERCP (Endoscopic retrograde cholangiopancreatography) was taken as biliary injury. Presence of dangerous cells in histopathology report of the pancreatic cells taken by ERCP was taken as carcinoma head of pancreas. The last conclusion was closed after the consequences of these examinations and histopathology. All strategies performed by an advisor gastroenterologist having post cooperation experience of in any event 5 years. The investigation of information was finished by factual examination program (SPSS rendition 22). The recurrence and rate were figured for subjective factors like sex, distinctive age groups, choledocholithiasis, biliary injury and carcinoma head of pancreas. Mean \pm SD was introduced for quantitative factors like age, weight and BMI. Impact modifiers like age, sexual orientation and BMI were constrained by definition. Post separation chi square

test was applied $p < 0.05$ was considered measurably huge.

RESULTS:

The study showed the age ranges from 40 to 70 years with mean age of 52.2 ± 5.3 years. Most patients were between 41 to 60 years age groups i.e. 84.6%. About two third patients were females i.e. 126 (62.7%). Mean weight of the patients was 78.9 ± 12.5 Kg and

mean BMI of the respondents was 26.293 ± 2.87 kg/m^2 . Choledocholithiasis was diagnosed in 67(33.3%) patients, biliary stricture in (7%) and carcinoma head of pancreas in 62(30.8%) patients with obstructive jaundice. Stratification of choledocholithiasis, biliary stricture and carcinoma head of pancreas in respect of age groups, gender and BMI are shown in Table 2.

Table- I: Age & Gender distribution of patients (n=201)

Variable	Frequency	Percentage
Age (years)		
25-40	12	5.9%
41-60	170	84.6%
61-75	19	9.5%
Gender		
Male	75	37.3%
Female	126	62.7%

Table No.2: Percentage of choledocholithiasis, biliary stricture and carcinoma head of pancreas among patients (n=201)

Variable	Frequency	Percentage
Choledocholithiasis		
Yes	67	33.3%
No	134	66.7%
Biliary Stricture		
Yes	14	7.0%
No	187	93.0%
Carcinoma Head of Pancreas		
Yes	62	30.8%
No	139	69.2%

BMI of patients showed a significant association with choledocholithiasis ($p=0.001$) and carcinoma head of pancreas ($p<0.001$).

Table No.3: Stratification of choledocholithiasis, biliary stricture and carcinoma head of pancreas with respect to age, gender and BMI of patients (n=201)

Variables	Choledocholithiasis		P value
	Yes	No	
Age			
25-40	06 (50%)	06 (50%)	0.499
41-60	55(32.4%)	115(67.6%)	
61-75	6 (33.3%)	13 (68.4%)	
Gender			
Male	19(25.3%)	56 (74.7%)	0.063
Female	48(38.1%)	78 (61.9%)	
BMI			
<20	02 (20%)	08 (80%)	0.001
20-30	65(38.7%)	103(61.3%)	
>30	00 (0%)	23 (100%)	
Biliary Stricture			
Age			
Yes			
No			
25-40	01 (8.3%)	11 (91.7%)	0.941
41-60	12 (7.1%)	158(92.9%)	
61-75	01 (5.3%)	18 (94.7%)	
Gender			
Male	02 (2.7%)	73 (97.3%)	0.065
Female	12 (9.5%)	114(90.5%)	
BMI			
<20	01 (10%)	09 (90%)	0.364
20-30	13 (7.7%)	155(92.3%)	
>30	00 (0%)	23 (100%)	
Carcinoma Head of Pancreas			
Age			
Yes			
No			
25-40	04(33.3%)	08 (66.7%)	0.978
41-60	52(30.6%)	118(69.4%)	
61-75	06(31.6%)	13 (68.4%)	
Gender			
Male	26(34.7%)	49 (65.3%)	0.366
Female	36(28.6%)	90 (71.4%)	
BMI			
<20	01 (10%)	09 (90%)	<0.001
20-30	38(22.6%)	130(77.4%)	
>30	23 (100%)	00 (0.0%)	

DISCUSSION:

The obstructive jaundice may prompt increment in morbidity and mortality prompting an indicative and helpful test for gastroenterologists.¹⁴ In nations like Pakistan, because of restricted health care and ignorance patients presents exceptionally late when they create progressed illness. Also, in various urban areas, the non-accessibility of cutting-edge indicative modalities like ERCP, CT filter, MRCP, PTC and helpful office like T-tubes is a major challenge. [15]

Our examination indicated that the occurrence in moderately aged patients of obstructive jaundice was seen all the more normally. The most widely

recognized reason was Choledocholithiasis in 33.3% while carcinoma head of pancreas in 30.8%. Khurram et al in his investigation indicated choledocholithiasis as most normal reason for biliary obstruction. [16]

The female sexual orientation in the investigation were among more normal having stone illness; a discovering like that of other workers. [17] The females demonstrated high occurrence of obstructive jaundice on the grounds that the nerve stones are all the more ordinarily present among them.¹⁸⁻²⁰ The examination done by Vargus and Astete among male patients going through ERCP indicated that

choledocholithiasis as first and carcinoma of regular bile pipe as third basic diagnosis. [21]

Malignancies prompting check of biliary channels are ampullary carcinomas, tumors of nerve bladder reaching out into CBD, tumors driving metastasis (most common from gastrointestinal tract), cholangiocarcinoma and auxiliary lymphadenopathy at the degree of porta hepatis.²¹ Both sexual orientations are similarly influenced by malignancies of Biliary channels.²² Choledochal pimple is the inherent cystic dilatations of either or both intra and extra-hepatic biliary channels. The high pervasive zones are in Asia, similar to Japan, and are more normal 3 to multiple times in females.^{15, 23} Our examination indicated that biliary injuries were available in 7% of cases. After cholecystectomy few different examinations demonstrated horrendous injuries and ligation of CBD as one of the commonest causes. [24,26]

In non-industrial nations like Pakistan, because of non-accessibility of cutting edge analytic and restorative modalities in each city, trans-stomach ultrasonography is one of the non-obtrusive, effectively accessible and best pattern imaging modalities in patients with obstructive jaundice on the grounds that the outcomes demonstrated high affectability and particularity to discover the reason.

CONCLUSION:

Jaundice is more common in females is the most important conclusion of our study and Choledocholithiasis was the most common cause in these patients. The results of our study suggest that early diagnosis and intervention had a significant role to reduce the morbidity and mortality along with improving the prognosis of patients with obstructive jaundice.

Conflict of Interest: The study has no conflict of interest to declare by any author.

REFERENCES:

1. Tummalala P, Munigala S, Eloubeidi MA, Agarwal B. Patients with obstructive jaundice and biliary stricture±mass lesion on imaging: prevalence of malignancy and potential role of EUS-FNA. *J Clin Gastroenterol* 2013;47(6):532-7.
2. Fang Y, Gurusamy KS, Wang Q, Davidson BR, Lin H, Xie X, et al. Meta-analysis of randomized clinical trials on safety and efficacy of biliary drainage before surgery for obstructive jaundice. *Bri J Surg* 2013;100(12):1589-96.
3. Decker C, Christein JD, Phadnis MA, Wilcox CM, Varadarajulu S. Biliary metal stents are superior to plastic stents for preoperative biliary decompression in pancreatic cancer. *Surg Endoscop* 2011;25(7):2364-7.
4. Siddiqui AA, Mehendiratta V, Loren D, Kowalski T, Fang J, Hilden K, et al. Self-expanding metal stents (SEMS) for preoperative biliary decompression in patients with resectable and borderline-resectable pancreatic cancer: outcomes in 241 patients. *Digestive Dis Sci* 2013;58(6): 1744-50.
5. Shukla S, Kharat PR, Kumar K. Clinicopathological study on patients presenting with obstructive jaundice. *Int Surg J* 2018; 5(2):705-10.
6. Scheufele F, Aichinger L, Jäger C, Demir IE, Schorn S, Sargut M, et al. Effect of preoperative biliary drainage on bacterial flora in bile of patients with periampullary cancer. *Br J Surg* 2017; 104(2):e182-8.
7. Kim JJ, Walia S, Lee SH, Patel B, Vetsa M, Zhao Y, et al. Lower yield of endoscopic ultrasound- guided fine-needle aspiration in patients with pancreatic head mass with a biliary stent. *Digestive Dis Sci* 2015;60(2):543-9.
8. Spanheimer PM, Cyr AR, Liao J, Johlin FC, Hoshi H, Howe JR, et al. Complications and survival associated with operative procedures in patients with unresectable pancreatic head adenocarcinoma. *J Surg Oncol* 2014;109(7):697-701.
9. Adamsen S, Hansen OH, Funch-Jensen P, Schulze S, Stage JG, Wara P. Bile duct injury during laparoscopic cholecystectomy: a prospective nationwide series. *J Am Coll Surg* 1997;184:571-8.
10. Nuzzo G, Giuliani F, Giovannini I, Ardito F, D'Acapito F, Vellone M, et al. Bile duct injury during laparoscopic cholecystectomy: results of an Italian national survey on 56591 cholecystectomies. *Arch Surg* 2005;140:986-92.
11. Clarke JS, Barrett P, Fonkalsrud EW, Johnson JN, Longmire WP, Pops MA, et al. Pathogenesis and Diagnosis of obstructive jaundice. *Western J Med* 2006;112:44-58.