



INCIDENCE OF CAUSES OF OBSTRUCTIVE JAUNDICE – PROSPECTIVE STUDY DONE AT GASTROENTEROLOGY DEPARTMENT IN KURNOOL MEDICAL COLLEGE, KURNOOL.

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KEYWORDS : Common bile duct stone, Endoscopic retrograde cholangiopancreatography(ERCP),stricture, Choledochal cyst.

AIM: In the present study, in the department of gastroenterology, Kurnool Medical College, we wanted to know the causes of obstructive jaundice prospectively.

Materials: 270 patients were evaluated for the cause of obstructive jaundice from June 2014 to till date. These patients were either referred from other departments in the same college or admitted in gastroenterology department itself for evaluation of obstructive jaundice.

Methods: After clinical and biochemical tests, patients with conjugated bilirubin greater than 15 % of total bilirubin are further evaluated with Ultrasound abdomen for any evidence of dilated common bile duct, intrahepatic biliary radical dilation (IHBRD), Common bile duct stones, any intraluminal masses in the common bile duct, common hepatic duct, mass in the second part of the duodenum, and any mass in the head of pancreas. Depending on the findings further investigations like CT scan abdomen or MRCP done. Upper gastrointestinal endoscopy is performed to know the anatomy upto second part of the duodenum, to take the biopsy if any mass lesion was found at the Ampulla, or from infiltrated duodenal mucosa due to carcinoma head of pancreas. Finally ERCP was performed to confirm the diagnosis in doubtful cases and treat the cause, like removal of common bile duct stones, take the biopsy from peri-ampullary tumour, placing stents in bile ducts, both plastic or metal stents depending on the cause.

Results: Total 270 patients were evaluated for the cause of obstructive jaundice. 139 were males and 131 were females. Age group ranged from 9 years to 89 years. This is shown in Table.

Age group in years	Number of Patients		Total
	Male	Female	
< 10	01	00	01
11-20	06	05	11
21-30	10	08	18
31-40	25	24	49
41-50	29	28	57
51-60	34	34	68
61-70	29	29	58
71-80	04	03	07
81-90	01	00	01
Total	139	131	270

The most common cause of obstructive jaundice was choledocholithiasis which was found in 188 patients (69.62%). Second most common cause of obstructive jaundice is common bile duct stricture which was noted in 45 cases (16.6 %). Cholangiocarcinoma and peri-ampullary growth each was responsible in 10 cases (3.70%). Other less common causes were Hydatid cyst in 7 cases (2.59%), choledochal cyst Type 1 in 5 cases (1.85 %) and Gallbladder carcinoma in 5 cases (1.85 %). Post ERCP pancreatitis which is a serious complication of ERCP developed in three (less than 1 %) patients¹. All this data is represented in the following.

1. Choledocholithiasis 69.62%

2. Common bile duct stricture 16.60 %
3. Cholangiocarcinoma 3.70 %
4. Peri-ampullary growth 3.70 %
5. Hydatid cyst 2.59 %
6. Choledochal cyst type 1 1.85 %
7. Gallbladder carcinoma 1.85 %

Discussion: Jaundice is one of the most common symptoms encountered by the clinicians in their daily practice. Obstructive jaundice develops when there is obstruction to the flow of bile. Obstruction could be due to stones in the common bile duct, stricture of common bile duct due to post operative cause, cholangiocarcinoma, extrinsic compression by inflamed head of pancreas, mass lesion in the head of pancreas, clips or ligatures applied inadvertently during Laparoscopic cholecystectomy, Mirizzi syndrome and gall bladder carcinoma.

Obstruction of bile duct causes dilation of common bile duct, intra hepatic biliary dilation and dilatation of Gall bladder. Courvoisier' law states that in the presence of a palpably enlarged gallbladder which is nontender and accompanied with mild painless jaundice, the cause is unlikely to be gallstones². Obstruction of bile ducts causes important biochemical changes. These are elevation of conjugated bilirubin, elevation of alkaline phosphatase, gamma GT and elevated levels of ornithine carbamyl transferase³. In the early phases, ornithine carbamyl transferase is slightly more sensitive indicator of biliary obstruction than alkaline phosphatase or bilirubin, but the values still return to normal in the face of a persistent stricture³. Diagnostic imaging and blood tests will usually be able to distinguish the various causes of jaundice. Definitive treatment will depend on the cause of the jaundice. If common bile duct stones are detected, endoscopic removal of the stones obstructing the bile duct is recommended. Endoscopic image is shown below. Endoscopic stenting is sometimes necessary as a temporary measure to relieve the bile duct obstruction and clear any bacterial infection before definitive surgery. Thereafter, laparoscopic cholecystectomy is advised to remove the gallbladder, from which most gallstones originate. If the root cause of obstructive jaundice is malignant tumor, the long-term outcome of such patients is best served if the tumor can be surgically removed. Stricture in the distal common bile duct is diagnosed with MRCP and it is managed either by CRE balloon followed by stenting and wherever needed subjected to



ERCP image with black pigment stone extracted with balloon and double pitail stent.

Surgery. Echinococcus granulosus causing Hydatid cyst⁴ in the liver and biliary tree cause obstructive jaundice either by the size of cyst causing compression or by intra biliary rupture and might cause cholangitis

Conclusion: The most common cause of obstructive jaundice in our study is choledocholithiasis, followed by stricture of bile duct due to various causes.

References:

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