

ETIOLOGY, EPIDEMIOLOGICAL PROFILE AND RADIOLOGICAL EVALUATION OF OBSTRUCTIVE JAUNDICE AT A TERTIARY CARE CENTERLokesh Jain¹**HOW TO CITE THIS ARTICLE:**

Lokesh Jain. "Etiology, epidemiological profile and radiological evaluation of obstructive jaundice at a tertiary care center". Journal of Evolution of Medical and Dental Sciences 2015; Vol. 4, Issue 78, September 28; Page: 13645-13648, DOI: 10.14260/jemds/2015/1950

ABSTRACT: BACKGROUND AND AIM: Obstructive jaundice is nowadays usually referred to gastroenterology department and therefore, it is important to identify the common causes and relevant investigations to find out the cause. With this objective we conducted a study at Mahatma Gandhi Hospital, Jaipur to find out the etiology and epidemiological profile of patients presenting with obstructive jaundice to our department. **PATIENTS AND METHODS:** 50 patients of obstructive jaundice were evaluated thoroughly for etiology, epidemiological profile and radiological evaluation. **RESULTS:** Malignancy was more common in males while benign causes predominated in females. Carcinoma head of pancreas was most common cause of obstructive jaundice followed by choledocholithiasis. **CONCLUSION:** Malignant obstructive jaundice is more common as compared to benign obstructive jaundice and malignant causes are more frequent in males as compared to females Where benign causes predominate. Ultrasound should be the first diagnostic test to be performed and in selected cases CT and MRCP should be performed.

KEYWORDS: Obstructive Jaundice, Etiology.

INTRODUCTION: Obstructive jaundice is defined as jaundice due to extra or intrahepatic biliary obstruction. The etiology of obstructive jaundice may be benign or malignant.^{1,2,3} Symptoms of obstructive jaundice include pale stools, pain abdomen, fever and pruritus. USG abdomen, CT and MRCP are diagnostic tools for obstructive jaundice and ERCP is therapeutic.^{4,5,6} Each new mode of investigation is suitable for a specific situation and, therefore, it is important to identify the common cause of obstructive jaundice in a community and to find out which of the many tests available are most useful for detecting them.^{7,8,9} With this objective we conducted a study at Mahatma Gandhi Hospital, Jaipur to find out the etiology and epidemiological profile of obstructive jaundice patients.

PATIENTS AND METHODS: Study was conducted in Department of Gastroenterology, Mahatma Gandhi Hospital, Jaipur for a two year period ranging from 1 April 2013 to 1 April 2015. Patients in Gastroenterology OPD who presented with obstructive jaundice were selected for the study. A thorough clinical history and epidemiological profile of patients were recorded including age, sex, and other demographic characteristics and all patients were subjected to routine biochemical investigations and USG abdomen to confirm the diagnosis. CT abdomen was done in selected cases to find out the level of obstruction and respectability in cases of malignant biliary obstruction. ERCP was done in selected cases for both therapeutic and palliative purposes.

RESULTS: Out of 50 patients who were evaluated 30(60%) were male and 20(40%) were female. The mean age of the study population was 45 years (Range 8–87 years). Malignant obstructive jaundice was seen in 32(64%) patients while 18(36%) had benign aetiology.

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Carcinoma head of pancreas was the most common aetiology and was seen in 16(32%) cases followed by carcinoma gallbladder, seen in 9(18%) cases. Choledocholithiasis was the most common benign aetiology seen in 15(30%). Other causes included periampullary carcinoma, cholangiocarcinoma, pancreatitis, benign CBD stricture and others. (Table-1) Malignant causes of obstructive jaundice predominated in males (72%), whereas in females benign causes were predominant (58%). Specific clinical features included cholangitis in 20(40%), biliary colic in 27(54%), palpable gall bladder in 20(40%), fever in 18(36%), pruritus in 30(60%) weight loss in 30(60%), hepatomegaly in 25(50%) and clay stools in 25(50%) patients. Serum alkaline phosphatase was raised in 45(90%) patients. Serum bilirubin levels were significantly higher in malignant obstruction as compared to benign obstruction. No patients with benign cause of obstructive jaundice had a serum bilirubin above 15mg/dl while 60% of malignant obstructive jaundice patients had serum bilirubin levels above 15mg/dl. Abdominal ultrasound was able to diagnose dilatation of biliary system (intra or extrahepatic) in 46(92%) cases. CT scan was performed, and was able to delineate level of obstruction and cause of obstruction in 48(96%) and 44(88%) cases respectively. MRCP was performed in total of 15 cases and correctly identified level and cause of obstruction in (95%) cases including choledocholithiasis, choledochal cysts, periampullary & hilar mass and CBD stricture.

ERCP was done in total of 15 cases and was able to delineate the level and cause of obstruction in all cases including malignant ductal and hilar cholangiocarcinoma, periampullary carcinoma and choledocholithiasis.

DISCUSSION: This prospective study in a defined population revealed the aetiological spectrum, clinical features and utility of imaging in obstructive jaundice in our setting over a 24months period, the jaundice being proved by clinical evaluation, laboratory and radiological investigations. A striking finding in the present study was that 64% of patients had malignant lesions and only 36% had benign lesions. Only a limited outcome is expected in malignant cases, irrespective of the aggressiveness of the treatment.^{10,11,12} By the time carcinoma of the head of pancreas presents with obstructive jaundice, it is too advanced for radical surgery.^{13,14,15} In this study, malignant obstructive jaundice was found more commonly amongst the males than females while females had more of benign obstructive jaundice which was statistically significant ($p < 0.05$). Carcinoma of gallbladder was the commonest malignancy in females most likely related to higher incidence of chronic cholelithiasis and dietary factors.

The mean age of the patients with the benign and malignant aetiology of obstructive jaundice was 32 years and 48 years respectively. Most of the patients with the benign jaundice were between 22- 40 years of age while malignant causes were more common in the older patients and were maximally seen between 45-82 years of age.

Regarding the various malignant causes diagnosed carcinoma head of pancreas was the commonest (32%) followed by the carcinoma gall bladder (18%), periampullary carcinoma (8%) and cholangiocarcinoma (6%). Choledocholithiasis (30%) was the most common among benign causes of obstructive jaundice with CBD stricture, pancreatitis and choledochal cyst accounting for rest of the cases (6%). Weight loss and pruritus were more frequent (80%) in malignant biliary obstruction as compared to (40%) benign obstruction. Right hyochondriac pain was more frequent (65%) in benign causes as compared to malignant causes (35%). Fever was more common in benign (40%) as compared to malignant causes (20%).

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Hepatomegaly and palpable gall bladder were more frequently found in malignant (60%) as compared to benign causes (25%). Amongst the radiological investigations the diagnostic accuracy of ultrasound in defining the level of obstruction was 90% as compared to 95%, 96% and 100% for CT scan, MRCP and ERCP, respectively.

CONCLUSION: Malignant obstructive jaundice is more common as compared to benign obstructive jaundice and malignant causes are more frequent in males as compared to females where benign causes predominate. Ultrasound should be the first diagnostic test to be done and in selected cases CT and MRCP should be performed. ERCP should be reserved for therapeutic intervention only.^{16,17} Malignant lesions are far advanced when presented with obstructive jaundice and radical treatment is not possible in the majority.¹⁸

Aetiology	Total Cases	Male	Female
Malignant	32	23	9
CA Head Pancreas	16	14	1
CA Gall bladder	9	4	6
Periampullary CA	4	3	1
Cholangio CA	3	2	1
Benign	18	7	11
Choledocholithiasis	15	5	10
Pancreatitis	1	1	0
Benign CBD stricture	1	1	0
Choledochal cyst	1	0	1
Total cases	50	30	20

Table 1: Incidence of various causes of obstructive jaundice

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AUTHORS:

1. Lokesh Jain

PARTICULARS OF CONTRIBUTORS:

1. Assistant Professor, Department of Gastroenterology, Mahatma Gandhi Hospital & Medical College, Jaipur.

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Dr. Lokesh Jain,
Room No. 205.
Department of Gastroenterology,
Mahatma Gandhi Hospital &
Medical College, Jaipur.
E-mail: drlokeswam@gmail.com

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