International Surgery Journal
Khan ZA. Int Surg J. 2019 Jun;6(6):1876-1880
http://www.ijsurgery.com
pISSN 2349-3305 | eISSN 2349-2902

DOI: http://dx.doi.org/10.18203/2349-2902.isj20192060

Original Research Article

Clinical profile of patients with obstructive jaundice: a surgeon's perspectives

Zubair Afzal Khan*

Department of Surgery, Government District Hospital, Rajouri, Jammu And Kashmir, India

Received: 09 April 2019
Accepted: 25 April 2019

***Correspondence:**
Dr. Zubair Afzal Khan,
E-mail: zubairafzal7140@gmail.com

ABSTRACT

Background: There are various causes of obstructive jaundice, choledocholithiasis– the commonest. Patients with obstructive jaundice usually present with complain of yellow skin and eyes, pale stools, dark coloured urine, jaundice, and pruritus. Abdominal pain often misleading for diagnosis. The objectives of the study were to study the clinical profile of patients with obstructive jaundice.
Methods: The study included the patients clinically diagnosed as suffering from obstructive jaundice. Thorough history taking and clinical examination was done. Patients undergone for various laboratory investigations, and radiological evaluation.
Results: A total 201 patients were included in the present study. Males are more affected (55.72%) as compared to females. Elder age groups (>65 years; and 55-65 years) were commonly affected. 58.71% of patients have malignant causes for development of obstructive jaundice as compared to benign causes in 41.29% of patients. Choledocholithiasis (30.35%) is the commonest cause of obstructive jaundice followed by carcinoma of pancreas (25.87%). Jaundice is the commonest symptom of presentation.
Conclusions: Better understanding of the clinical profile in the patients with obstructive jaundice will facilitate appropriate management and lead to improved survival.

Keywords: Obstructive jaundice, Choledocholithiasis, Clinical profile

INTRODUCTION

Obstructive jaundice (surgical jaundice) in simple terms means the outflow of bile has been obstructed anywhere from the liver to the duodenum.[1] A correct pre-operative diagnosis in almost always possible today because of advances in imaging techniques over the decades.[2] Removal of block relieves the symptoms and often results in cure. In present day world surgical jaundice has become more of a medical entity as most of the obstructive jaundice cases are managed by Gastroenterologists by ERCP or by stenting rather than by surgeons.[3]

There are varied causes of obstructive jaundice, but it is most commonly due to choledocholithiasis (also called bile duct stones or gallstones in the bile duct) – presence of a gallstone in the common bile duct.[4] Other causes like, malignancies such as cholangiocarcinoma, periampullary and pancreatic cancers, and benign stricture including chronic pancreatitis have become increasingly prevalent.[5-7] There as also rise in iatrogenic causes of obstructive jaundice, like injury of biliary tract and cholangitis with the increase of invasive procedures performed on the biliary tract.[8,9]

Biliary tract disorders can be significantly found in worldwide population, and the quite majority of cases are

attributable to choledocholithiasis. 20% of persons older than 65 years in USA have gallstones and around 1 million newly diagnosed cases of choledocholithiasis are reported every year.[10] Patients with obstructive jaundice usually present with complain of yellow skin and eyes, pale stools, dark coloured urine, jaundice, and pruritus.[10] Abdominal pain often misleading for diagnosis– some patients with choledocholithiasis have painless jaundice, whereas some patients with hepatitis have distressing pain in the right upper quadrant. Malignancy often associated with the absence of pain and tenderness during the physical examination.[10] Patients with obstructive jaundice have tendency to develop nutritional deficits, infectious complications, acute renal failure, and impairment of cardiovascular function. Other adverse events such as coagulopathy, hypovolemia, and endotoxemia can be insidious and significantly increase mortality and morbidity.[11]

An accurate diagnosis can usually be made with combination of different approaches like, history, physical examination, and biochemical tests, and when appropriate cholangiography and liver biopsy and observation of the patient's course.[12] Early and precise detection of etiology of obstructive jaundice can help surgeons to accurately manage such patients and thus will improve quality of life of patient and improving the survival rates among the patients with malignant pathology.[13] Hence, present study was undertaken study the clinical profile of patients with obstructive jaundice..

METHODS

Type of study

Observational, prospective, non-randomized, cohort study.

Site of study

Department of Surgery, Sher-i-Kashmir Institute of Medical Sciences Soura, Srinagar, and Government District Hospital, Rajouri, Jammu & Kashmir.

Study duration

January 2005 to December 2009.

Ethical clearance

The study protocol was presente to Institutional Review Board for approval and it was approved by IRB, Sher-i-Kashmir Institute of Medical Sciences Soura, Srinagar.

Inclusion criteria

The patients, clinically diagnosed as suffering from obstructive jaundice and referred to the Department of Radio-Diagnosis for further evaluation.

Exclusion criteria

Exclusion criteria were patients below 15 years of age; and patients with jaundice due to causes other than obstructive pathology like hemolytic or hepatocellular jaundice.

The written informed consent was obtained from patients before enrolling them into the study. The study included the patients clinically diagnosed as suffering from obstructive jaundice. Thorough history taking and clinical examination was done in each patient included in the study. Patients also undergone for various laboratory investigations, such as, liver function tests for total bilirubin, conjugated bilirubin, alkaline phosphatase, hepatic trans aminases SGOT and SGPT, total serum proteins and serum albumin. Other hematological investigations included hemoglobin estimation, total leucocyte count, differential leucocyte count, platelet count, prothrombin time, International normalized ratio (INR), blood urea, serum creatinine, serum electrolytes. Patients also undergone radiological evaluation like, abdominal ultrasound to evaluate 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. The data were recorded in structured case record form.

Statistical analysis

The collected data were subjected to statistical analysis using Microsoft Office Excel. Data was expressed as absolute numbers with or without percentages, as means with standard deviation or as medians with ranges. Frequency comparisons were performed by chi-square test. A probability value less than 0.05 was considered to denote statistical significance.

RESULTS

A total 201 patients were included in the present study, who had fulfilled the inclusion and exclusion criteria defined for the study. In the study, more than half of the patients with obstructive jaundice were males (55.72%) with male:female ratio of 1.25:1. As per the age distribution of the patients, elder age groups were commonly affected with obstructive jaundice – age group of greater than 65 years: 34.33%; and age group of 55-65 years: 22.39%. Younger age groups were less affected. The mean age of patients was 56.68±23.34 years. A majority of patients (63.68%) patients were belong to urban area (Table 1).

According to Figure 1 regarding the etiology for the obstructive jaundice, 118 (58.71%) patients have malignant causes for development of obstructive jaundice as compared to benign causes in 83 (41.29%) patients. In exploring the causes in details, among malignant causes carcinoma of pancreas is commonest cause, responsible for about 1/4th of overall causes for development of

obstructive jaundice. Among the benign causes, choledocholithiasis (gall stone in common bile duct) is commonest cause, responsible for nearly 1/3rd of overall causes for development of obstructive jaundice (Table 2).

Table 1: Demographic characteristics of study population (n=201).

Variables	No. of patients	Percentage (%)
Gender		
Male	112	55.72
Female	89	42.18
M:F ratio	1.25:1	
Age (years)		
15-25	12	5.97
25-35	15	7.46
35-45	19	9.45
45-55	41	20.40
55-65	45	22.39
>65	69	34.33
Mean age	56.68±23.34	
Residence		
Urban	128	63.68
Rural	73	36.32

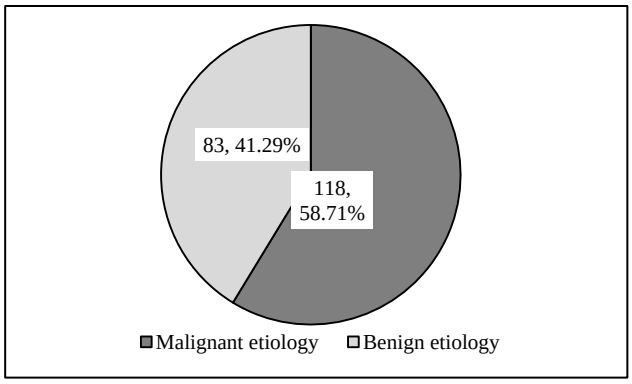

Figure 1: Causes of obstructive jaundice.

Table 2: Distribution of the patients according to etiology of obstructive jaundice (n=201).

Causes		No. of patients	%
Malignant cause	Carcinoma of pancreas	52	25.87
	Cholangiocarcinoma	32	15.92
	Periampullary carcinoma	19	9.45
	Secondaries in liver	15	7.46
	Total	118	58.71
Benign causes	Choledocholithiasis	61	30.35
	Benign biliary strictures	17	8.46
	Choledochal cyst	5	2.49
	Total	83	41.29

Table 3: Distribution of the patients according to symptoms.

Symptoms	Malignant cause (n=118)		Benign causes (n=83)		Total (n=201)	
	N	%	N	%	N	%
Jaundice	118	100.00	78	93.98	196	97.51
Pain abdomen	76	64.41	48	57.83	124	61.69
Itching	72	61.02	54	65.06	126	62.69
Loss of appetite	98	83.05	62	74.70	160	79.60
Loss of weight	94	79.66	59	71.08	153	76.12
Dark urine	91	77.12	35	42.17	126	62.69
Mass per abdomen	68	57.63	8	9.64	76	37.81

According to symptomatology for obstructive jaundice as per Table 3, jaundice is the commonest symptom presentation (97.51%)– in all patients with malignant etiology; and in 93.98% of patients with benign etiology. Other common representing symptoms include – loss of appetite (79.60%); and loss of weight (76.12%). Dark urine and mass per abdomen were commonly found in the patients with malignant etiology as compared benign etiology.

DISCUSSION

Obstructive jaundice is not a disorder, but it is a symptom of an underlying diseases condition involving the liver, the gallbladder or the pancreas. It will usually be managed by surgical intervention; hence it is also known as surgical jaundice.[14] In the present study, 201 patients with obstructive jaundice were included in the defined study period.

In the present study, males are more affected (55.72%) with obstructive jaundice as compared to females with Male:Female ratio of 1.25:1. The different studies have reported different in male and female predominance. In a study carried out by Anand et al of 80 cases of obstructive jaundice, there was a slight female preponderance at 1:1.05, other studies have following male:female ratio: Hussain Talpur et al: 1:2.32; Lawal et al: 1:0.78; Sharma et a: 1.05:1.[15-18]

As per the age distribution of the patients in the present study, elder age groups (>65 years; and 55-65 years) were commonly affected with obstructive jaundice as compared with younger age groups with the mean age of patients was 56.68±23.34 years. The mean age of incidence of obstructive jaundice found to be 48.5 years in the study done by Shukla et al.[19] In a study by Sharma et al mean age was 62.5.[18] Other studies also have reported similar age groups to be involved in obstructive jaundice.[15-17] Obstructive jaundice is one of the

commonest indication for abdominal operation upon the elderly. The elderly patients with benign etiology had a mortality rate of 26% but high incidence of nonfatal complications. Many of these unfortunate consequences could have been avoided had elective surgery been undertaken soon after the emergence of the first symptoms of biliary tract disease.[20]

Regarding the etiology for the obstructive jaundice, 58.71% of patients have malignant causes for development of obstructive jaundice as compared to benign causes in 41.29% of patients. Similar type of etiological distribution have been found in the study done by Gupta et al, in which it was observed that 63.89% of cases have malignant causes while 36.11% of cases have benign causes.[21] A study, done in Pakistan involving 60 patients of obstructive jaundice, reported that there were 56.6% of patients with malignant causes of obstruction and 43.3% of patients with benign causes of obstructive jaundice.[22] More higher prevalence (75.3%) of malignant causes obstructive jaundice have been found in study of Sharma et al.[18] Literature also suggest that malignant biliary tract obstruction (MBTO) is the commonest frequent cause of obstructive jaundice. Primary pancreatobiliary tract carcinoma and carcinoma of other nearby structure can cause compression of the biliary tract.[23]

In exploring the causes in details in the present study, choledocholithiasis– gall stone in common bile duct – is the commonest (30.35%) cause of obstructive jaundice followed by carcinoma of pancreas (25.87%). In a study done by Anand et al regarding clinical profile and the different modalities of treatment of obstructive jaundice, it was reported that common cause of obstructive jaundice was choledocholithiasis followed by malignancy.[15] In an Ethiopian study, it was reported that choledocholithiasis as the most common benign cause of obstructive jaundice.[24] According to literature, choledocholithiasis, primary or secondary, is the commonest cause of obstructive jaundice.[25]

In the present study, icterus– jaundice is the commonest symptom presentation (97.51%) in all patients with malignant etiology; and in 93.98% of patients with benign etiology. Other common representing symptoms include loss of appetite (79.60%); and loss of weight (76.12%). In a study by Gupta et al, it was observed that jaundice (91.67%), loss of appetite (77.78%) and abdominal pain (75.00%) were the commonest presentation for obstructive jaundice cases.[21] Jaundice was also the main presenting symptom in the different studies done by of Agarwal et al and Nadkarni et al.[26,27] In a study by Warren et al, the frequent presenting symptoms were jaundice, abdominal pain, loss of weight, and pruritus.[28]

There are various causes of obstructive jaundice, the most common are- choledocholithiasis; benign strictures of the biliary tract; pancreaticobiliary malignancies; and metastatic disease.[4] Due to lack of advanced diagnostic/ therapeutic facilities in developing countries like, India, the outcome of management of obstructive jaundice may be poor.[29] Thus, understanding the clinical profile in these patients will facilitate appropriate management and lead to improved survival.

CONCLUSION

Early and precise detection of etiology of obstructive jaundice can help surgeons to accurately manage such patients and thus will improve quality of life of patient and improving the survival rates. Better understanding of the clinical profile in these patients will facilitate appropriate management and lead to improved survival.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. Shah R, John S. Cholestatic Jaundice (Cholestasis, Cholestatic Hepatitis). In: StatPearls. Treasure Island (FL): StatPearls Publishing; 2019. Available at: https://www.ncbi.nlm.nih.gov/books/NBK48-2279/. Accessed on 16 January 2019.
2. Bertani H, Frazzoni M, Mangiafico S, Caruso A, Manno M, Mirante VG, et al. Cholangiocarcinoma and malignant bile duct obstruction: A review of last decades advances in therapeutic endoscopy. World J Gastrointest Endosc. 2015;7(6):582–92.
3. Clarke DL, Pillay Y, Anderson F, Thomson SR. The current standard of care in the periprocedural management of the patient with obstructive jaundice. Ann R Coll Surg Engl. 2006;88(7):610–6.
4. Wang L, Yu WF. Obstructive jaundice and perioperative management. Acta Anaesthesiol Taiwan. 2014;52(1):22-9.
5. Lipsett PA, Pitt HA. Acute cholangitis. Front Biosci. 2003;8:s1229-39.
6. Sinanan MN. Acute cholangitis. Infect Dis Clin North Am. 1992;6:571-99.
7. Lipsett PA, Pitt HA. Acute cholangitis. Surg Clin North Am. 1990;70:1297-312.
8. Liu YH, Qiu ZD, Wang XG, Wang QN, Qu ZQ, Chen RX, et al. Praziquantel in clonorchiasis sinensis: a further evaluation of 100 cases. Chin Med J (Engl). 1982;95:89-94.
9. Khuroo MS, Zargar SA, Mahajan R. Hepatobiliary and pancreatic ascariasis in India. Lancet. 1990;335:1503-6.
10. Bonheur JL, Ells PF, Talavera F, Anand BS, Kapoor VK, Minocha A. Biliary Obstructi. MedScape. Available at: https://emedicine.medscape.com/article/187001-overview. Last accessed on 16 January 2019.
11. Shrikhande SV, Barreto G, Shukla PJ. Pancreatic fistula after pancreaticoduodenectomy: the impact

of a standardized technique of pancreatico-jejunostomy. Langenbecks Arch Surg. 2008;393:87-91.
12. Anand S, Panda C, Senapati AT, Behera MR, Thatei C. A study on incidence, clinical profile, and management of obstructive jaundice. J Evid Based Med Healthc. 2016;3:3139-45.
13. Shehu K, Babameto A, Xinxo S, Shehu B, Duni A, Taci S, et al. Relation between the Demographic and Clinical Characteristic and the Etiology of Obstructive Jaundice. Mediterranean J Med Sci. 2015;2:1-8.
14. Assy N, Jacob G, Spira G, Edoute Y. Diagnostic approach to patients with cholestatic jaundice. World J Gastroenterol. 1999;5(3):252–62.
15. Anand S, Panda C, Senapati AT, Behera MR, Thatei C. A study on incidence, clinical profile, and management of obstructive jaundice. J Evid Based Med Healthc. 2016;3(59):3139-45.
16. Hussain Talpur KA, Mahmood Malik A, Iqbal Memon A, Naeem Qureshi J, Khan Sangrasi A, Laghari AA. Biliary bypass surgery - Analysis of indications & outcome of different procedures. Pak J Med Sci. 2013;29(3):799-802.
17. Lawal D, Oluwole S, Makanjuola D, Adekunle M. Diagnosis, management and prognosis of obstructive jaundice in Ile-Ife, Nigeria. West Afr J Med. 1998;17(4):255-60.
18. Sharma MP, Ahuja V. Aetiological spectrum of obstructive jaundice and the diagnostic ability of ultrasonography: a clinician's perspective. Trop Gastroenterol. 1999;20(4):167-9.
19. Shukla S, Kharat PR, Patbamniya N, Kumar K. Clinicopathological study on patients presenting with obstructive jaundice. Int Surg J. 2018;5:705-10.
20. Morse TS, Deterling RA Jr. Obstructive jaundice in the elderly patient. Am J Surg. 1962;104:587-90.
21. Gupta AK, Singh A, Goel S, Tank R. Profile and pattern of obstructive jaundice cases from a tertiary care teaching hospital of Uttar Pradesh. Int Surg J. 2017;4:743-6.
22. 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.
23. Jemal A, Siegel R, Ward E, Hao Y, Xu J, Thun MJ. Cancer statistics. CA Cancer J Clin. 2009;59(4):225-49.
24. Bekele Z, Yifru A. Obstructive jaundice in adult Ethiopians in a referral hospital. Ethiopian Med J. 2000;38(4):267-75.
25. Foley WD, Quiroz FA. The role of sonography in imaging of the biliary tract. Ultrasound Q. 2007;23(2):123-35.
26. Agarwal JB, Patel RA. Surgical management of obstructive jaundice. J Ind Med Ass. 1974;62(12):414-6.
27. Nadkarni KM, Jahgirdar RR, Kagzi RS. Surgical obstructive jaundice – a study of 26 cases. J Postgraduate Med. 1981;27(1):33-9.
28. 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.
29. Mehrdad M, Seyed AM, Mohammad Taghi MS. Obstructive jaundice in Iran: factors affecting early outcome. Hepatobiliary Pancreat Dis Int. 2008;7:516–9.

Cite this article as: Khan ZA. Clinical profile of patients with obstructive jaundice: a surgeon's perspectives. Int Surg J 2019;6:1876-80.