



Clinical Presentation and Different Treatment Modalities of Obstructed Jaundice

**Ahsan Ali Laghari^{1*}, Qamber Ali Laghari¹, Aijaz Ahmed Shaikh¹,
Ambreen Muneer² and Muhammad Pandhi¹**

¹General Surgery Department, Liaquat University of Medical and Health Sciences,
Jamshoro, Pakistan.

²Department of Surgery, Liaquat University of Medical and Health Sciences, Jamshoro, Pakistan.

Authors' contributions

This work was carried out in collaboration among all authors. Author AAL designed the study and wrote the protocol. Authors QAL and AAS wrote the first draft of the manuscript. Author AM guideline and author MP managed the literature searches and data analysis. All authors read and approved the final manuscript.

Article Information

DOI: 10.9734/JPRI/2020/v32i1730747

Editor(s):

(1) Dr. Jongwha Chang, University of Texas, USA.

Reviewers:

(1) Jitender K. Malik, Bharat Institute of Pharmacy, India.

(2) Sangita Arun Shelar, Pravara Institute of Medical Sciences, India.

Complete Peer review History: <http://www.sdiarticle4.com/review-history/58609>

Original Research Article

Received 27 April 2020
Accepted 01 July 2020
Published 25 August 2020

ABSTRACT

Objective: To determine the clinical presentation and different treatment modalities of obstructed jaundice at tertiary care Hospital.

Study Design: Prospective observational study.

Place and Duration: Present study was conducted in the Department of general Surgery of Liaquat University of Medical and Health Sciences, Jamshoro during two years from July 2015 to June 2017.

Patients and Methods: Total 50 patients having obstructed jaundice and either gender were evaluated after taking history, clinical examinations including specific investigations like ultrasound of abdomen, liver function test (LFT), magnetic resonance cholangiopancreatography (MRCP), computed tomography (CT) endoscopic retrograde cholangio pancreatography (ERCP), magnetic resonance imaging (MRI), percutaneous transhepatic cholangiography (PTC) biopsy, tumor markers and x- ray chest for diagnosis and prognosis purpose. All the data was recorded via self-made proforma.

*Corresponding author: E-mail: dr.ahsanallaghari@gmail.com;

Results: Out of all cases, 20 patients were in age group of 30 to 45 year, 21 patients were in age group 46 to 64 years and 09 patients were in age group 65 to 80 year. Thirty one patients were presented with intermittent jaundice and pain, 14 patients had jaundice, pruritus, pale stool, dark urine and 5 patients were presented with jaundice, pruritus, pale stool with dark urine, pain, anorexia and weight loss. Thirty one patients were diagnosed with benign lesions and 19 patients had malignant lesions. Most of the patients (26.52%) were treated by ERCP, stent. Fifteen underwent open surgery, and 9 were treated by palliative procedure, chemotherapy, radiotherapy and gene therapy.

Conclusion: Obstructed jaundice is a critical problem all over the world, in which initially patients present with jaundice, pain, pruritus with pale stool, dark urine and weight loss. Patients can be treated by ERCP, stent. Fifteen patients underwent open surgery and 9 were treated by palliative procedure, chemotherapy, radiotherapy and gene therapy.

Keywords: Obstructed jaundice; clinical presentation; treatment options.

1. INTRODUCTION

Word jaundice means yellowish skin discoloration, mucous membrane due to raised bilirubin concentration in the blood, sclera or failure of bile flow in the intestine; means any pathology arises inside the duct, in the wall or outside of the wall. Obstruction of the biliary tree started from the liver up to second part of duodenum; [1] obstruction due to stone, sclerosing cholangitis, worm infestation, cystic lesion, secondary due to trauma, ligation, fibrosis, cholangiocarcinoma, adenocarcinoma of gallbladder, periampullary ampullary carcinoma and secondary tumor arises ahead of pancreas. [2] Whatever causes the biliary tree obstruction, in which failure to bile flow in the intestine may lead obstruction of bile. Bile stasis may lead to increased concentration of conjugated bilirubin in the blood, which may result in deep seated jaundice, pale stool, dark urine and pruritus. If obstruction arises due to small stone or infections the patients present with Charcot trade fever along with rigors, pain and jaundice. In obstruction due to malignancy typically, patients present with deep seated jaundice with or without pain, anorexia weight loss and ascites [3]. Obstruction of left and right hepatic ducts and common bile duct (CBD) leads to increase in bilirubin level that subsequently piles up in the skin or mucous surfaces producing jaundice [4].

There several investigations are introduced in the diagnosis on etiological basis of obstructed jaundice, including laboratory investigations like serum direct and indirect bilirubin levels, gamma glutamyl transferase, coagulation profile, alkaline phosphate, aminotransferases, protein albumin/globulin (A/G) ratio. [4-6] Ultrasonography is best primary test for obstructive jaundice, it can be diagnose several etiologies like calculus in common bile duct and its size including hepatic

metastases. After ultrasound some other imaging diagnosis like magnetic resonance colangiopancreatography showing space occupying lesion within the tube, endoscopic retrograde colangiopancreatography for diagnostic or therapeutic purpose for lesion seen in the tube [7], computed tomography for diagnose or staging purpose either pathology in the tube, outside the tube and tumor in head of pancreas [8], magnetic resonance imaging, magnetic resonance angiography for soft tissue involvement [9]. Percutaneous trans hepatic cholangiography for klat skin tumor, upper tract obstruction or drainage of bile [10]. Patients of obstructive jaundice are at high risk of hepato renal syndrome, hepatic encephalopathy, infection, disseminated intra vascular coagulations. [11] Patients admitted with critical conditions will need emergency iv fluid, antibiotics, electrolyte, diuretics (Manitol) lactulose and minimal surgical interventions [12]. During an ERCP, stents can be passed in bile ducts, to allow drainage of bile into intestine and can give the biopsy from bile ducts or the pancreas. [13] Common bile duct, open exploration measured as a standard technique following ERCP failure or lack of the availability of the laparoscopic exploration of common bile duct, it means calculus extraction from the bile duct after opening, then CBD closure with or without T tube insertion. [14] However the treatment of the obstructed jaundice suggests many procedures according to jaundice genesis, its staging, severity and long-term planning etc. [15] The purpose of this study was to determinate clinical presentation and different treatment modalities at tertiary care Hospital.

2. MATERIALS AND METHODS

This prospective observational study was carried out at general surgery department of Liaquat

University of medical and health sciences, Jamshoro. Study duration was two years from July 2015 to June 2017. Total 50 patients having proved obstructed jaundice and either gender were included in the study. Patients less than 12 years of age and those who were not willing to participate in the study were excluded. Patients were assessed after taking medical history, clinical examinations and specific laboratory and radiological investigations like abdominal ultrasound, liver function test (LFT), magnetic resonance cholangio pancreatography (MRCP), computed tomography (CT) endoscopic retrograde cholangio pancreatography (ERCP), Magnetic resonance imaging (MRI), percutaneous transhepatic cholangiography (PTC) biopsy, tumor markers (CA 19-9_CEA) and x- ray chest for diagnosis and prognosis purpose. After diagnosis, patients underwent different treatment modalities. All the data was collected via self-made proforma. Data was analyzed by using SPSS version 20.

3. RESULTS

Total 50 patients were treated. Twenty patients were in age groups of 30 to 45 years, 21 patients were in age groups 46 to 64 and 9 patients were in age group 65 to 80 years. Males were in majority 62% and females were 38%. (Table 1).

Thirty one patients were presented with intermittent jaundice and pain, 14 patients had jaundice with purities, pale stool and dark urine and 5 patients were presented with jaundice, purities, pale stool, dark urine, pain, anorexia and weight loss. (Table 2).

In this study 31 patients were diagnosed with benign lesions and 19 patients were diagnosed with malignant lesions. (Table 3).

In this study 15 patients underwent open surgery, 26 patients were treated by ERCP with stent and 9 patients were treated by palliative procedure, radiotherapy, chemotherapy and gene therapy. (Table 4)

Table 1. Age and gender distribution n=50

Age	No of Patients	%
30 to 45 year	20	(40.0%)
46 to 64 year	21	(42.0%)
65 to 80 year	09	(18.0%)
Gender		
Male	31	(62.0%)
Female	19	(38.0%)

Table 2. Clinical presentation of patients n=50

No of Patients	Clinical Presentation
31	Intermediate Jaundice , pain
14	Jaundice. Pruritus, pale stool and dark urine
05	Jaundice. Pruritus, pale stool. Dark urine, anorexia , weight loss and pain .

Table 3. Patients distribution according to benign and malignant lesions n=50

No. of Patients	Stage (Open Surgery)	Percentage
31	Benign lesion	62.0%
19	malignant lesion	38.0%

Table 4. Treatment options n=50

No of Patients	Percentage %	Options
15	30%	Open surgery
26	52%	ERCP, STENT
09	18%	Palliative procedure

4. DISCUSSION

Jaundice is the common manifestation of the biliary tract disorders and the assessment of obstructive jaundice is the common problem faced by general surgeons. Patients of surgical jaundice presented in outpatients department (OPD) at an advanced stage are so difficult to treat and diagnosed. In this study males were 62% and females were 38%, these findings were consistent to the study of Selvasekaran R et al. [16]; as in their study out of 50 patients, 28 were males and Prabakar A et al. [17] also found that male patients were 66.7% and females were 33.3%.

In this study 20 patients were in age groups of 30 to 45 years, 21 patients were in age groups 46 to 64 and 9 patients were in age group 65 to 80 years. Consistently Selvasekaran R et al. [16] reported that most common age groups were 41 to 50 years and 51 to 60 years. However Prabakar A et al. [17] reported that most of the patients 40% were aged 51 to 70 years.

In this study thirty one patients were presented with intermittent jaundice and pain, 14 patients had jaundice with purities, pale stool and dark urine and 5 patients were presented with jaundice, purities, pale stool, dark urine, pain, anorexia and weight loss. Chalya LP et al.[18]

reported that patients age range was from 12 to 78 years and according to clinical presentation, jaundice was in 48 patients, clay colored stool was in 43 cases, pruritus was in 40, weight loss in 5, pain in 48, scratch mark was in 30, and lump was seen 1 patient. However, Selvasekaran R et al[16] and Prabakar A et al[17] also found almost comparable findings regarding clinical presentation. In the study of Mangam NP et al[19] also some comparable findings of clinical presentation were reported.

In this study 15 patients underwent open surgery, 26 patients were treated by ERCP with stent, 9 patients were treated by palliative procedure, radiotherapy, chemotherapy and gene therapy. On the other hand Chalya LP et al.[18] reported that 64 patients were treated by cholecystojejunostomy, 18 with choledochoduodenostomy, 10 with cholecystectomy and Hepiticojejunostomy was performed in 4 cases. While Selvasekaran R et al[16] reports that 25 patients underwent surgery, 32% underwent palliative therapy in the form of chemotherapy and two patients were given ascitic fluid tapping, 44% patients were managed by triple bypass for gastrointestinal and biliary drainage, while 44% were treated with choledocholithotomy & choledochoduodenostomy for calculus disease.

In this study 31 patients were diagnosed with benign lesions and 19 patients were diagnosed with malignant lesions. Sharm & A huja et al[20] stated that gallbladder carcinoma may present picture of obstructive jaundice. Siddique K et al.[21] stated in their study that Benign causes were 43.33%, Malignant causes were 56.66%. While inconsistently, Roy C B et al[22] reported that 58% patients had malignant lesions and remaining had benign obstructed jaundice. Gameraddin M et al.[23] reported that the benign causes were in 62% cases and malignant causes were in 33% patients, and most patients presented with clay colored stool, pruritus, anorexia, abdominal pain and scratch marks.[20].

5. CONCLUSION

It was concluded that the obstructed jaundice is a serious and critical condition. Commonest clinical features were pain, pruritus, pale stool, dark urine, anorexia and the weight loss. This type of patients should be investigate and treatment on emergency basis to decrease the morbidity and mortality. Patients of obstructed jaundice can be treated by open surgical procedure, ERCP, stent, by pass procedure chemotherapy, radio therapy, and gene therapy.

CONSENT

As per international standard or university standard, patient's written consent has been collected and preserved by the author(s).

ETHICAL APPROVAL

Ethical approval has been taken from the authority to carry out the research.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Ahmed I, Jan AU, Ahmad R .Obstructive jaundice. J Postgraduate Med Inset .2001; 15:194-8
2. Syed N,Mohammad SA ,Umair UL, ,shafique UR .Etiological spectrum of obstructive jaundice. Med Channel 2010;16:299-301.
3. Khurram S, Ali A, Mirza S et al .Evaluation of the aetiological spectrum of obstructive jaundice ,J Ayub Med Coll Abbotabad.2008;2:62-66.
4. Afzal MN, Ahmad QA, Rahman UA. Diagnostic Outcomes and Management of Patients Presenting with Obstructive Jaundice in Surgical Department of Services Hospital Lahore: A Prospective Cross Sectional Study. P J M H S 2019;13;1;181-84
5. Jawed R . Relation between the clinical presentation and etiology of obstructive jaundice. Kufa Med Journal 2011;14: 209-2013.
6. Kobayashi T, Makuuchi M , Sano K, Koyama k ,Moloi T .Repeated obstructive jaundice and acute pancreatitis caused by metastatic liver tumor an unusual cause of Hepato gastro enterology .2005 ;52 : 220-222.
7. Gaffor A, Buladi G Q, Imran M .Role of imaging in obstructive jaundice. J Surg Pakistan 2004; 9:24-26.
8. Khuram M, Durani AA, Hassan Z et al. Endoscopic Retrograde Cholangopancreatography evaluation of patients with obstructive jaundice. J Coll Phy Surg Pak. 2003; 13:325-8.
9. Gameraddin M, Abdulgafar R, Yousef M.The role of ultra sound in diagnosis of obstructive jaundice causesin sudanese population. IOSR Journal of Nursing and Health Sciences .2013; 1: 25-28.

10. Baris NB, Anjum MN, Sabir S, Aslam MI. Computed Tomography in obstructive jaundice preponderance of dilated intra hepatic biliary channels in left lobe. Pakistan Postgrad Med J. 2000;11: 29-31.
11. Munair k, Bari V, Yaqoob j, Khan DBA, Usmsn MU. The role of magnetic resonance imaging MRI in obstructive jaundice. J Pak Med Asso. 2004;54:128-32.
12. Acalovschi M. Cholangio carcinoma, Risk factors, diagnosis and management. Rom J Intern Med. 2004;42:41-58
13. Having an ERCP (endoscopic retrograde cholangio pancreatogram). <https://www.guysandstthomas.nhs.uk/resources/patient-information/gi/having-an-ercp.pdf>. 1-8
14. Ali MM, Helmy MZ, Gomaa E. Choledochoduodenostomy versus T-tube drainage in patients have stones in common bile duct with risk factors of post-operative missed stones. International Surgery Journal. 2019;26;6(12): 4343-7
15. Petrovskiy AN, Popov A Ju, Bykov MI, Barishev AG, Lishchishin VYa, et al. Differentiated Approach and Steps in the Obstructive Jaundice Patients Treatment. J Surg Oper Care 2018;4(1): 101.
16. Selvasekaran R, Nagalakshmi G, Anandan H. Clinical Spectrum of Presentation of Obstructive Jaundice in Inflammation, Stone Disease and Malignancy. Int J Sci Stud 2017;5(4):10-14
17. Prabakar A, Raj RS. Obstructive jaundice: a clinical study. J. Evolution Med. Dent. Sci. 2016;5(28): 1423-1429
18. Chalya LP, Kanumba SE, Mchembe M. Etiological spectrum and treatment outcome of obstructive jaundice at a university teaching hospital in north western Tanzania: A diagnostic and therapeutic challenges. BMC Research 2011; 4 :147.
19. Mangam NP, Dakhore SD, Bodade RM, Dhurve AS, Dhoran AP. Presentation, Etiology and Management of Obstructive Jaundice: A Prospective Study. JMSCR;2018;06;07;207-15
20. Sharma M P Ahuja V. Aetiological spectrum of obstructive jaundice and diagnostic ability of ultra sonography. A clinician's perspective tropical
21. Siddique K, Ali Q, Mirza S, Jamil A, et al. Evaluation of the Aetiological spectrum of obstructive jaundice. J Ayub Med coll Abbottabad. 2008 ;20 :4
22. Roy C B, Hanifa A M Alam SM. Etiological Spectrum of Obstructive Jaundice in a Tertiary Care Hospital, Gobil journal of Medical Research 2015;4;1.
23. Gammerdin M, Omer S, Salih S, Suha A, Elsayed. Sonographic Evaluation of Obstructive Jaundice. Open Journal of Medical Imaging. 2015;5:24- 29

© 2020 Laghari et al.; This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Peer-review history:
The peer review history for this paper can be accessed here:
<http://www.sdiarticle4.com/review-history/58609>