SHORT COMMUNICATION

Pattern and Management of Obstructive Jaundice in Wad Medani Teaching Hospital, March 2014 -2015

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Abstract:

Obstructive jaundice is not uncommon in this area certainly with what is reported in the literature, malignant jaundice is more common than choledocholithiasis. The pre-operative management followed the international guidelines; most of the surgery done to the malignant jaundice was palliative because of the late presentation.

Endoscopic service in management of obstructive jaundice is important and shall be utelized after completion of the new GIT Centre-Wad Medani Hospital. This study was a prospective cross sectional descriptive study, conducted in Wad Medani hospital - Gezira state – Sudan from March 2014 to March 2015. Wad Medani Teaching Hospital is a tertiary hospital with 600 beds serving all Gezira state and nearby states

Material and Method: 124 patients admitted to hospital with symptoms and signs of obstructive jaundice including; yellow coloration of the sclera, dark urine,pale stools, itching, with or without the association of vomiting, abdominal pain, abdominal mass and weight loss. Diagnosis was confirmed by history, examination and biochemical and radiological investigations.The data was analyzed by computer using SSPS.

Results: 52(41.9%) were males and72 (51.8%) were females, with male to female ratio of 1:1.3. The cases of obstructive jaundice were found to be distributed among their age groups from 18-40yr (15.3%),41-60yr(31.5%) , 60yr and above (53.2%).

Definitive diagnosis after completion of investigations results showed that cases due to common bile duct (CBD) stone and carcinoma of the head of pancrease were 55 (44.4%) and 52 (41.9%) respectively. The relation between the diagnosis and sex results showed CBD stone in females was 37(51.4%) where as in males carcinoma of the head of pancrease was 25(48.11%),

ERCP was used in 67(54%) patients both for diagnostic and therapeutic indications.

The operative intervention was also studied for all patients with obstructive jaundice and the results showed that 48(38.7%) patients underwent surgical intervention with 7(5.6%) CBD exploration and 41(33.1%) by pass surgical operation.

Conclusion:

ERCP has a promising role in the study area in managing patients with obstructive jaundice. The family physicians have an important role to play in early detection and referral of patients with obstructive jaundice to hospitals to avoid delayed presentation and minimize the harmful effects of hyper bilirubinemia on the liver so the step should start with how to detect the case and after that what to do for the case before referral to nearby hospital.

Key words: malignant jaundice, choledocholithiasis, hyperbilirubinemia.

Introduction:

Jaundice (derived from French word ‘jaune’ for yellow) or icterus (Latin word for jaundice) is a yellowish staining of the skin, sclera and mucous membranes by deposition of bilirubin in these tissues. [(1)].

Jaundice indicates excessive levels of conjugated or unconjugated bilirubin in the blood and clinically apparent when the bilirubin level exceeds 2mg/dl (34.2 µmolperL). It is most apparent in natural sunlight. It may be undetectable in artificial or poor light. In fair-skinned patients, jaundice is most noticeable on the face, trunk, and sclerae; in dark-skinned patients, it’s noticeable on the hard palate, sclerae, and conjunctivae. .

Causes of jaundice can be classified into pre-hepatic, hepatic or post hepatic. In this review, the focus was on post hepatic causes of jaundice (obstructive or surgical cholestasis).

Obstructive jaundice is not a definitive diagnosis and early evaluation to establish the etiology of the cholestasis is crucial to avoid secondary pathological changes (e.g. secondary biliary cirrhosis) if obstruction is not relieved. (2)

An accurate knowledge of the anatomy of the liver and biliary tract, and their relationship to associated blood vessels is essential for the performance of hepatobiliary surgery because wide anatomic variations are common. The classic anatomic description of the biliary tract is present in 58% of the population. (3)

The liver, gallbladder, and biliary tree arise as a ventral bud (hepatic diverticulum) from the most caudal part of the foregut early in the fourth week.

This divides into two parts as it grows between the layers of the ventral mesentery: the larger cranial part (pars hepatica) is the primordium of the liver, and the smaller caudal part (pars cystica) expands to form the gallbladder, its stalk becoming the cystic duct. The initial connection between the hepatic diverticulum and the foregut narrows, thus forming the bile duct. As a result of the positional changes of the duodenum, the entrance of the bile duct is carried around to the dorsal aspect of the duodenum. (4)

The biliary system can be broadly divided into two components, the intra-hepatic and the extra-hepatic tracts. The secretory units of the liver (hepatocytes and biliary epithelial cells, including the peribiliary glands), the bile canaliculi, bile ductules (canals of Hering), and the intrahepatic bile ducts make up the intra-hepatic tract while the extra-hepatic bile ducts (right and left), the common hepatic duct, the cystic duct, the gallbladder, and the common bile duct constitute the extra-hepatic component of the biliary tree. (5)

Material and Methods:

Prospective cross sectional descriptive study.done in Wad Medani Hospital, Gezira state, Sudan, from March 2014 to March 2015

Patients admitted to hospital with symptoms and signs of obstructive jaundice including ;yellow coloration of the sclerae ,dark urine ,pale stools, itching, with or without the association of vomiting, abdominal pain,abdominal mass and weight loss. Diagnosis was proved by history, examination and biochemical and

radiological investigations as obstructive jaundice.
Data was collected using a pre-tested structured questionnaire processed and analyzed statistically using SPSS computer software version 22. Percentage was calculated for the various descriptive values and frequencies obtained and the mean values and standard deviation for normal distribution test.

Results:

82% of patients with obstructive jaundice in Wad Medani Teaching Hospital were from central states Sudan, with 9.7% of patients from Southern Sudan.
63patients were admitted via emergency department and 58 patients from private clinics and 3 from PHC referral. 44.4% of cases were due to CBD stones in both sexes.

Table 1: Distribution of patients by causes of jaundice N=124

Causes	Frequency	Percent	Valid Percent	Cumulative Percent
CBD stone	55	44.4	44.4	44.4
Ca Head of Pancreas	52	41.9	41.9	86.3
Periampullary carcinoma	6	4.8	4.8	91.1
CBD stricture	2	1.6	1.6	92.7
Cholangiocarcinoma	8	6.5	6.5	99.2
Mirriz's syndrome	1	.8	.8	100.0
Total	124	100.0	100.0	

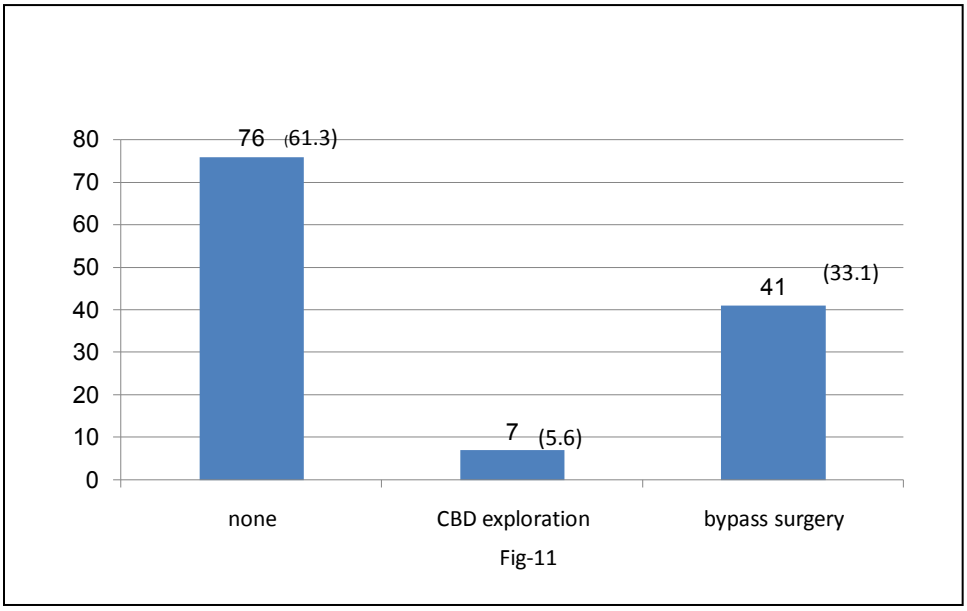

Figure 1: Operative interventions in patients with obstructive jaundice

Discussion:

The total number of patients at the end of the study period was found to be 124 patients, 52(41.9%) were males and72 (51.8%) were females,with male to female ratio of 1:1.3 and the cases of obstructive jaundice were found to be distributed among their age groups from 18-40yr (15.3%),41-60yr(31.5%) , 60yr and above (53.2%).

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ERCP was used in 67(54%) patients both for diagnostic and therapeutic roles. The operative intervention was also studied for all patients with obstructive jaundice and the results showed that 48(38.7%) patients underwent surgical intervention with 7(5.6%) CBD exploration and 41(33.1%) by pass surgical operation (fig-1).

In a descriptive prospective study undertaken to highlight the etiological spectrum, treatment outcome of obstructive jaundice conducted at Bugando Medical Centre, Tanzania between July 2006 and June 2010, a total of 116 patients were studied. Females out numbered males by a ratio of 1.3:1. Patients with malignant obstructive jaundice were older than those of benign type. Carcinoma head of pancrease was the commonest malignant cause of jaundice where as choledocholithiasis was the commonest benign cause. Abdominal ultrasound was the only diagnostic imaging done in all patients and revealed dilated intra and extra-hepatic ducts, common bile stones and abdominal masses in 56.2%, 78.9%, 58.1% and 72.4% of the cases respectively.

References

1. Roche SP, Kobos R. Jaundice in the adult patient. [Review] [20 refs]. American Family Physician 69(2):299-304, 2004.
2. C D Briggs Peterson. Investigation and management of obstructive jaundice.
3. Surgery 25[2], 74-80. 2007.
4. KoenraadJ.Mortelé and Pablo R.Ros. Anatomic Variants of the Biliary Tree MR Cholangiographic Findings and Clinical Applications .AJR Am.J.Roentgenol. 177, 389-394. 2001.
5. M.LAMAH 1NDKAGHD. Anatomical Variations of the Extrahepatic Biliary Tree: Review of the World Literature. Clinical Anatomy 14, 167-172. 2001.
6. JACQUES GILLOTEAUX. Introduction to the Biliary Tract, the Gallbladder and Gallstones. MICROSCOPY RESEARCH AND TECHNIQUE 38, 547-551. 1997.