



PROFILE OF MALIGNANT EXTRA HEPATIC BILIARY OBSTRUCTION IN TERTIARY CARE CENTRE

Gastroenterology

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ABSTRACT

Background and aims: Malignant EHBO is a common condition seen by gastroenterologist. There is scant data from south Asia about demography, clinical, laboratory, imaging & endoscopy features of patients with malignant EHBO.

Material and Methods: We retrospectively analyzed our two year data. Diagnosis was based on imaging with cytological confirmation. Statistics used was percentage, median and range for Parametric data

Results: Median age of the patients was 58 years (range 24-85 years), 43% were females. Carcinoma head of pancreas (CAHOP) 120(40%), periampullary carcinoma (PAC) 80 (26.6%), Gallbladder carcinoma (GBC) diagnosed in 50(16.6%) patient ,Cholangio carcinoma (CCA) 50 (16.6%). Diabetes and gall stones were present (10 % & 76% in GBC,60% & 4.1% in CAHOP, 4.5 % & 22.5% in PAC, 10% & 8% in CCA). Presenting symptoms were cholestatic jaundice, pain right hypochondrium, fever followed by weight loss, anorexia, vomiting and debility. Palpable gallbladder lump was present in 64 % of GBC, 90% of CAHOP, 47.5% of PAC and 10% of CCA patients. Cholangitis was present in 50% GBC, 87.5% CAHOP, 48.75% PAC and 72% of CCA patients. Imaging revealed liver infiltration in 66% in CGB , 7.5% of CAHOP & 6.25% PAC and 12% CCA patients

Conclusions: CAHOP (40%) is most common cause of malignant EHBO in South India. Most patients of malignant EHBO except PAC presents in advanced stage. Palpable gallbladder present in nearly 60 % of cases, while cholangitis present in two third of the patients.

KEYWORDS

Extra hepatic biliary obstruction; Gallbladder carcinoma; Pancreatic carcinoma; Periampullary carcinoma; Cholangio carcinoma

INTRODUCTION

Malignant EHBO is a common condition seen by gastroenterologist. There is scant data from south Asia about demography, clinical, laboratory, imaging & endoscopy features of patients with malignant EHBO. Our hospital is a tertiary care centre. Patients with malignant extrahepatic biliary obstruction are provided biliary drainage through Endoscopic and percutaneous biliary drainage with or without metal stent placement by our department, while resectable patients of periampullary carcinoma, cholangiocarcinoma and carcinoma head of pancreas undergo preoperative biliary drainage in case of high bilirubin (>20mg/dl) or cholangitis. We analyzed our last more than six years data by reviewing inpatient files of patients with collection and analysis of complete data.

METHODS

Data was collected over two years data of patients with malignant EHBO admitted to our hospital. Most of the patients were diagnosed on the basis of ultrasound, which also revealed type of block, extent of disease, liver and lymph node metastasis. In patients with no clear documentation of advanced disease on ultrasound Compound tomography (CT) abdomen was also done for staging. Cytological confirmation by USG guided fine needle aspiration cytology or endoscopic versus percutaneous biliary brushing. FNAC from lymph nodes and ascitic fluid cytology revealed malignant spread (Table 1).

Table 1: Demographic profile of patients with malignant extrahepatic biliary obstruction with different etiologies

	GBC	CAHOP	PAC	CCA
Sex ratio Male: Female (%)	61:39	76:24	76:24	60:40
Age in years mean (range)	59 (23-76)	60(23-86)	58(30- 81)	58(30-85)
Frequency in overall (%)	50(16.6)	120(40)	80(26.6)	50(16.6)
Diabetes mellitus	10(20%)	72(60%)	2(4.5%)	5(10 %)
Gall stone disease	38(76%)	5(4.1%)	18(22.5%)	4 (8 %)
History of cholecystectomy	20(40%)	2(1.6%)	1(1.25%)	4(8%)

RESULTS

On analysis of data (%), periampullary carcinoma (PAC was the most

common etiology for malignant EHBO in our patients, it was diagnosed in 120(40%) of patients, while other etiologies were carcinoma head of pancreas (CAHOP) in 80(26.6%), carcinoma Gall bladder (CGB) in 50(16.6%), cholangiocarcinoma (CCA) in 50 (16.6%). Mean age of the 300 patients studied was 58 years +/- nine years (age range 24-85 years). It was comparable among all the groups. Majority of patients are males compared to females. Presenting symptoms were cholestatic symptoms 264 (88%), weight loss 145(48.3%), anorexia 235(78.3%), pain right hypochondrium (RHQ) 207(69%), gastrointestinal bleed in the form of hematemesis and melena 7 (2.3%) and vomiting in 33(11 %). On comparing presenting symptoms of different etiologies we observed that cholestatic symptoms were comparable (more than three fourth of the patients) between different groups, while pain in RHQ was more common in CAHOP then in GBC, PAC and CCA patients. Fever as presenting complaint was more common in CAHOP compared to others suggestive of higher incidence of cholangitis. Icterus was present in nearly 90% of the patients in all groups, hepatomegaly was present in more than two third of the patients. Palpable gallbladder lump was less common in CCA. We observed that associated diseases like diabetes mellitus was most common with CAHOP then with other etiologies. History of cholecystectomy was present more commonly present in GBC and CCA. Laboratory reports revealed that High white blood cell count (> 11, 000/cumm) suggestive of cholangitis was present most commonly in CAHOP then other groups of patients. Abnormal Liver function tests as high median bilirubin was 12.2 mg /dl (range 1.2-36 mg /dl, normal < one mg/ dl); serum alkaline phosphatase 1108 IU/dl (range 118-6280 IU/dl), raised SGPT (>two times) was present most commonly in CAHOP. Liver infiltration was present most commonly in GBC. Gall stones were present most commonly in association with GBC then other etiologies.. In CAHOP group 65(54.1%) patients underwent surgery, 45 patients(37.5%) underwent ERCP and plastic stenting (most were presurgical drainage), 25(20.8%) underwent ERCP and SEMS placement , patients underwent endoscopic papillotomy and biopsy and remaining patients declined any intervention. In PAC group all patients were referred for surgery, but 14 patients declined any treatment. Endoscopic biliary drainage and plastic stenting was done in 55(68.75%), only endoscopic papillotomy in seven patients. In CCA group 30 (60%) referred to surgeons , 12(24%) underwent ERCP and plastic stenting and four patients underwent endoscopic SEMS placement followed by intraluminal brachytherapy.

DISCUSSION

The present study has highlighted the fact that malignant EHBO is predominantly a disease of middle aged people with predominantly male population. Present study revealed that CAHOP was the most common etiology for malignant EHBO in our patients (40%), while other etiologies were PAC (26.6%), GBC(16.6%), and CCA(16.6%). Our data is different compared to other study published from India in which on ultrasound evaluation malignant EHBO was much more common than benign causes (75.3% Vs. 24.7%) with Gall Bladder Carcinoma constituting (28.7%), Carcinoma Pancreas (26.5%), Cholangio Carcinoma (10.8%) and Ampullary Carcinoma (9.8%) [1]. While comparing patient groups with different etiologies for malignant EHBO, we observed that GBC is predominantly a disease of middle aged female (mean age 59 years), who present with jaundice, weight loss, anorexia, pain RUQ, hepatomegaly, gallbladder mass and fever. This constellation of clinical features is similar to that reported from India [2-4] and other countries [5,6] except presence of gallbladder mass and history of fever which is more common in over patients which likely reflects delayed presentation and late referral to our centre. These finding emphasize teaching by Strauch et al. [7] that GBC should be suspected in an elderly women with a history of biliary complaints, who present with a change in the frequency and severity of pain or a mass in the right hypochondrium or develops hepatomegaly. These findings are invariably associated with advanced disease and cannot be relied on for screening population or for detecting early disease. In the present study, the number of patients with GBC having associated gallstones on imaging was 65%, which is comparable to other studies [4,8]. Gallbladder cancer is the most common cause of malignant obstructive jaundice, especially women in the northern part of India [9].

The majority of our patients with GBC (71%) presented with advanced disease (stage three and stage four). It is comparable to other series from India where incidental GBC was diagnosed in 2% of patients and different from western series revealing stage I 26.4%, stage II 5%, stage III 28.8% and stage IV 39.8%.

Our study shows that CAHOP is predominantly a disease of middle aged male, who present with weight loss, anorexia, jaundice, hepatomegaly, gallbladder mass, pain RUQ, fever, and ascites. This constellation of clinical features is slightly different from western data reporting that 57% of patients were male and they presented with abdominal pain (78.3%), Jaundice (93.3%), weight loss (70.8%) and vomiting (20.8%) in the palliated group compared to abdominal pain (36%), jaundice (72%), weight loss (43%) in resected group. [10] It is possibly due to delayed presentation to our hospital, delayed referral, lack of awareness among general practitioners and gender bias in presentation to hospital and getting treated for malignancy.

History of new onset diabetes mellitus diagnosed in quarter of our patients which in various studies has been reported to be 6-68% [11-13]. Periampullary tumors have a high incidence among digestive neoplasm. Their overall prognosis is very poor, mainly due to the fact that cancer of the head of pancreas is the most frequent tumor in the group. In our series PAC is mainly a disease of male in their 6th decade, these patients presented with Jaundice, weight loss, fever, abdominal pain, hepatomegaly and cystic gallbladder lump. It is comparable to western series literature [14] where clinical presentation with jaundice (81.25%), pain abdomen (56.25%), hepatomegaly, palpable gallbladder and occult gastrointestinal bleed are present. Nearly all of our patients with PAC were resectable except four % of the patients who were having lymadenopathy of celiac, superior mesenteric and paraaortic groups of nodes. Carcinoma of extrahepatic bile duct remains a difficult clinical problem. Because experience with these tumors has been limited to a small number of centres, meaningful clinical trials have been difficult to perform, there is scant data on CCA from India. While in western series pain RUQ, anorexia, weight loss and pruritus are present in only one third of the patients, while fever is rarely the presenting symptom [14,15] (Table 2&3).

Table 2: Comparison of clinical characteristics of different groups of patients with malignant EHBO

Clinical Presentation	GBC	CAHOP	PAC	CCA
Cholestatic symptoms	42(84%)	112(93.3%)	65(81.25%)	45(90%)
Pain right hypochondrium	46(92%)	94(78.3%)	45(56.25%)	22(44%)
Fever	25(50%)	105(87.5%)	39(48.75%)	36(72%)

Weight loss	30(72%)	85(70.8%)	20(25%)	10 (20%)
Anorexia	45(90%)	115(95.8%)	35(43.75%)	40(80%)
Lump abdomen	3(6%)	5(4.1%)	1(1.25%)	-
GI bleed	-	2(1.6%)	5(6.25%)	-
Retention type vomiting	5(10%)	25(20.8%)	2(2.5%)	1(2%)
Clinical Findings				
Hepatomegaly	20(40%)	81(67.5%)	26(32.5%)	28 (56%)
Splenomegaly	1(2%)	15(12.5%)	1(1.25%)	1(2%)
Gallbladder lump	32(64%)	108(90%)	38(47.5%)	5(10%)
Ascites	5(10%)	19(15.8%)	8(10%)	6(12%)
Succusion splash	1(2%)	2(1.6%)	-	-
Supraclavicular nodes	1(2%)	5(4.1%)	1(1.25%)	1(2%)
Abdominal lump other then gallbladder	-	28(19%)	5(12%)	-

Table 3: Laboratory and imaging features of patients with malignant EHBO with different etiologies.

Laboratory reports	GBC	CAHOP	PAC	CCA
Bilirubin median, mode (range) mg /dl	11.3, 14.4 (0.5-51)	8.5,14.4 (1.9-38)	10.6, 14.4 (0.5--36)	12.5 (1.3-32.2)
Alkaline phosphatase median (range)U/dl	506 (46-3812)	678 (66-3244)	455 (57-4257)	338 (122-1450)
ALT> 2times IU/dl	22 (44%)	95(79.5%)	22(27.5%)	33(66%)
High TLC (>11, 000)/cumm	25(50%)	52(43.3%)	24(30%)	15(30%)
Serum Albumin median (range) mg/dl	3(1.5-4.7)	3.1 (1.2-4.6)	3.0 (1.9-4.)	-
INR>1.2	8(16%)	58(48.3%)	25(31.5%)	16(32%)
Creatinine >1.6 mg.dl	11 (22%)	18(15%)	10(12.5%)	9(18%)
Imaging features				
Liver infiltration	33(66%)	9(7.5%)	5(6.25%)	6(12%)
Metastasis	35(70%)	12(10%)	2(2.5%)	1(2%)
Lymphadenopathy N1	92(37%)	14(16%)	5(5%)	13 (23.2%)
N2	59(23%)	23(26%)	3(4%)	4(7.1%)

CONCLUSION

This study from single centre retrospective study describing large group of consecutively admitted of patient with malignant EHBO. CAHOP (40%) is the most common cause of malignant EHBO in south India. Most patients of malignant EHBO except PAC presents in advanced stage of disease due to delayed medical consultation and possibly delayed referral. There was high incidence of palpable gallbladder mass in GBC & CAHOP, cholangitis was more common in CAHOP, and high frequency of higher biliary block was detected in CCA and GBC.

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