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GALLBLADDER CARCINOMA;
FREQUENCY IN PATIENTS UNDER GOING CHOLECYSTECTOMY FOR CHRONIC CHOLECYSTITIS

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ABSTRACT… Objective: Chronic Cholecystitis is one of the commonest diseases presenting in surgical department and is subjected to cholecystectomy each time. A suspicious gall bladder on ultrasound initiates further investigations to rule out carcinoma of gall bladder yet some times a benign looking gall bladder on ultrasound turns out to be carcinoma of gall bladder on histopathology. **Design:** Descriptive study. **Place & Duration of study:** District Head Quarters Hospital, Sargodha, from September 2007 to March 2009. **Patients & Methods:** 200 patients who underwent both open and Laparoscopic cholecystectomy for cholelithiasis were subjected to this study. All relevant data was documented on a standardized data form. Patients were between the ages of 28-74. Patients already diagnosed as Gallbladder Carcinoma, empyema gall bladder, mucocele and gall bladder polyp were excluded from the study. Gall bladders removed after each surgery ware sent to laboratory for histopathological evaluation. **Results:** A total of 200 cases were studied (161 females, 39 males; M: F ratio 1:4). The mean age was 45 years (range 28-74 years). The most common presenting complaint was pain right hypochondrium with nausea and vomiting (85%).The average operating time was 50 minutes in case of open cholecystectomy and 1 hour in laparoscopic cholecystectomy. Complications included biliary leak in 2 patients (1%), Wound Infection in 3 patients (1.5%) and death in one case (0.5%). The overall rate of complications was 3%. There were a total of 5 patients of laparoscopic cholecystectomy who required extension of the incision, for Carcinoma Gallbladder. **Conclusions:** Carcinoma of gall bladder is a very aggressive malignancy and usually presents at a very advance stage as its symptoms mostly are marked by symptoms of cholecystitis. Detection of gall bladder carcinoma is very difficult in early stages on ultrasound. Any findings in ultrasound suggesting malignancy should be confirmed on further investigations like CT scan .Carcinoma of Gall bladder is not very common in cases of cholecystectomy for chronic Cholecystitis but once found should be dealt with extreme precision following established operating protocols.

Key words: Cholelithiasis, Gallbladder Carcinoma, Laparoscopic Cholecystectomy

INTRODUCTION

Carcinoma of Gallbladder is a rare finding in western world but in comparison, its rate is much higher in eastern countries like India and Pakistan where people do not have much knowledge of the fatal diseases of biliary tract. Gallbladder cancer is the fifth most common gastrointestinal cancer and is incidentally found in 1–2% of gallbladders after laparoscopic cholecystectomy, anomalous pancreaticobiliary ductal junction is believed to be one of the risk factors for gall bladder carcinoma[1,2]. These are usually early cancers confined to the gallbladder and adjacent liver.

These early cancers are difficult to diagnose on ultrasonography[3] Overall the median survival of patients with gallbladder cancer is 6 months, and the prognosis and survival depends on the stage of the disease. Potentially curative surgery gives a median survival of 3.6 years[4]. Gallbladder tumors preferentially metastasize to the regional lymph nodes and liver parenchyma. Gallbladder carcinoma occurs particularly if chronic cholecystitis is left untreated. The usual type of Gallbladder Carcinoma is an Adenocarcinoma (85 out of every 100 Gallbladder cancers) but Squamous and mixed Squamous-Adenocarcinoma also occur, some studies advocate the incidence of adenocarcinoma to be as high as 100 percent[5]. Spread is by direct invasion of the Liver and Porta hepatis and to the hilar lymph nodes via the lymphatics and also via veins of the liver. The widespread adoption of laparoscopic cholecystectomy has led to an increased frequency of gallbladder carcinoma discovery intraoperatively. Little data exist to guide surgeons in the optimum management of patients with gallbladder cancer, particularly with respect to the potential advantages of radical resection.

PATIENTS AND METHODS

This study included a total of 200 patients who were admitted in the District Headquarters Hospital Sargodha, during a period of 1.5 years, diagnosed as a case of cholelithiasis via clinical and radiographic assessment. Patients diagnosed as cases of gallbladder carcinoma pre-operatively or having hilar lymphadenopathy were excluded from the study. Similarly, the cases diagnosed as Empyema, mucocele and Gallbladder polyp were also excluded. A detailed history was taken followed by the clinical examination. Pre-operative work up included biochemistry and imaging. All the necessary information including history, examination findings, investigations and preoperative findings were documented on a detailed Performa.

INCLUSION CRITERIA

All Patients diagnosed as cases of cholelithiasis with signs of cholecystitis were included in the study and were operated electively via open or laparoscopic procedures randomly.

EXCLUSION CRITERIA

Patients already diagnosed as Gallbladder Carcinoma empyema gall bladder, mucocele and gall bladder polyp were excluded from the study.

143 out of total 200 patients (71.5%) were operated via open cholecystectomy and 57 out of 200 (28.5%) were operated via Laparoscopic Cholecystectomy. Samples of Gallbladder collected from all patients were opened at the time of resection and the mucosa was inspected. Gallbladder Cancer was found incidentally in 5 patients intra-operatively or following the operation by subsequent pathologic evaluation of the specimen.

RESULTS

The study was performed on 200 patients out of them, 161 were females and 39 were males (M: F ratio 1:4). The mean age was 45 years (range 28-74). Maximum numbers of patients were between 34-48 years of age. Ultrasound scan showed a normal liver with gallstones in most of the cases also showing debris in thick-walled gallbladder in 17 cases (8.5%). The patients were subjected to open or laparoscopic cholecystectomy. 5 out of total 200 cases were discovered as Gallbladder cancer intra-operatively or post-operatively via the histopathological evaluation. 4 out of 5 of these patients were classified as T2 N0 M0 while 1 out of 5 was classified as T3 N1 M0.

An inflamed gallbladder was found with dense omental adhesions in 1 patient (0.5%). The gallbladder was removed with a small amount of adherent liver tissue in this case. Three stones (<1 cm) were found in the gallbladder of 2 patients discovered as Gallbladder carcinoma (1%) while in 3 patients the size of stones were (>3cm). Histology showed multiple foci of mucosal dysplasia and areas of poorly differentiated adenocarcinoma in 4 patients (2%) which infiltrated the full thickness of the gallbladder wall.

One patient (0.5%) was diagnosed as Squamous cell carcinoma on Histopathologic evaluation. The Operation time ranged from 35 to 85 minutes (average 50 minutes). Complications of the procedure were found infection in 6 patients (3%), wound infection in 3 patient (1%), atelectasis in another 3 and superficial thrombophlebitis in 1 case was noted.

Table-I. Age distribution of study population (N=200)

Age (decade)	No. of Patients
30-40	52
40-50	100
50-60	32
60-70	16

Table-II. Number of cases found malignant (according to age) (N=5)

Age (decade)	No. of Patients
40-50	1
50-60	3
60-70	1

Table-III. Complications of operations

Complications	No. of patients
Wound infection	3
Atelectasis	2
Superficial thrombophlebitis	1

DISCUSSION

It is difficult to diagnose Gallbladder cancer precisely at a relatively early preoperative stage, and occasionally even at an advanced stage, the management of biliary tract cancer has changed dramatically in the last 20 years[6]. In many cases, the condition could not been confirmed, before removal[7].Gall bladder malignancy is predominantly a disease of females, however there is a regional variation in female to male ratio 3:1. This ratio is reported in one of the local studies[8]. Ultrasonography was most sensitive and specific diagnostic tool in detecting gall bladder malignancy, it has a very high diagnostic accuracy in early and advanced gall bladder malignancy[9,10]. In a collective literature review by Piehler and Circhlow[11], the incidence of Gallbladder cancers in operations of the biliary tract was 1.91%, with a range from 0.55% to 6.55%. Kimura et al[12] reported asymptomatic Gallbladder cancer to be found in 15 (0.5%) of 3000 autopsies. In our study, Gallbladder was examined and cross sectioned after each operation and sent to the laboratory for Histopathological assessment.

Although Tumor markers have nothing to do with the staging of the Gallbladder cancer but still Tumor markers must be performed as were performed on 47 High risk patients (23.5%) who were more than 45 years of age. Though these were high in 6 cases, without Gallbladder cancer. Even in cases of asymptomatic Gall stones, a possible association with Gallbladder cancer should always be taken into consideration specially in cases with high risk factors.

CONCLUSION

Carcinoma of gall bladder is a very aggressive malignancy and usually presents when it is at a very advance stage. Its symptoms most of the times mimic benign gall bladder diseases like chronic cholecystitis thus making it difficult to be diagnosed in most of the early cases. Detection of gall bladder carcinoma is very difficult in early stages on ultrasound. Any findings in ultrasound suggesting a possible malignancy should be confirmed on further investigation like CT scan. Histopathological examinations of each gall bladder removed should be a done as an innocent looking gall bladder may turn out to be a carcinoma of gall bladder gall bladder. Gall bladder Cancer during an Open Cholecystectomy is a rare event but still it happens at 2.5% rate.

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