

Presentation of Cancer of the Gallbladder at Mayo Hospital, Lahore.

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Carcinoma of the gallbladder is a progressive malignant disorder with a poor and painful prognosis and high mortality rate¹. Our study highlights the enhanced presentation of the carcinoma of gallbladder in patients having cholecystectomies in general ward and its possible aetiological factors in the population of Pakistan in general and Punjab in particular. Analysis of case records and histopathology reports of 100 patients who underwent cholecystectomies was done, with the objective to determine the incidence of cancer of gall bladder and highlight the possible aetiological factors. Out of a total of 100 patients 89% were females and 11% were males. The total incidence of cancer of the gall bladder in these patients was 16% the highest yet reported in literature and it was seen that it was more common in females (13%) who are relatively quite young in age. The aetiological factors held responsible were the unmistakable association of gallstones, the delayed treatment, repeated attacks of cholecystitis, multiparty, congenital abnormalities of biliary tract and infections of the biliary system. Though various modalities of treatment have been described but bulk of the above can be controlled and prevented.

Key words: Cancer gall bladder, aetiology of CA gallbladder

Our present knowledge regarding the incidence and aetiological factors for the carcinoma of the gall bladder is mostly dependent upon American and European literature. Western data does not represent the true picture of the magnitude of this disease in Pakistan, as the climate, socioeconomic conditions, nutrition and availability of health facilities are fairly different here². Therefore, it was the need of the hour to conduct a study which could highlight the higher incidence of carcinoma of the gall bladder and its possible aetiological factors in the population of Pakistan in general and Punjab in particular.

Since its first reporting by Maximilian de Stall in 1777 AD it has been described off and on, but it has usually been associated with two major findings, gallstones and a poor survival rate. The patient when diagnosed is usually beyond any help.

The only way we can be protected against this ominous disease is to know that it is not rare, its incidence is rising, we should have a high suspicion regarding the presence of this disease in biliary patients, an enhanced research for its aetiological factors especially which are yet unknown and finally prevention from these aetiological factors³.

Material and Methods

This study was carried out at Mayo Hospital Lahore. A total of 100 patients were included in the study. Who were admitted in South Surgical Ward between 30th October 98 to 30th October 1999 through the out patients department with a provisional diagnosis as of chronic cholecystitis with cholelithiasis. Ultrasonography was the main stay of investigative procedure however CT was also done in 7 cases where there was a pre op suspicion of cancer of gall bladder. The gall bladder was sent to pathology department of King Edward Medical College.

Results

During the period of study 100 cases of operated cases of chronic cholelithiasis with cholecystitis were evaluated, out of which 16 i.e. (16%) were found to have cancer of the gall bladder. Out of these 13 were female (13%) and three (3%) were male. The female to male ratio of cholelithiasis was the same i.e. (8:1) but the female to male ratio of cancer of gall bladder was (5:1)

The average age of patient was 45 years with a minimum of 30 years and maximum of 70 years. A relatively younger age as compared to European and American data.

Table 1

	No. of Pts.	No. of cases of CA gallbladder	%age	Ratio
Total	100	16	16	
Female	89	3	13	5
Male	11	3	3	1

The majority of patients were Punjabi speaking (52%). The second largest group was of Kashmiri Settlers in and around Lahore (29%) Urdu speaking patients made up (15%) while 4% were Pushto speaking. Most of the patients (67%) were city dwellers and (84%) belonged to low socioeconomic group i.e. monthly income less than Rs. 3000/-

Carcinoma of the gall bladder is a commonly encountered malignancy in our set up at Mayo Hospital. Although exact incidence rates are not available for our population, our ward statistics show it to be the 6th most common tumor in females (5.4%) and 9th commonest tumor in males (2.1%). In our present study the incidence of cancer was an alarming 16% i.e. almost one out of 7 cases of gall bladder disease is suffering from cancer. We

have tried to assess the known factors and tried to find out new possible causes.

Age:

The average age of patients of our series was 45 years with a minimum of 30 years and maximum of 70 years. This is a relatively younger age group in comparison to earlier authors who reported average age of 57.5 years⁵, 62.5 years, (1954), 67 years (1967), 68.2 years (1982) and 62 years⁷.

Average age of mid-forties is markedly different from mid-sixties of European and American population. All this may be due to different geographic distribution, socioeconomic conditions nutritional and dietary deficiencies or may just be due to increasing longevity of population of the West.

Sex:

In our series gallbladder cancer was predominantly present in females in the Ratio of female to male 5:1. This ratio is wider as described by Illingworth⁵ as (4:1), (4.8:1) by Hart and Mundecchai¹⁰, (32:1) by Moringhini^{5,6,7}. This high ratio in females is not probably due to increased incidence of gall stones and cholecystitis in general population^{8,9}.

Nutrition Dietary Factors and Carcinogens:

We could isolate two factors, a low protein diet, leading to decreased generalized resistance and diet rich in methyl nitrosamines, which are found abundantly in a variety of food stuff lying open in the hot and humid climate of our country (As documented by PCSIR Laboratories of Lahore in 1988).

The methyl nitrosamine along with methyl cholanthrene^(1,2,10) and 3 ortho-aminotoulene are naturally acting chemical carcinogen which have been incriminated by many authors for being the offending agent^{4,12}.

In our series of 100 patients, all 16 patients who were diagnosed as a case of carcinoma gallbladder contained gallstones showing an association of 100%.

It was reported to be 73% by Arminisk, 90% by Lwis¹⁰ 74% by Hardy⁴, 69% by Belts and Condon.

Site, size, number and shape of gall stones also played an important role in causing carcinoma^(2,3,12). A report was published by Andrew, K, Dhiel which stated that if size was less than 2.3 cm, the incidence is low, but the incidence is higher in stones of 3cm and more.

According to the histopathological reports of 16 cases, it was seen that adenocarcinoma was the predominant type seen almost in 85% of our cases, Similar to the data of Western Population^(1,7,12).

Delayed Treatment of Repeated Cholecystitis:

In our series, all the patients, who suffered from the cancer of gall bladder had history of previous hospitalization the 5% of patients suffering from carcinoma gall bladder had symptoms for one year, 55% of the sufferers had symptoms for 5 years.

In most of the published literature it was stated that 80% of patients had symptoms for more than 5 years^(2,11,12) and that 45% of patients had symptoms for more than one year^(2,7,11).

Multiparity:

In our series, all the female patients were multipara, having a minimum of five issues and maximum of eight. Average number of parity was 6.5.

Anomalous Junction of Pancreatico Biliary Tract:

This common concept plays a role in causation of carcinoma gall bladder especially when due to 15 mm long and located outside the wall of duodenum^(8 & 11). Six of our patients had undergone ERCP-2 them had AJPB.

Estrogen Therapy:

In our study of 13 female patients suffering from carcinoma of gall bladder, only two patients remembered using estrogens, especially for post-menopausal flushing climacteric.

Female sex hormones and the use of endogenous estrogens leads to an increase in the total body cholesterol and hence predisposition of cholecystitis and gallbladder carcinoma^(6,21).

Inflammatory Bowel Disease:

There has been a quoted relevant incidence of 0.91%^{10,12} of cancer of the gall bladder and inflammatory bowel disease.

In our study of 16 cases, we noted that two cases of gall bladder cancer had concomitant ulcerative colitis¹⁰.

Local Statistical Incidence:

First reporting of carcinoma gallbladder was by Professor Amir ud Din in his article "Some observation on Gall Bladder disease in West Pakistan in 1964" and he quoted the incidence to be 5%. Next study was by Yaqinand Pormar in 1976 and reported the incidence to be 6.3%. Hassan et al in 1978 reported the incidence of be 8.4%. During the same year pathology department of postgraduate, medical center, Karachi concluded the incidence to be 6.6%. Usmani in 1982 reported the incidence to be 12%. Our study reported the highest incidence i.e. 16%.

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