



Original Article

PREVALENCE OF GALL BLADDER CARCINOMA IN PATIENTS WITH CHOLELITHIASIS

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Abstract

The objective of the study was to find out the prevalence of gallbladder carcinoma in patients having cholelithiasis.

For this purpose a prospective study was carried out on 15 patients of both sexes in Shaheed Ziaur Rahman Medical College Hospital, Bogura. Their mean age was 56 ± 8 years; (range 30 to 70 years) having gall bladder mass. Gall bladder mass and stone were detected by history, Physical examination, ultrasonography and computed tomography of the abdomen. Carcinoma was confirmed by histopathological examination of specimens removed by operation. All gallbladder masses removed by operation showed malignant tumor on histopathological examination. Among them adenocarcinoma and squamous cell carcinoma were present in 94 and 6 percent respectively. Stones were present within gallbladder mass in 94 percent of cases. In 80 percent of cases the disease was in advanced stage.

The results of the present study suggested that the patient having cholelithiasis are prone to develop malignancy in the gallbladder. However as the sample size is small further studies are needed by taking large number of sample to validate this statement.

Introduction

Cancer of the gall bladder is the commonest malignant tumor of the biliary tract. Despite advancements in diagnostic and surgical techniques, it is still characterized by late diagnosis and poor prognosis. There is a considerable variation in its incidence especially in this subcontinent where the incidence is very high.^{1,2,3}

It has been observed that the incidence of carcinoma gall bladder in patients suffering from cholelithiasis is high in Bangladesh in contrast to that seen in western countries.^{4,5} It has been strongly supported by many

that carcinoma gall bladder is associated with gall stones.^{3,5,6,7}

Despite the improvement in diagnostic and surgical techniques no changes in survival rate has been observed. This is mainly due to late onset of symptoms and direct extension of tumor to neighbouring organs at the time of diagnosis.⁸ In majority of patients with early carcinoma, the diagnosis is usually made at operation or biopsy of gall bladder specimen after cholecystectomy. Ultrasonography has been employed to detect early form of gall bladder cancer.⁶ Present study is aimed at to determine the impact of gall stone in the development of gall bladder carcinoma.

Materials and Methods

This prospective observational study was carried out in surgery department of Shaheed Ziaur Rahman

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Medical College Hospital, Bogura from July 2007 to December 2008. The sample size of the study was 15. Patients having pain, tenderness, mass in right hypochondrium were selected including both sexes and ages between 30 to 70 year (mean 56 ± 8 years). Inclusion criteria were all patients with carcinoma in gall bladder at age group between 30 to 70 years. Exclusion criteria were patients with benign gall bladder diseases, other biliary carcinoma. Data were collected by un structured questionnaire. A detail history was taken and though physical examination was done. Subsequently necessary biochemical, radiological and other special investigations were carried out. The diagnosis of carcinoma was confirmed by histopathological examination of the specimen removed or biopsied by operation. In each case clinical, biochemical, radiological, sonographical and histopathological parameters were recorded in the study. After collection of all data it was processed and analyzed by simple statistical method.

Results

The mean age of the patients presenting with gall bladder carcinoma was 56 ± 8 years (range 30-70 years). In 47 percent of cases malignant tumor in gall bladder was found in age group between 51 to 60 years. Only 6 percent of the carcinoma was diagnosed before the age of 40 years and 27 percent patients developed malignancy after the age of 60 years. 87 percent patients were female and 13 percent patients were male. Female to male ratio was 6.6:1. All patients presented with pain in abdomen, 20 percent had Jaundice, palpable mass in right hypochondrium in 60 percent of cases, ascitis was in 14 percent cases, anorexia was present in 94 percent of cases. Ultrasonogram and computed tomogram detected mass with stone in the gall bladder in 94 percent of cases and only mass in gall bladder in 6 percent of cases.

Histopathological examination of the specimen removed by operation showed malignant tumor in all gall bladder masses among which 94 percent was adenocarcinoma and 6 percent was squamous cell carcinoma. Removed specimen of gall bladder masses showed stone in 94 percent of cases.

Table-I

Demographic and clinical characteristics of study group.

Variables	No. of cases	Percentage
Age		
<50	4	26
51-60		7
48		
>60	4	26
Gender		
Female	13	86.6
Male	2	13.3
Clinical feature		
Abdominal pain	15	100
Palpable mass	9	60
Joundice	3	20.
Ascitis		2
13.3		
Anorexia	14	93.33
Investigations		
Ultrasonogram		
Mass with stone	14	93.33
Mass without stone	1	6.67
CT Scan		
Mass with stone	14	93.33
Mass without stone	1	6.67

Table-II

Types of carcinoma and relation with stone of the study population.

	Histopathology		No.	Perce- ntage	P value
	Ademo Carcinoma	Squamous Cell carcinoma			
CA GB with Stone	13	1	14	94	
CA GB without Stone	1	0	16		P<0.05
Total	14	1	15		

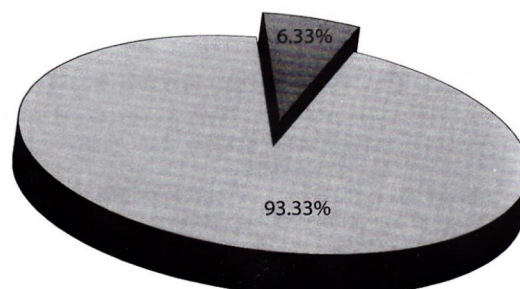


Fig.-1: Relation of gall stone with gall bladder carcinoma

Discussion

47 percent of the patients in the present series had carcinoma in the gall bladder at the ages between 50 to 60 years, only 6 percent of cases, gall bladder malignancy was diagnosed before the age of 40 years and 27 percent were diagnosed as gall bladder carcinoma after the age of 60 years. This study was compared with the general review of the literature which ranges from 60 to 80 years.^{11,12} This variation in ages could be due to the fact that in present study the age including into the study were 30 to 70 years. But maximum cases were recorded between 51 to 60 years. In both present and reviewed series the prevalence of the gall bladder carcinoma was seen high in elderly age group.

In this study women were seen affected more than men and female to male ratio was 6.6:1 which was similar to previously reported Gupta S et al's and Alboores-Scaveda J et al's data where female patients affected more by carcinoma of gall bladder.

Our study included the patients after histopathological confirmation of diagnosis of malignant tumor in the gall bladder after operation. So all cases in the series had malignant tumors in gall bladder. The prevalence of adenocarcinoma was high and it was 96 percent in our series.

Kaushik SP's operational study also showed a high prevalence of adenocarcinoma in the gall bladder.¹⁰

Eduardo C et al's epidemiological and Kaushik SP's observational studies showed a high prevalence of gall bladder carcinoma in patients with stone in the gall bladder.^{9,10} In our series high prevalence of malignancy in gall bladder was found in cases of gall bladder stone and it was 96 percent.

Above findings suggested that stones in the gall bladder might be at least in part with other risk factors plays an important role in the pathogenesis of gall bladder malignancy. However the study was conducted in a single department setting in which there was a relatively small number of patients having gall bladder carcinoma during the observation periods and data were collected over a period of 1.5 years.

Before conclusion of gall stone as a etiological factor for gall bladder carcinoma large scale multicentric study over long period is necessary.

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