



Research Paper

Earlier mean age of diagnosis of Gallbladder Carcinoma observed in Eastern India: A cross-sectional study reveals in a Tertiary Care Hospital of West Bengal

Authors

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Abstract

Introduction: Gallbladder cancer is the most common malignancy of the biliary tract, an early clinical diagnosis is enigmatic. Epidemiological studies have identified striking geographic and ethnic disparities - inordinately high occurrence in American Indians, elevated in Southeast Asia, yet quite low elsewhere in the Americas and the world.

Objective: The objective was to find out the mean age of diagnosis of Gall Bladder Carcinoma and to find out the association of the carcinoma with gender, if any.

Materials and Methods: A cross sectional observational study was conducted in Medical College and Hospital, Kolkata by Consecutive sampling method during the time period Jan 2016- Dec 2016.

Results: Out of 57 study subjects 35.08% were males and 64.91% were females. Among the 57 patients included in the study, the minimum age of the study subjects was of 26 years and the maximum age being 69 years. Mean age of the study subjects was 48.70 years with a standard deviation of 10.64 years.

Conclusion: The mean age of diagnosis of carcinoma Gall Bladder is lesser in India than that of the European countries although female preponderance is similar mostly all over the world. Further studies are required to find out such differences according to ethnicity and gender.

Keywords: Gall Bladder Carcinoma, diagnosis, earlier age, females.

Introduction

Gallbladder cancer (GBC) is a rare though notoriously lethal malignancy with marked ethnic and geographical variations. Because early symptoms are vague and anatomically the gallbladder lacks a serosa to limit cancer spread, the diagnosis of gallbladder cancer frequently occurs at an advanced stage, typically with an abysmal prognosis. The highest frequency of

disease is in women over the age of 65. Apart from gallstones, female gender, ethnicity, genetic susceptibility and lifestyle factors. The mean survival rate for patients with advanced GBC is 6 months: with a 5-year survival rate of less than 5% in stage IV. GBC should be suspected in patients after 60 years with constant pain in the right hypochondrium and a history of recent weight loss.¹

In India, gallbladder cancer (GBC) is most prevalent in northern and northeastern states of Uttar Pradesh, Bihar, Orissa, West Bengal and Assam². GBC is two times higher in women than men and is the leading digestive cancer in women in northern India cities³. Six cancer registries of the Indian Council of Medical Research (ICMR) (1990-96) show a 10 times lower incidence of GBC per 1 00 000 in South India compared with the North, the age-adjusted incidence rate (AAR) for females being 0.8 in Chennai in the south and 8.9 in Delhi in the north⁴. GBC ranks amongst the first 10 cancers in the ICMR registries (2006-2008) of Delhi, Dibrugarh, Kolkata, Bhopal and Mumbai⁵. The incidence of GBC increases after the age of 45 years and is maximum at the age of 65 years⁶. A recent study of Unisa S et al 2011⁷, performed ultrasonography (USG) in 5100 with symptoms and 1448 persons without symptoms, respectively in Eastern UP and Bihar. Prevalence of gallstones on USG was found to be 1.99% in males and 5.59% in females. Adjusted odds ratio (ORs) [95% confidence interval (CI)] revealed a significantly increased risk of Gallstone Disease (GSD) in females >50, 1.703 (CI 1.292-2.245);

The highest frequency of the disease is found among females (2-6 times more common) over the age of 65^{6,8-12}. There is a marked regional and ethnic variation in the incidence of GBC. The highest mortality rates have been reported among Chilean Mapuche Indians and Hispanics. Incidence rates are much lower in Europe¹⁵.

The current burden of disease as per Globocan 2018 data: New Cases: 25, 999 Deaths: 19,676 No. of people living with the disease (5 year prevalence for all ages): 31,357.¹⁴

There is scarcity of studies regarding incidence and prevalence of Gall Bladder Carcinoma in

India as per gender and age distribution. The objectives of the current study was to find out the mean age of diagnosis of Gall Bladder Carcinoma and to find out the association of the carcinoma with gender, if any.

Materials and Methods

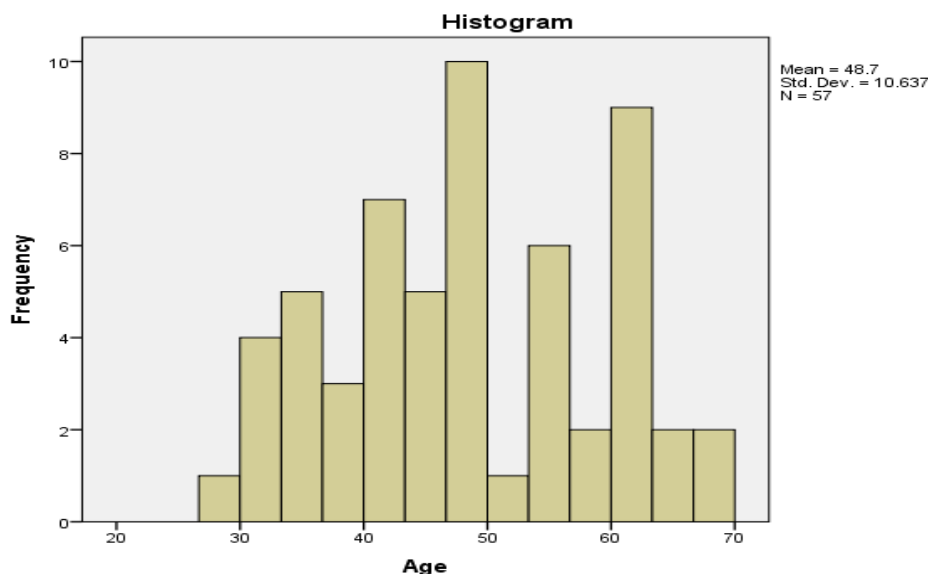
It was a cross sectional observational study conducted in Medical College and Hospital, Kolkata (MCH, Kolkata). The study period was during Jan 2016- Dec 2016 obtained from the record of the Radiotherapy Department of MCH, Kolkata after getting required permission from the respective authorities. The study population i.e. 57 consecutive cases of diagnosed carcinoma Gall Bladder were selected for the study. Diagnosis of the patients were made by radiological investigations and histopathological reports (HPE report) following surgical resection. A predesigned proforma was used for registering the patients' name, sex and age during diagnosis of the cancer. Descriptive statistical analysis has been carried out in the present study. Results on continuous measurements are presented on Mean \pm SD (Min-Median-Max) The Statistical software SPSS 21.0 was used for the analysis of the data and Microsoft word and Excel have been used to generate graphs, tables etc.

Results and Analysis

Out of 57 study subjects 35.08% were males and 64.91% were females (Table 1). Among the 57 patients included in the study, the minimum age of the study subjects was of 26 years and the maximum age being 69 years. Mean age of the study subjects was 48.70 years with a standard deviation of 10.64 years (Figure 1).

Table.1 Distribution of subjects according to gender (n=57)

Gender	Frequency	Percentage
Male	20	35.08
Female	37	64.91
Total	57	100.0

Figure 1: Histogram showing distribution of age of study subjects (n=57)

Discussion

In our present study we have attempted to find out the mean age of diagnosis of Gall Bladder Carcinoma and to find out the association of the carcinoma with gender, if any.

Our present study concludes that Mean age of the study subjects was 48.70 years with a standard deviation of 10.64 years (Figure 1) and Out of 57 study subjects 35.08% were males and 64.91% were females (Table 1).

Murthy NS et al.⁶ concluded that Age specific incidence rate (ASIR) was observed to be high after the age of 45. The highest ASIR was recorded in Delhi and was found to be 22.08 in males and 35.67 in females, respectively, per 10⁵ persons after the age of 65 years. Observations revealed a very distinct age-related pattern among both genders. The incidence is comparatively very low in age groups below 45. Incidence rates increased with increasing age at 45 years and peaks after 65+ years.

Unisa S et al.⁷ found out that the different morbidity pattern of upper GI Tract and to establish a link between higher age and increased Prevalence of GBD among females was 1.7 times more than males. Adjusted odds ratio (ORs) [95% confidence interval (CI)] revealed a significantly increased risk of Gallstone Disease (GSD) in females >50, 1.703 (CI 1.292-2.245);

High annual incidence rates occur in North and South American Indians, generating an inordinate mortality, particularly amongst women: 15.5 per 100,000 in women (vs 7.5/100,000 in men)¹⁵

S Jane Henley et al.¹⁶ concluded that the median age at diagnosis of gallbladder cancer was older among non-Hispanic whites (median age at diagnosis 73 years). This finding quite differs from our present study finding probably due to different ethnic group.

Our present study also shows similar finding with the above studies regarding higher incidence of GBC in female gender.

On the contrary, the mean age of incidence at 48.70 years with a standard deviation of 10.64 years is significantly lower than the studies mentioned above.

Conclusion

The mean age of diagnosis of carcinoma Gall Bladder is lesser in India than that of the European countries although female preponderance is similar mostly all over the world as per our study based on data available at MCH, Kolkata. Further studies are required after having large number of samples from different parts of West Bengal to establish the above-mentioned observational difference.

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