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Original Article

Clinicopathological Profile of 66 Patients with Carcinoma Stomach in North-East Part of Bangladesh

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Abstract

Background*: There is wide variation in the prevalence of carcinoma stomach throughout the world. In some parts of the world it is decreasing whereas in the other parts it is increasing. Also there are variations in the risk factors of the disease.* ***Objective****: To see clinicopathological profile of patients of carcinoma stomach in North-East part of Bangladesh.* ***Materials and Methods****: Consecutive new patient diagnosed as carcinoma of stomach were interviewed and data was recorded in a data sheet.* ***Results****: Total 66 cases, age varying from 26−77 (mean 52) years, male 45 (68.2%) and female 21 (31.8%) were enrolled. Out of them 44 (66.7%) were above 45 years. People from lower economic group (51, 78.8%) and rural area (39, 59.1%) were predominantly affected. Commonest presenting symptoms were weight loss, abdominal pain and vomiting. Common site of lesion was antrum and common histopathological type was adenocarcinoma (64, 97%).* ***Conclusion****: Carcinoma stomach is a disease of older age group and male are predominantly affected. Smoking, tobacco and betel nut chewing are risk factors. Lower income group and rural people are more affected.*

Key words*: Gastric carcinoma; Patient profile; Gastric adenocarcinoma*

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Introduction

In 2012, in the world estimated incidence of carcinoma stomach was 951594 and causing death of 723,073 individuals worldwide.[1] Overall it is the second most common cause of death in some Asian countries.[2-3] Worldwide the incidence of new cases of gastric cancer in 2002 was 934,000 of which 56% were from Asia. The incidence of gastric carcinoma is decreasing in western countries whereas increasing in the rest of the world.[4] There is a wide variation in the prevalence of gastric cancer throughout the world. It has been hypothesized that incidence of gastric cancer is determined by environmental factors rather than gastric factor.[5] Recognized dietary risk factors for gastric cancer are smoked foods, salted fish and meat, pickled vegetables. Smoking is another important risk factor.[6-9] Gastric cancer is three times common among male.[9] Person working in coal mine, nickel refinery rubber and timber processing industries and those exposed to asbestos fibers are more affected.[10]

In this background this cross-sectional study was designed to see the profile of patients of carcinoma of stomach as well as associated risk factors in North East part of Bangladesh.

Materials and Methods

All consecutive patients of carcinoma of stomach newly diagnosed by endoscopy of UGIT and histopathology in North East Medical College & Hospital, Sylhet were enrolled in this study. History,

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clinical examination and laboratory findings along with demographic features were recorded in a predesigned data sheet. Statistical analysis was done using SPSS 17. χ^2 test was done to see the difference and p value <0.05 was taken as significant. Sample size was calculated using Fruchere and Guilford formula. Estimated sample size was 66.

Results

Total 66 patients, age varying from 26−77 years (mean 52.0, SD 11.30 years) were enrolled in this study. Among them 45 (68.2%) were male and 21 (31.8%) were female with male female ratio 2.1:1. Among them 44 (66.7%) were above 45 years age group while 22 (33.3%) were in 26−45 years age group, but difference was not statistically significant. Among them 41 (62.1%) were smokers, 52 (78.8%) were tobacco chewers and 5 (7.6%) were alcoholic.

In this series 51 (77.3%) persons were from rural community and 39 (59.1%) from lower socio-economic group (p<0.05). Among the patients 21 (31.8%) were housewives followed by farmers 19 (28.8%). Regarding food habit, none of the patients took salted fish, meat and smoked food. In this series only three patients had family history of cancer. Commonest presenting symptoms were weight loss, abdominal pain and vomiting. Thirteen patients had distant metastasis including lymph node, liver and peritoneum. Commonest site of lesion was antrum 41 (62.1%) and histopathologically 64 (97.01%) were adenocarcinoma and only two (3%) were lymphoma. Commonest blood group among the patients in this series was B +ve (23, 34.8%) followed by O +ve (20, 30.3%).

Table I: Epidemiological features

Variables	Number (%)	p values
Age ≥45 years	44 (66.7)	>0.05
Age up to 45 years	22 (33.3)	
Male	45 (68.2)	>0.05
Female	21 (31.8)	
Smoker	41 (62.1)	>0.05
Nonsmoker	25 (37.9)	
Tobacco and betel nut chewer	52 (78.8)	<0.05
Tobacco and betel nut non-chewer	14(21.2)	
Occupation		
Housewives	21 (31.8)	
Farmer	19 (28.8)	
Service	08 (12.1)	
Others	12 (27.3)	
Economic status		
Poor	39 (59.1)	<0.05
Middle class	21 (31.8)	
Rich	06 (9.1)	
Urban	15 (22.7)	<0.05
Rural	51 (77.3)	
Blood group		
A (positive + negative)	15 (13+2)	
B (positive + negative)	25(23+2)	
O (positive + negative)	21 (20+1)	
AB (positive + negative)	05 (5+0)	

Table II: Clinicopathological features

Variables	Number	Percentage
Presenting Symptoms		
Weight loss	49	74.24
Abdominal pain	41	62.12
Vomiting	34	51.51
Anemia	48	72.72
Site of lesion		
Antrum	41	62.12
fundus	12	18.18
Lesser curvature	9	13.636
Body	4	6.06
Histopathology		
Adenocarcinoma	64	96.97
Lymphoma	02	3.03
Metastasis	13	19.69

Some subjects had more than one features

Discussion

Total consecutive 66 patients were enrolled in this cross-sectional study. In this study incidence was 66.7% in >45 years age group, which is consistent with other reports.[11,12] In this series 45 (68.2%) patients were male and 21 (31.8%) were female with ratio of 2.1:1 showing male predominance. This result is also

similar to other published reports.[13,14] Smoking, betel nut and tobacco chewing have been found as potential risk factors. In this study 41 (62.1%) subjects were smoker and 52 (78.8%) were tobacco chewer. It is also consistent with reports from India.[15,16] In this small group of patients housewives and farmers were mostly affected. Farmers are exposed to chemical fertilizer and insecticides which may be risk factors. But higher incidence in housewives could not be explained. This result is not consistent with reports from India.[17] In our study 39 (59.1%) patients are from lower economic group followed by 21 (31.8%) from middle class. Environment, food habit and nutrition may have a causal role here. This finding is consistent with reports from Addis Ababa.[18]

Most gastric cancers occur sporadically[19] and it can occur in family occasionally.[20] In current study 3 (4.5%) patients had family history of gastrointestinal malignancy. In this group, 25 (7.8%) had blood group B followed by O group (21, 31.8%). But previous reports show that carcinoma of stomach is more common in people with blood group A.[21,22] These contradictions may be due to small sample size. Common presenting symptoms in our series are weight loss (74.2%), anaemia (72.7%), abdominal pain (62.1%) and vomiting (51.5%). Features of gastric outlet obstruction are more common in our series than in western country reports.[23] This may be explained as our people seek medical service late due to economic constrain and ignorance. In this series site of involvement is mostly antrum (62.1%) which is consistent with reports from other Asian countries (48%). But incidence of proximal gastric carcinoma is increasing in western countries with simultaneous decrease in distal lesion.[24,25] Commonest histopathological type in this series is adenocarcinoma (97%), which is similar to another Asian report.[26] Incidence of metastasis is 19.7% in our series, which is consistent with another report.[27] Due to routine screening gastric cancer is detected earlier in Japan.[28] But in our country such screening is absent. In addition poor socio-economic status and less awareness lead to delayed medical consultation in our country.

In this study, features of gastric outlet obstruction and antral lesion are common findings in age group more than 45 years. Further study with large sample size may be done in future for proper assessment of demographic features as well as planning for early detection and treatment.

Limitations

Sample size was small. Presence of H. pylori infection was not looked for as a causal factor.

References

1. Khazaei S, Rezaeian S, Soheylizad M, Khazaei S, Biderafsa A. Global incidence and mortality rates of stomach cancer and the development index: an echological study. Asian Pac J Cancer Prev 2016; 17(4): 1701–1704.
2. Medina-Franco H, Heslin MJ, Cortes-Gonzalez R. Clinicopathological characteristics of gastric carcinoma in young and elderly patients: a comparative study. Annsurg Oncol 2000; 7(7): 515−519.
3. Crew KD, Neugut AL. Epidemiology of gastric cancer. World J Gastroentrol 2006; 12(3): 354−362.
4. Parker SL, Tong T, Bolden S, Wingo PA. Cancer statistics, 1997. CA Cancer J Clin 1997; 47: 5−27.
5. Crew KD, Neugut AL. Epidemiology of gastric cancer. World J Gastroentrol 2006; 12(3): 354−362.
6. What are the risk factors for stomach cancer. American Cancer Society. Available at: https://www.cancer.org/cancer/stomach-cancer/causes-risks-prevention/risk-factors.html. Accessed July 2018.
7. Nomura A, Grove JS, Stemmermann GN, Severson RK. Cigarette smoking and stomach cancer. Cancer Research 1990; 50: 7084.
8. Trédaniel J, Boffetta P, Buiatti E, Saracci R, Hirsch A. Tobacco smoking and gastric cancer: review and meta-analysis. International Journal of Cancer 1997; 72(4): 565–573.
9. Chandanos E, Rubio CA, Lindblad M, Jia C, Apostolos V. Tsolakis AV et al. Endogenous estrogen exposure in relation to distribution of histological type and estrogen receptors in gastric adenocarcinoma. Gastric Cancer 2008; 11: 168–174.
10. Parsonnet J, Friedman GD, Vandersteen DP, Chang Y, Vogelman JH, Orentreich N et al. Helicobacter pylori and the risk of gastric carcinoma. N Engl J Med 1991; 325(16): 1127−1131.
11. Pisani P, Parkin DM, Bray F, Ferlay J. Estimates of the worldwide mortality from 25 cancers in 1990. Int J Cancer 1999; 83: 18−29.

12. Parker SL, Tong T, Bolden S, Wingo PA. Cancer statistics 1997. CA Cancer J Clin 1997; 47: 5−27.

13. Ajani JA, VanCutsem E, Moiseyenko V, Tjulandin S, Fodor M, Majlis A et al. Docetaxel (D), cisplatin, 5-fluorouracil compared to cisplatin (C) and 5-fluorouracil (F) for chemotherapy-naive patients with metastatic or locally recurrent, unresectable gastric carcinoma (MGC): Interim results of a randomized phase III trial (V325) Proc Am Soc Clin Oncol 2003; 22: 249 (Abstr).

14. Sasagawa T, Solano H, Mena F. Gastric cancer in Costa Rica. Gastrointest Endosc 1999; 50: 594−595.

15. Gajalakshmi CK, Shanta V. Life style and risk of stomach cancer: a hospital based case-control study. Int J Epidemiol 1996; 25: 1146–1153.

16. Mathew A, Gangadharan P, Verghese C, Nair MK. Diet and stomach cancer: a case-control study in South India. Eur J Cancer Prev 2000; 9: 89–97.

17. Rao DN, Ganesh B. Estimate of cancer incidence in India in 1991. Indian J Cancer 1998; 35: 10–18.

18. Johnson O, Ersumo T, Ali A. Gastric carcinoma at Tikur Anbessa Hospital, Addis Ababa. East Afr Med J 2000; 77: 27−30.

19. La Vecchia C, Negri E, Franceschi S, Gentile A. Family history and the risk of stomach and colorectal cancer. Cancer 1992; 70: 50–55.

20. Fenogilo-Preiser C, Carneiro F, Correa P et al. Gastric carcinoma. In: Hamilton S, Aaltonin L (eds). Pathology and Genetics. Tumors of the Digestive System, Lyon, France: IARC Press; 2000: 37–52.

21. Aird I, Bentall HH, Roberts JA. A relationship between cancer of stomach and the ABO blood groups. Br Med J 1953; 1: 799–801.

22. Beasley WH. Blood groups of gastric ulcer and carcinoma. Br Med J 1960; 1: 1167–1172.

23. Hajiani E, Shoshtari MHS, Masjedizadeh R, Hashemi J, Azmi M, Rajabi T. Clinical profile of gastric cancer in Khuzestan, southwest of Iran. World J Gastroenterol 2006; 12(30): 4832−4835.

24. Blot WJ, Devesa SS, Kneller RW, Fraumeni JF Jr. Rising incidence of adenocarcinoma of the esophagus and gastric cardia. JAMA 1991; 265: 1287−1289.

25. Hansson LE, Sparen P, Nyren O. Increasing incidence of both major histological types of esophageal carcinomas among men in Sweden. Int J Cancer 1993; 54: 402−407.

26. Qurieshi MA, Masoodi MA, Kadla SA, Ahmad SZ, Gangadharan P. Gastric cancer in Kashmir. Asia Pacific Journal of Cancer Prevention 2011; 12: 303−307.

27. Kim DY, Ryu SY, Kim YJ, Kim SK. Clinicopathological characteristics of gastric carcinoma in young patients. Langenbecks Arch Surg 2003; 388(4): 245−249.

28. Hamashima, C, Shibuya D, Yamazaki H, Inoue K, Fukao A, Saito H et al. The Japanese guidelines for gastric cancer screening, Japanese Journal of Clinical Oncology 2008; 38(4): 259−267.