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Anatomical Distribution and Demographic Data of Gastric Cancer in Mashhad, Iran

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ABSTRACT

Introduction: The global incidence of gastric cancer (GC) has decreased dramatically in recent decades, and its features have changed as well. Most of these changes have arisen from altered dietary and nutritional habits. GC is the most prevalent cancer in the north and northeast of Iran. The present study aimed to briefly review the location of gastric tumors in a population in the northeast of Iran.

Methods: The present descriptive, cross-sectional study was conducted in north east of Iran. The medical records of the patients diagnosed with GC were reviewed within a seven-year period since 2006.

Results: Among 212 Iranian patients in Mashhad, Iran, the cardia was the most commonly involved anatomic location. No significant correlations were observed between age, gender, and tumor location. Moreover, the incidence of GC reduced in the patients aged 60-69 years, while the most common anatomic site of the tumors remained the same.

Conclusion: Recognizing the most prevalent tumor sites and risk factors for GC could result in precise diagnostic and preventative programs for this disease. Therefore, raising global awareness regarding the risk factors for GC could enhance these processes.

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Introduction

Regarding to the changes in the lifestyle of individuals throughout time, prevalence of malignancies have also been changed. Gastric cancer (GC) is a proper example in this regard. GC accounted for 2% of the mortalities in 2012, while this rate was higher than 20% in the 1930s. Recent improvements in personal hygiene and cancer prevention have resulted in such dramatic demographic changes (1). Furthermore, there are numerous ongoing cancer control strategies, such as improving dietary habits and physical activity and reducing tobacco use, body weight, and alcohol consumption (2).

The incidence of stomach tumors varies in different parts of the stomach. The site of primary gastric tumors is considered to be an important issue. Patient outcomes and the effective management of stomach tumors largely depend on identifying the exact location of these tumors (3).

The present study aimed to briefly review the localization of stomach tumors in an Iranian population.

Material and methods

This descriptive, cross-sectional study was conducted in Ghaem Hospital in Mashhad, Iran.

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The medical records of the patients diagnosed with GC (regardless of their age) were reviewed within a seven-year period since 2006, and their pathological and demographic data were extracted. The records with missing data regarding the pathological examination of the patients were excluded from further evaluation.

Data analysis was performed in SPSS version 20. The frequency of tumor locations and demographic data were expressed as figures, and analysis of variance (ANOVA) was used to determine the correlations between the tumor location and demographic data.

Results

In total, 212 patients with GC (mean age: 63.31±13.59 years) were evaluated in the present study. The majority of the patients were male (72.4%), and the others were female (27.6%) with the mean age of 64.05±12.95 and 61.37±14.99 years.

Distribution of tumor location based on the gender and age of the patients is depicted in figures 1 and 2, respectively. No significant correlation was observed between the gender of the patients and tumor location (P=0.856). In addition, the results of ANOVA indicated no significant association between age and tumor location (P=0.345).

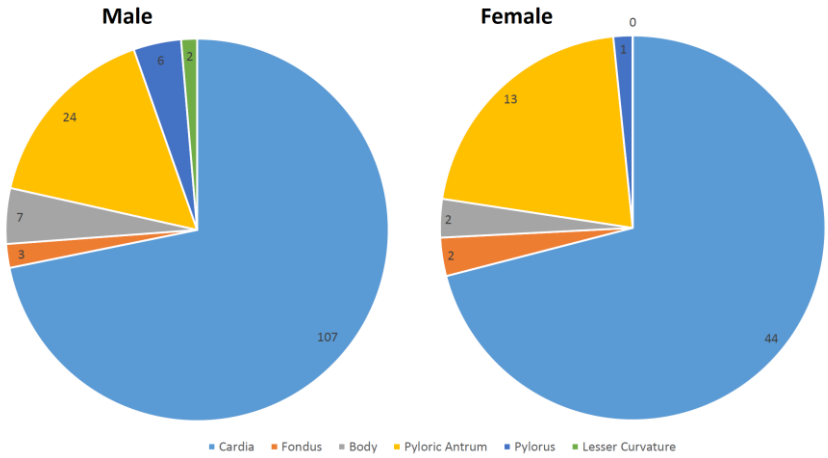

Figure 1. Tumor Location Distribution Based on Gender

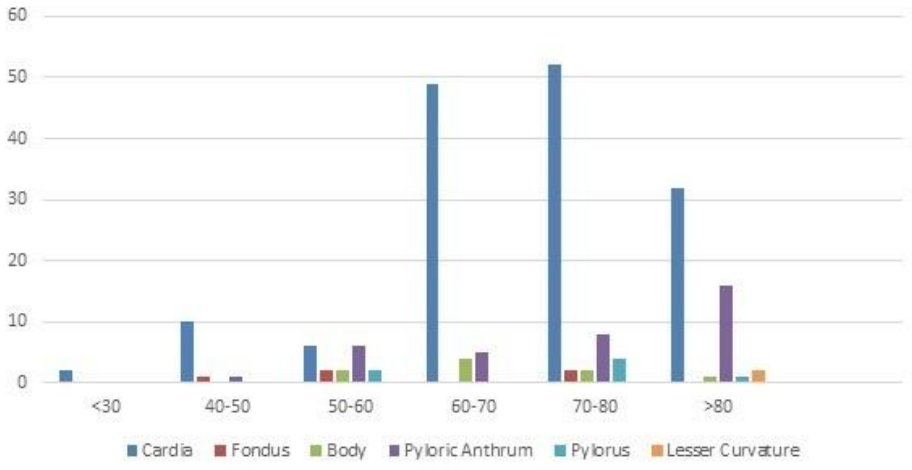

Figure 2. Tumor Location Distribution Based on Age

Discussion

The most high-risk areas for GC are in the north and northwest of Iran (4). The most common anatomical sites for stomach tumors vary in different countries. In the northwest of Iran, the lesser curvature has been reported to be the most commonly involved anatomic site in GC (5). In a multicenter report in Iran, GC was mostly diagnosed in the patients aged 60-69 years, followed by those aged 70-79 years (6). However, our findings indicated that GC was most prevalent in the patients aged 70-79 years, followed by those aged 60-69 years. This inconsistency could be attributed to the larger sample size of the present study. While the most common anatomic site for gastric cancer was the cardia in the current research, distal tumors were also most prevalent in the studied region within the mentioned period (6).

Despite the limited studies regarding the changes in the incidence of GC in the studied region, some of the factors should be taken into account. Accordingly, lower rates of GC have been reported in younger patients. Moreover, Malekzadeh et al. reported atrophic gastritis and high salt intake to be among the major risk factors for GC (4). Other suggested risk factors include low selenium, high intake of red meat, and low fruit and vegetable intake. While some of these factors are similar to the influential factors in cardiovascular diseases, the avoidance of the risk factors for GC is recommended for the general population not only for the prevention of GC (7).

Conclusion

According to the results, the most common tumor site in GC was the cardia, followed by pyloric antrum, in both men and women. The prevalence of pyloric antrum tumors increases by the age of 60 years, while the prevalence of these tumors decreases by the age of 70 years. Our findings showed no significant correlations among age, gender, and tumor location in GC patients.

References

1. Siegel RL, Miller KD, Jemal A. Cancer statistics, 2016. CA Cancer J Clin. 2016; 66(1):7-30.
2. Torre LA, Sauer AM, Chen MS Jr, Kagawa-Singer M, Jemal A, Siegel RL. Cancer statistics for Asian Americans, Native Hawaiians, and Pacific Islanders, 2016: Converging incidence in males and females. CA Cancer J Clin. 2016; 66(3): 182-202.
3. Pesic M, Karanikolic A, Djordjevic N, Vuka K, Rancic Z, Radojković M, et al. The importance of primary gastric cancer location in 5-year survival rate 2004. 51-3 p.
4. Malekzadeh R, Derakhshan MH, Malekzadeh Z. Gastric cancer in Iran: epidemiology and risk factors. Archives of Iranian medicine. 2009; 12(6): 576-83.
5. Nourozinia F, Rasmi Y, Otarod M, Golizadeh M, Khadem-Ansari M-H. Epidemiology and histopathology of gastric cancer in Urmia. Urmia Medical Journal. 2013; 24(3): 170-5.
6. Norouzinia M, Asadzadeh H, Shalmani HM, Al Dulaimi D, Zali M. Clinical and histological indicators of proximal and distal gastric cancer in eight provinces of Iran. Asian Pacific Journal of Cancer Prevention. 2012; 13(11): 5677-9.
7. Sardarinia M, Akbarpour S, Lotfaliany M, Bagherzadeh-Khiabani F, Bozorgmanesh M, Sheikholeslami F, et al. Risk Factors for Incidence of Cardiovascular Diseases and All-Cause Mortality in a Middle Eastern Population over a Decade Follow-up: Tehran Lipid and Glucose Study. PloS One. 2016; 11(12): e0167623.