



Descriptive Study of Risk Factors for Esophageal Cancers diagnosed at Mehraban Hospital, Herat, Afghanistan

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ABSTRACT

Background: Esophageal cancer is the sixth leading cause of cancer mortality worldwide, accounting for about 5% (407,000 deaths) of all cancer deaths annually. It is the eighth most common cancer worldwide (¹). Esophageal cancer usually presents at an advanced stage, and thus curative treatment is limited and the prognosis is poor, with an overall 5year survival no greater than 20%. (¹)

Objective: This study aimed to determine the Risk Factor for esophageal cancer patients registered at Mehraban Hospital Herat -Afghanistan.

Materials and methods: A quantitative retrospective cross-sectional study was conducted using the medical records of patients diagnosed from 23 August 2021 to 21 May 2022. Data includes information on gender, age, risk factors, diet, address and types of cancer diagnosed. The data was transferred to a customized form and analyzed using Microsoft Excel program to classify cancer types.

Results: The total number of patients with completed documents were 70. Of these, 43 (61.4%) were male and 27 (38.5%) were female. Most of the patients were in the age range of 35–85 years. The most common cancers were adenocarcinoma 38(54.3%) and squamous cell carcinoma 32(45.7%).

Conclusion: Results showed that the esophageal adenocarcinoma was more than esophageal squamous cell carcinoma. Oesophageal cancer was predominant in men and majority of them were in sixth decade of life. Use of smokeless dipping tobacco (Locally termed as “Naswar”) and dried salted meat were found in most oesophageal cancer patients.

Keywords: Adenocarcinoma, Oesophageal cancer, tobacco (Naswar)

INTRODUCTION

Cancer is a well-known cause of death globally and is a huge impediment in improving the human life expectancy around the globe. According to the 2019 World Health Organization (WHO) report, cancer is the first or second prominent cause of death among 112 countries out of 183 countries, and it is classified as third or fourth in other 23 countries (²). The International Agency for Research on Cancer (IARC) projected that cancer burden has grown to around 18 million new cases with 9 million

death occurrences in 2018 alone .(2) Adenocarcinoma and squamous cell carcinoma are the two most common types of esophageal cancer (15)

MATERIALS

AND

METHODS

a retrospective observational population-based epidemiological study of esophageal cancer has been conducted based on an 8-month cancer incidence report from August. 23. 2021 to May.21. 2022. The present study includes incidence of esophageal cancer only among Herat city residents. The report thoroughly present most common types of cancer by age, gender, family history, diet, risk factor, histology type and tumor location.

RESULTS

Oesophageal cancers were predominant in males (61.4%) rather than females (38.5%). The majority of the patients diagnosed with oesophageal cancer were above 60 years old (81.8%). The mean age of patients was 60 years. The oldest patient was 85 years old and the youngest patient was 35 years old.

Risk factors: Most oesophageal cancer patients (23 patients comprising 32.8% of patients) had a history of using smokeless dipping tobacco (Naswar), 15 patients (21.4%) gave history of using dried salted meat. Thirteen patient (18.5%) had history of drinking hot tea and 10 patients (14.2%) had history of cigarette smoking. A small percentage (12.8%) of patients had family history of oesophageal cancer.

Discussion

The current study was conducted in a curative hospital located in Herat city, Western Afghanistan. Over the period of the study, the researcher has seen a large number of patients with oesophageal cancer in Mehraban hospital in Herat. As oesophageal cancer is a complex disease and almost always referred to a tertiary care hospital, the researcher was able to capture most of the cases in this area.

The study revealed that the percentage of adenocarcinoma is higher than squamous cell carcinoma which are 54.3% and 45.7%. Same as the United States, the incidence of squamous cell carcinoma is declining, however, the incidence of adenocarcinoma has increased more than 6-fold in the last three decades.(5) Reports from Asian countries, such as Singapore and China have shown a decline in the incidence of squamous cell carcinoma.(6) The present study showed adenocarcinoma and squamous cell carcinoma occur more frequently in patients above 60 years old and the age of onset of patient with esophageal cancer has decreased than the report from the United States, where the incidence of squamous cell cancer of the oesophagus increases with age as well and peaks in the seventh decade of life.(7) Oesophageal cancer occurred more often in men compared to women(8) It was similar to the present study where the incidence of oesophageal cancer was predominant in men compared to women .The National Cancer Registry 2007 reported the incidence of oesophageal cancer in Malaysia is slightly higher in males compared to females. (9) The incidence of oesophageal cancer is very low in those under 40 years of age, but it increases in succeeding years of life. The overall incidence increases with age and for our study, it reached a peak in the sixth decade. In China, aging population is a major cause of the increasing burden of oesophageal cancer (10). Jemal et al., (2011) also revealed that the incidence of oesophageal cancer has been found to increase in a continuous manner with age. (11) Among the well-recognized risk factor, smokeless dipping tobacco (Naswar) was found in most oesophageal cancer patients in our study. Tobacco contains many carcinogens particularly nitrosamines and when a smoker ingests tobacco condensates, it causes nitrosamines to react with the oesophageal mucosa. (8) Smokeless Tobacco (Naswar) attributed to oral and esophageal cancer (17). This study highlights the frequency of Naswar consumption in high risk population in Herat. Majority of our patients use tobacco in different forms like dipping snuff (Naswar) as pinch which is placed under the lip between the gingival and buccal mucosa, snuff inhalation and eating Naswar. All Naswar users were using Naswar as pinch, 8–10 times/day for a long period of time since the age of adolescence. Out of 70 patients of esophageal cancer in our sample, 23 (32.8%) were users of Naswar (Table 1-3), It was similar to the study in Khyber Pakhtunkhwa region of Pakistan (16).

Dried salted meat is also a risk factor. One study in southwest of china at Yanting County shows that the frequent and long-term consumption of salted meat and salted fat could increase the risk of developing esophageal cancer (18). In our study 15 patients(21.4%) had history of using long-term dried salted meat. smoking is also a well-described risk factor

for oesophageal cancer.⁽¹²⁾ The present study found that 14.2% of patients were smokers and they faced an increased risk of both squamous cell carcinoma and adenocarcinoma of the oesophagus. There is a direct correlation between the numbers of cigarettes a smoker smokes per day, the length of time the smoker spends smoking, and the risk of oesophageal cancer⁽¹³⁾. In this study 54.2% of patient had Lower oesophageal cancer and appeared to be the commonest site of oesophageal cancer. These findings are in good conformity with the observation in Indians by Cherian et al., (2007) where lower oesophageal cancers outnumbered the middle and upper and appeared to be the commonest site of oesophageal malignancy.⁽⁶⁾ While the study in China found that squamous cell carcinoma of the oesophagus was located mainly in the middle of the oesophagus and most of the adenocarcinoma of the oesophagus were located in the lower oesophagus.⁽¹⁴⁾

Conclusion: In conclusion, oesophageal cancer was predominant in males and majority of them were detected in sixth decades of life. The common Histological sub-type of oesophageal cancer was adenocarcinoma. Consumption of smokeless dipping tobacco (Naswar) and dried meat were found in most oesophageal cancer patients.

Table 1-1: Age- group

Number	Age group	Frequency	Percentage
1	35-44	6	8.5%
2	45-54	17	24.2%
3	55-64	24	34.2%
4	65-74	17	24.2%
5	75-85	6	8.5%

Figure 1-1

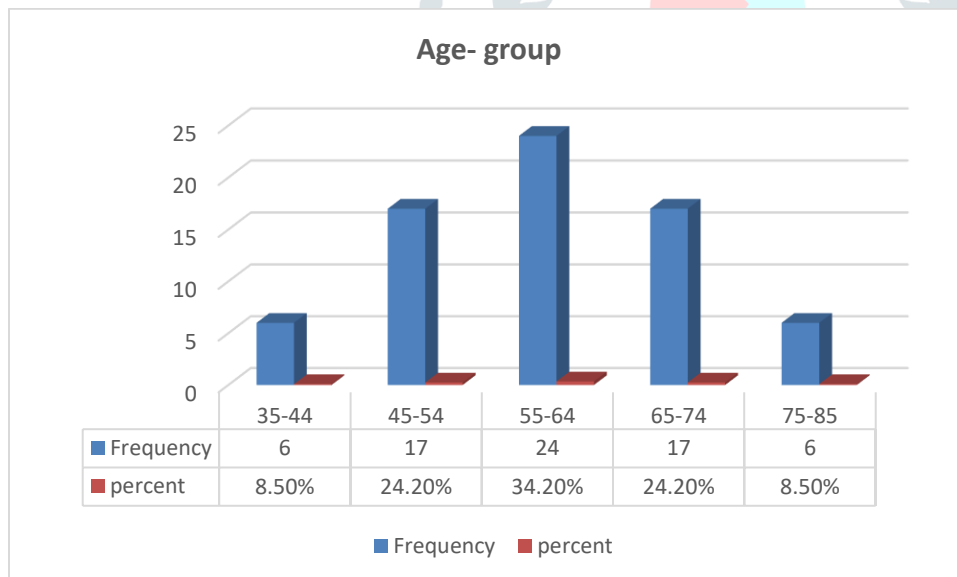


Table1-2 Sex- Category

Number	Sex category	Frequency	Percentage
1	Male	43	61.4%
2	Female	27	38.5%

Figure 1-2

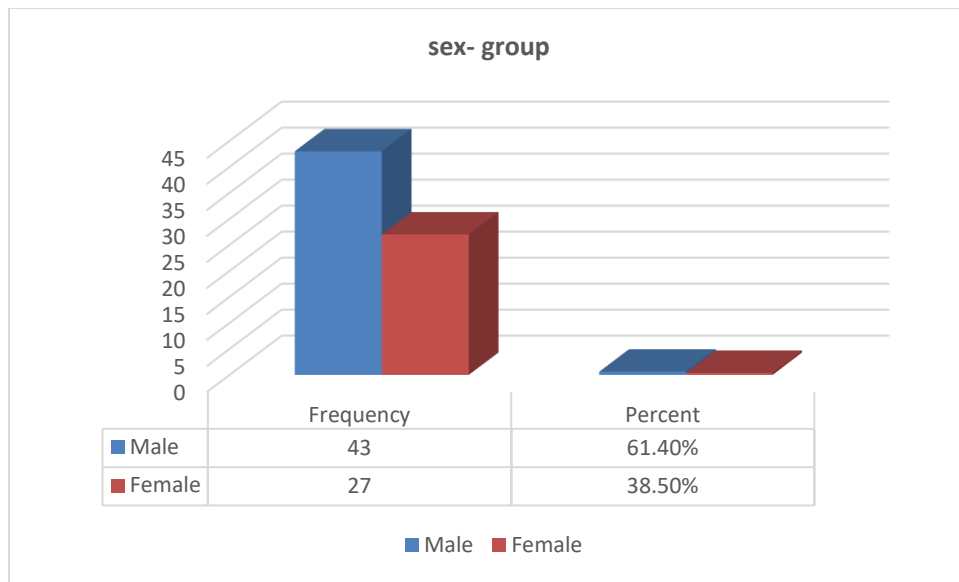


Table 1-3: Risk Factors of oesophageal cancer.

Number	Risk Factors	Frequency	percentage
1	tobacco (Naswar)	23	32.8%
2	Dried Meat	15	21.4%
3	Hot Tea	13	18.5%
4	Smoking	10	14.2%
5	Family History	9	12.8%

Figure1-3

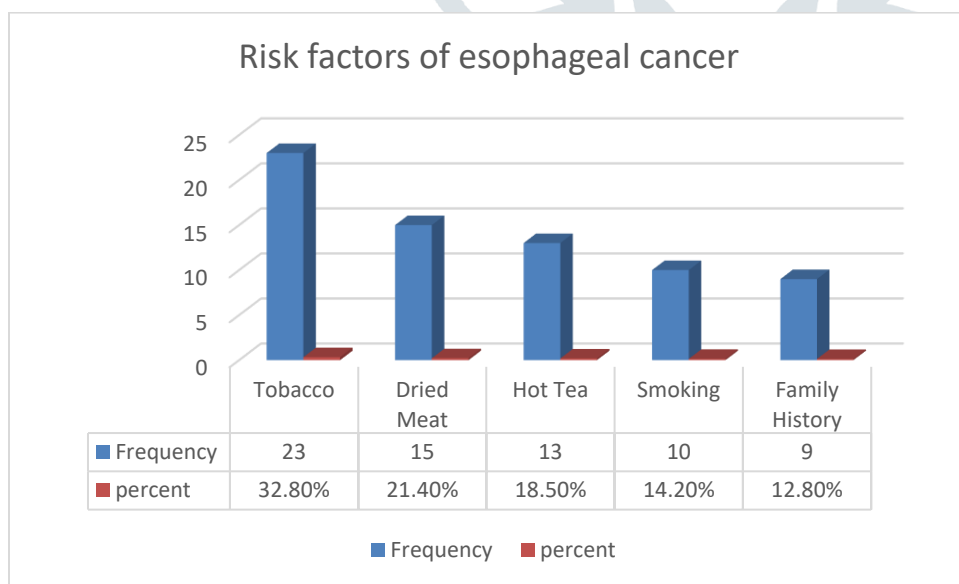


Table 1-4 Tumor Location detected by Endoscopy

Number	Tumor Location	Frequency	percentage
1	Upper	7	10%
2	Middle	25	35.7
3	Lower	38	54.2%

Figure 1-4

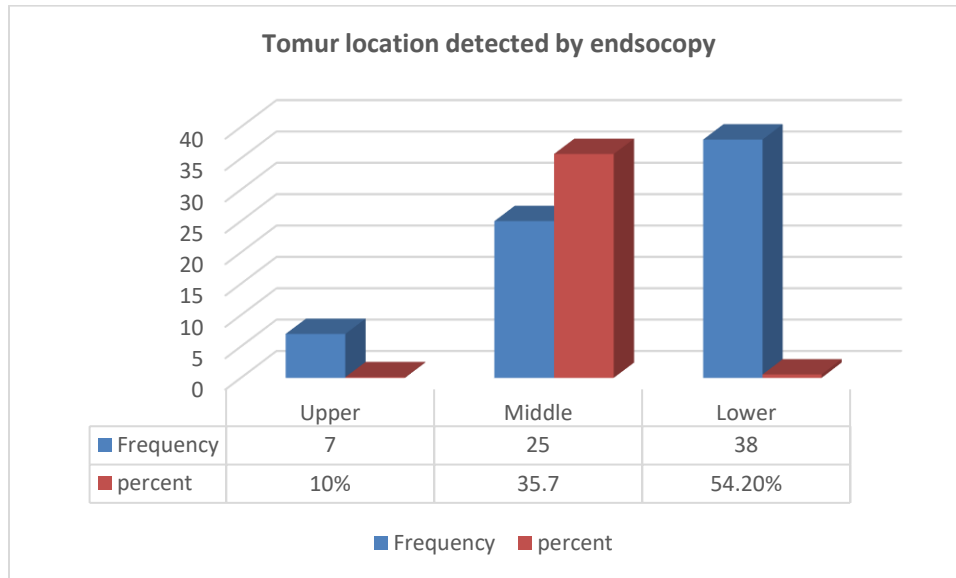
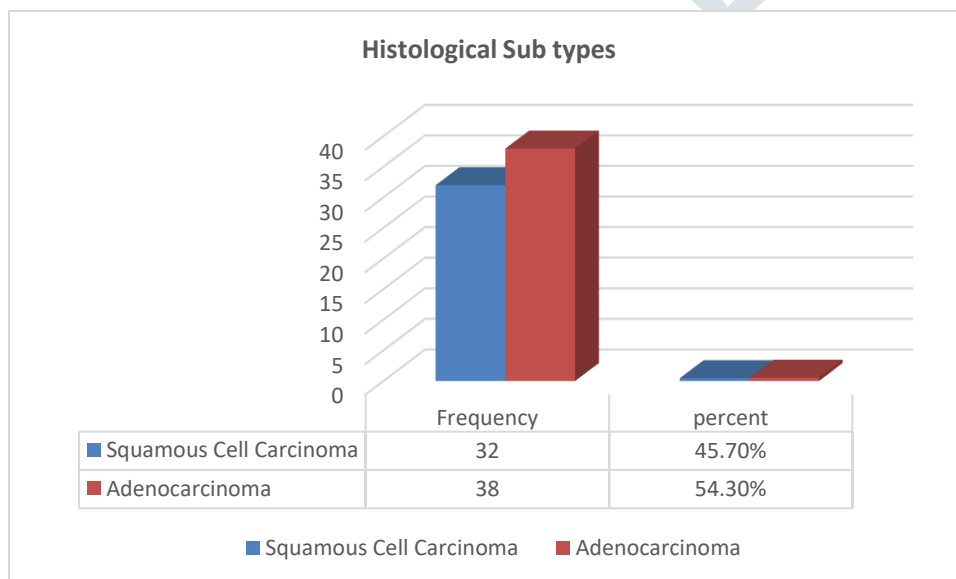


Table 1-5 Histological sub types

Number	Histological types	Frequency	percentage
1	Squamous Cell Carcinoma	32	45.7%
2	Adenocarcinoma	38	54.3%

Figure1-5



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