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Research Article

**FREQUENCY AND PATTERN OF ESOPHAGEAL
CARCINOMA**

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Article Received: April 2019**Accepted:** May 2019**Published:** June 2019**Abstract:**

Objective: The aim of this research work is to assess the rate & pattern of the EC (Esophageal Carcinoma) in accordance with the groups of age & sex.

Methodology: The review of all biopsies of the esophagus which received in the pathology department of Masoomen Hospital Trust Karachi for a period of 5 years from April 2014 to March 2019, carried out and we studied the patients suffering from cancers of esophagus in detail.

Results: We reviewed two hundred and fifteen patients in this research work. There were fifty-seven patients of benign abrasions & one hundred and fifty-eight cases were malignant. Out of total one hundred and fifty-eight patients of malignant abrasions, the most frequent carcinoma was the carcinoma of the squamous cell present in 95.0% (n: 150) patients followed by 3.0% (n: 5) patients of adeno-carcinoma & 2.0% (n: 3) patients of not differentiated carcinoma. There was dominancy of the females in this complication with 57.0% in comparison with the 43.0% male patients. Majority of the patients were living in their 5th life decade followed by 4th & 6th decade of life.

Conclusion: The carcinoma of the squamous cell is most common EC followed by the Adeno-carcinoma.

Keywords: Carcinoma, Comparison, Frequency, Pathology, Malignant, Benign.

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INTRODUCTION:

EC has many variations in its prevalence according to ICD-10 [1]. EC is very frequent in the countries which are under development, there are 2 belts of the occurrence of EC based on geography in whole world. The belt of esophageal cancer in Asia contains Mongolia, China Republic, Iran, Pakistan & Turkmenistan [2]. The information from one important city of Pakistan showed that this complication is 7th most frequent malignancy in males and data from Karachi showed that it is the 6th most common malignancy in men and 6th most common malignancy in women [3]. In Quetta, this was the 3rd most common malignancy in men responsible for 11.0% patients of the cancers [5]. The prevalence of the complication is very high in some parts of the world affecting 100 per 100,000 people in regions as Iran, China republic & Russia. The occurrence in the countries of South & East Asia is about 10 to 50 patients per 100,000 and in the countries of the west, including the United States of America has very less rate of occurrence of about less than 10 per 100,000 [6, 7]. The most predominant histology in the countries of the west are adeno-carcinoma & carcinoma of the squamous cell is the dominant complication in our country Pakistan [7].

The smoking of cigarettes is very common risk factor for the occurrence of EC [8]. Molecular alterations as P53 mutation in conjunction with smoking heralds the malignancy development [9]. The research works have concluded that less use of vegetables & fruits are also important risk factors [5]. There is documentation about the association of the utilization of pickled vegetables which have high amount of the N-nitroso compounds with the cancer of esophagus [10-12]. Dysphagia & loss of the body weight are very frequent symptoms of the complication. There are some other

symptoms of this complication as odynophagia, cough & hoarseness [13]. There is very adverse prognosis for the patients suffering from EC, despite quick treatment [14, 15]. There is possibility of the identification of the carcinoma in its initial stage after the development of the endoscopy [16]. We carried out this research work to determine the rate and pattern of the EC to compare it with the findings of other national and international research works.

METHODOLOGY:

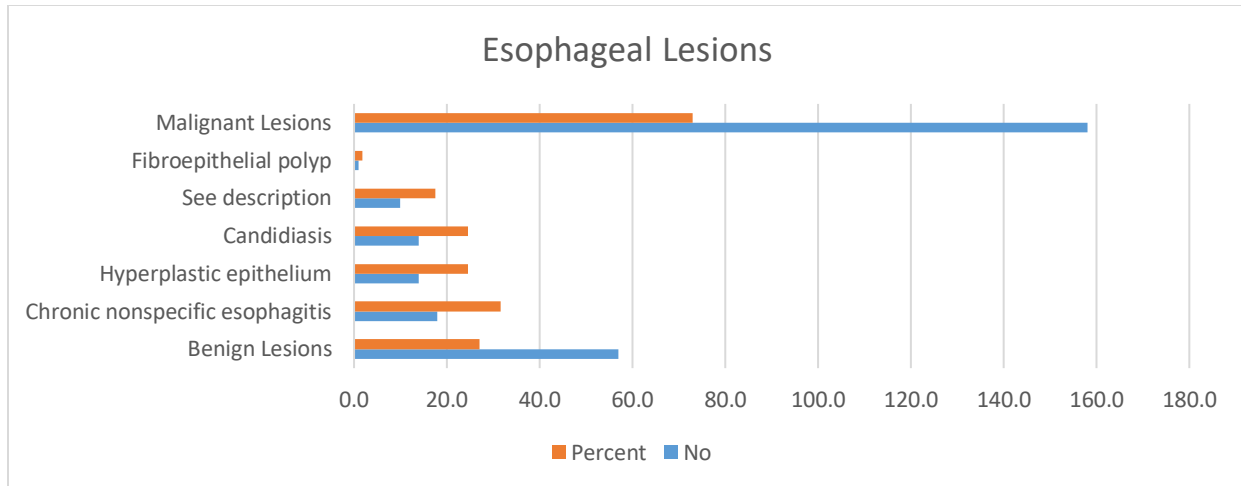
This research work was retroactive as well as prospective in nature. This research work carried out in the Department of Pathology of Masoomeen Hospital Trust Karachi. This research work contained all the biopsies of the esophagus through endoscopy which were under examination in the same department for a period of complete 5 years from April 2014 to March 2019. There were total two hundred and fifteen patients in this research work. The examination of the H & E (Hematoxylin & Eosin) stained sections carried out to observe the detail of the cancers of esophagus.

RESULTS:

We studied the two hundred and fifteen biopsies of esophagus in this research work. Out of total patients, 27.0% (n: 57) patients were suffering from benign abrasions & 73.0% (n: 158) patients were suffering malignant nature complication. In fifty-seven benign abrasions, the diagnosis of eighteen patients carried out as chronic non-specific esophagitis followed by fourteen patients of HE (Hyperplastic Epithelium), Fourteen patients suffering from candidiasis & 1 patient suffering from the complication of fibro epithelial polyp. The report of the other ten patients was according to the examination as available in Table-1.

Table-I: Distribution of 215 Esophageal Lesions

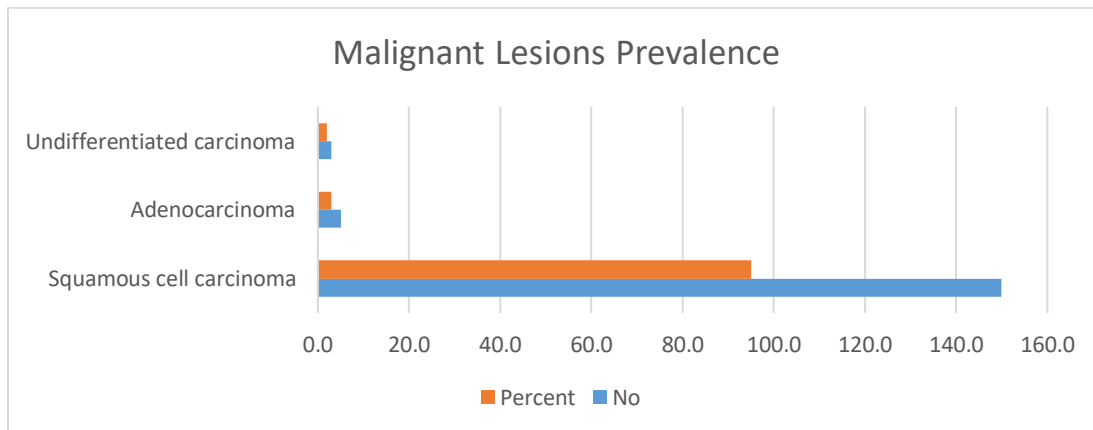
Type of Lesions	No	Percent
Benign Lesions	57.0	27.00
Chronic nonspecific esophagitis	18.0	31.58
Hyperplastic epithelium	14.0	24.56
Candidiasis	14.0	24.56
See description	10.0	17.54
Fibro epithelial polyp	1.0	1.75
Malignant Lesions	158.0	73.00



Out of one hundred and fifty-eight malignant abrasions, the most frequent malignancy was the carcinoma of the squamous cell with a rate of 95.0% (n: 150) followed by 3.0% (n: 5) patients with adeno-carcinoma and 2.0% patients of non-differentiated carcinoma as presented in Table-2.

Table-II: Distribution of 158 malignant lesions

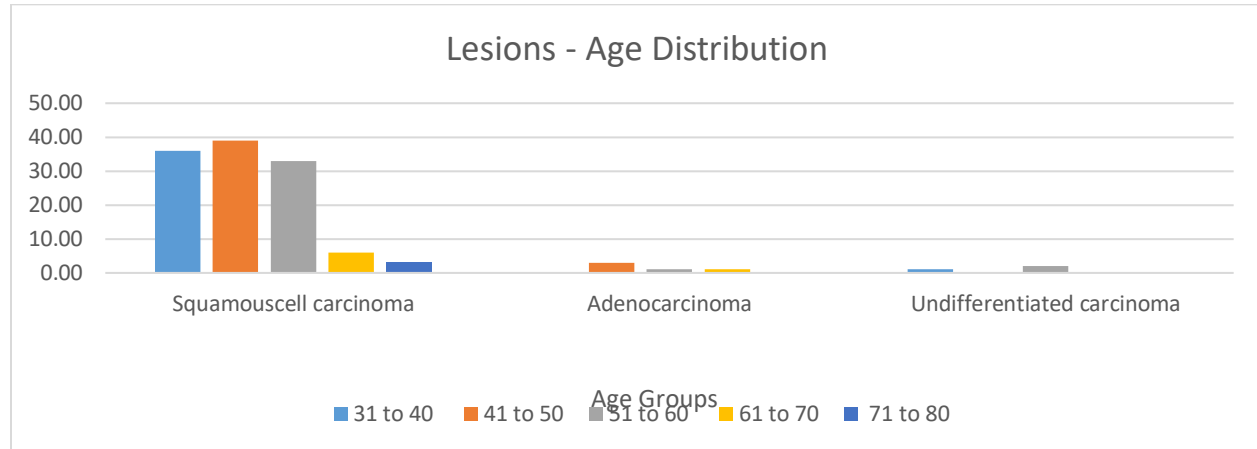
Type Of Lesion	No	Percent
Squamous cell carcinoma	150.0	95.00
Adenocarcinoma	5.0	3.00
Undifferentiated carcinoma	3.0	2.00



A very high rate of this cancer was available in females with a sum of 57.0% (n: 90) patients in comparison with the 43.0% (n: 68) males. Majority of the patients suffering from the carcinoma of esophagus were available in the 5th decade of their life followed by the patients in their 4th & 6th decade of life as available in Table-3.

Table-III: Age Distribution of 158 Malignant Lesions

Type of Lesion	Age Groups (in years)						
	10 to 20	21 to 30	31 to 40	41 to 50	51 to 60	61 to 70	71 to 80
Squamous cell	2.00	31.00	36.00	39.00	33.00	6.00	3.00
Adenocarcinoma	—	—	—	3.00	1.00	1.00	—
Undifferentiated	—	—	1.00	—	2.00	—	—

**DISCUSSION:**

There is very high occurrence of cancer in our county Pakistan till the creation of the country [17]. The burden of such complication is in need of highly facilities of health care system in the whole world particularly in our country Pakistan [18]. In recent research work, we reviewed the biopsies of esophagus with endoscopy to determine the rate & pattern of the cancers of esophagus. In this research work, we studied total two hundred and fifteen biopsies of esophagus. Out of total, 27.0% (n: 57) patients were available with benign & 73.0% (n: 158) patients were available with malignant abrasions. The results of this research work are very much similar with the research works carried out in the same country as in Quetta [5], Karachi [2-19] & various research works from other countries as India [20], Japan [21] & Bangladesh [22], where the carcinoma of squamous cell was most common EC followed by adeno-carcinoma.

EC is very dangerous complication because of dysphagia, which causes the disability among patients to swallow altogether with the outcome of biochemical alterations induced by this complication [23]. In this research work, dysphagia was the most important available complain in 90.0% patients of cancer. This finding is very much similar with the results of Roohullah [5], Kuwano [21] & Saleh M [19]. In a large amount of countries, the cancer of esophagus is two to four times more common in males in comparison with females. In the countries of China Republic, Iran & Afghanistan, the prevalence of this cancer is same in

both genders [8]. This research work showed the dominance of the females in the occurrence of this disease. This finding is similar with the results of Bhurgri Y [24] who concluded a high occurrence of this cancer among females. Whereas Roohullah [5] stated the same frequency of this complication in both genders. Puhakka and Aitsalo [25], Malik [4], Afidi SP [23] & Salih M [19] concluded a high frequency of men for this complication in comparison with the female patients.

EC is very common in the age groups of elder age but it is also occurring in persons of young age [23]. In this research work, majority of the patients of EC were spending their 5th decade of life followed by 4th & 6th decade of life. This finding is consistent with the results of research works conducted in Karachi [2-23], Quetta [5] and India [12]. They also reported the high amount of patients having the age from 41 to 60 years. EC is life threatening condition, as the complete prognosis is very adverse. In time identification of the tumor is the basic for the good prognosis [5]. The main symptom was dysphagia available in 90.0% patients showing that there should be thorough investigation to tackle the issue of carcinoma in that particular region.

CONCLUSION:

This research work was an initial interrogation & represents the aid to the information on the occurrence of the complication in our country Pakistan. The main purpose of this research work to gather the basic

information so that future work may be carry out to tackle the issues of the frequent malignancies. One of the most influential risk factor is adverse social and economic background & there is need of more emphasis on education. The chose area in this research work is poor social & economic condition which displayed a rising cancer rate. There is need to increase the awareness with the help of education which is very vital and it can play a best role for prevention.

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