CANCER OF ESOPHAGUS: TEN YEARS EXPERIENCE AT CENAR, QUETTA

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Background: A retrospective study of 659 patients of Ca Esophagus was conducted from 1 January 1990 to 31st December 1999 (10 years) at CENAR Quetta. The aim of this study was to highlight the incidence, early detection, management, and various other parameters of Ca Esophagus. ***Results:*** During this period, 5819 new eases of cancer were registered. Cases of Ca Esophagus constituted 659 (11.32 ***%)*** in number. It was studied that this cancer was the 3th most common cancer registered in both sexes at our centre. 65 new cases of Ca Esophagus were registered at CENAR Quetta per annum on an average. Males slightly dominated the females. Maximum number of cases 470 (71.31 %). were reported between ages 4 1 - 6 0 years with a median age of 55 years. Maximum number of cases 399 (60.57 %), involved lower 3' of Esophagus. Squamous cell carcinoma was the most common histopathology seen in 574 cases (87.10 %). These patients were mainly treated with radiation therapy, palliative, because by the time they reported, they were found in stage 111 and beyond. Some patients were also treated with chemotherapy along with radiation, but the overall prognosis was poor. A few patients have also undergone palliative surgery; such as pull through or push through tubes prior to radiotherapy. ***Conclusions:*** Since the patients presented with late & advanced disease, it is, therefore, recommended that all cases of dysphagia particularly from this region of the country should be thoroughly investigated with the suspicion of Ca Esophagus. It is further suggested that general population be educated about the potential risk factors like smoking, use of naswar, beetle nut chewing, and intake of very hot food & beverages.

INTRODUCTION

Esophageal cancer is the ninth most common cancer in the world'. Esophageal cancer is a disease of mid to late adulthood (60-70 years). Its mortality rates parallel its incidence, with a median age at death of 66. The probability of surviving esophageal cancer is low, with only 8% of patients surviving 5 or more years, with a median survival of 9 months[2]. There is a marked variation in its incidence, more than for any other tumor, according to sex, geographical area, and racial & economical background [J]. The annual age-adjusted incidence rate among males varies from less than 5 cases per population among whites in the United States to 18.7-26.5 per 100,000 cases in some regions of France, with up to >100 cases per in Northern China, the regions of Iran & States of Central Asia, near the Caspian Sea and Afghanistan". In most countries esophageal cancer is 2 to 4 times more frequent in men than in women. In China, Iran, Afghanistan “the Esophageal cancer belt region” this cancer is almost as frequent in women as in men.

Tobacco smoking is a strong risk factor for esophageal cancer[4]. The regular consumption of alcohol predisposes to cancer due to chronic irritation of the mucosa. Studies have shown that diet low in vegetables & fruits is another risk factor. In China, the country with the highest mortality rate due to this disease, incidence rates have been decreasing since the 1970's, probably as a consequence of a diet with higher contents of foods rich in proteins, carotene, vitamins C & E, and riboflavin. Barrette’s esophagus is characterized by glandular metaplasia of the squamous epithelium of the lower 3rd of the. usually in response to chronic gastro-esophageal reflux | These patients are risk of developing adenocarcinoma of the esophagus. Other risk factors for Ca Esophagus Are Achalasia, intake of hot soup & beverages, ionizing radiation, Plummer- Vinson syndrome, Tylosis, etc[5].

25 — 30 % of the tumors arise in the upper 3rd of the esophagus, 40 - 50 % in the middle 3rd ¡and upto 10 % in the lower 3rd. Macroscopically, tumors appearing nodular, ulcerating or diffusely infiltrating.

Cancers of upper 2/3ld of the esophagus are invariably squamous cell carcinomas. Those in the lower 3rd are most commonly squamous but I/3rd are adenocarcinomas arising from Barrettes esophagus

Tumours spread within Esophagus longitudinally and circumferentially, eventual*ly*. resulting in complete Esophageal obstruction.

It was studied that all the patients reported in advance stage (stage III & beyond), the patients were mainly treated by radiation therapy palliatively. Some cases went through surgical procedures such as push through tubes (Rush Tube) passed particularly in the lower 3rd of Ca Esophagus. The patients were also kept on Cisplatinum based chemotherapy after completion of radiation therapy. Responses were encouraging initially, but we could not get survival rates more than 10 % for the five years.

Table-4: Ten most common malignant tumours in females

	Tumour	No.	%age
I	Breast	469	19.70%
2	Skin	424	17 81 %

3	Head & Neck	282	11.40%
4	Esophagus	278	11.68%
5	OIT	168	7.05%
6	Gynecological	152	06 38 %
7	Haematological	103	4.32%
8	Lunas	99	04 15 %
9	Eye. ..	66	02 85 %
10	Miscellaneous	337	14.16%

Table-5: Geographical distribution of esophageal

Country	ISO.	% of Total Reg. Cases	% of Total Ca Esophagus eases
Baluchistan (Pak)	3 77	6.47%	57.21%
Afghanistan	282	4.85%	42.79%
Total Ca Esophagus 1	659 1	II .32%	100%

Table-6: Age range of esophageal cancer patients

Age in Years	No. of Cases	% of Total Reg. Cases	1 % of Total Ca I Esophagus cases
0-20	*Nil*	0	0
21 -30	***25***	0.38	3.79
31 -40	***90***	1.54%	13.65
41-50	***265***	4.55	40.21
51-60	***205***	3.53	31.1
<60 (61 – 72)	***77***	01.32	11.68
Total	***659***	11.32	100

***Table-7: Histopathological* diagnosis of esophageal cancer patients**

Histopathology	No. *of* cases	% of Total Ca Esophagus
Squamous *cell* Ca	574	87.1 %
Adenocarcinoma	*33*	05.0%
Miscellaneous	*52*	07.8 %

Table-8: Location of tumour in patients with esophageal cancer

***Site of* Esophagus**	**No. of Cases**	**% of Total Ca Esophagus**
Upper 3rd	62	09.4 %
Middle 3rd	198	30.04%
I Lower 3rd	399	60.5 %
Total	659	100%

DISCUSSION

Carcinoma of **Esophagus** accounts for 1 /0 cancers in USA, with 12500 new cases in 19792. Male predominance was studied with a ratio 4.8**.**

1.6 per million populations. Highest rates of Ca Esophagus, worldwide are reported in Iran, Areas of China, Caspian Sea, Afghanistan and States of Central Asia, where the incidence is around 100 cases per million populations[1]". Furthermore, the male to female ratio is not much different compare to the west where male predominance is reported.

In western population the major risk factors for the development of Ca Esophagus are smoking & Alcohol. However, in the Esophageal cancer belt areas, most of the population is Muslim, therefore, besides smoking some other environmental factors may contribute to this high incidence rate[15]. Baluchistan is having its borders both with Iran & Afghanistan, therefore, the high incidence of Ca Esophagus reported from this part of the country is comparable to the Esophageal cancer belt regions, suggesting similar environmental factors responsible for the occurrence. It was studied that the incidence of Ca Esophagus for the last 10 years was 11.32 % of all registered cancer patients, rendering it the 3rd most common malignancy in both sexes. Also, the male to female ratio was not much different, i.e. 1.4: 1, suggesting slight male dominance. The high incidence rate in Iran Afghanistan and also adjoining parts of Baluchistan is probably due to high rate of smoking habits (cigarettes, bidi etc)[7]. Betel nut chewing and intake of naswar are other common habits in this part of country, responsible for this high incidence of Ca Esophagus[18]. Drinking the tea very hot is another custom prevailing in this region, which may also contribute to the high incidence, as a result of thermal injury to the Esophageal mucosa. All the patients reported in stage III & beyond reflecting lack of the patient education and also lack of the health facilities in this part of the country[19]. Dysphagia was the main symptom in 90 % of the patients suggesting that all the patients with this symptom should be thoroughly investigated to rule out Ca Esophagus, particularly in this region, as prognosis highly correlates staging (early stage has good prognosis). Histopathology's revealed 87 % of Squamous cell carcinoma, which is comparable to the West. 70 % of our patients reported at the age of 41 to 60 years with the median age of 55 years, suggesting it is a tumour of old age as reported

by the West. Various authors have reported the incidence in the upper 3[r] 10 % to 25 %, from middle 3[rd] 40% - 50 %, and from lower 3.25 **%** to 50 ***%m²*.** Our study demonstrated higher incidence from lower 3[rd] (60 %) and lower incidence from middle 3[rd] (30 %).

The patients in our study presented in stage III & beyond, hence they were treated palliatively with radiotherapy. Some patients were also put on Cisplatinum based chemotherapy after the completion of radiation. Overall survival rates, however, were not significantly different.

CONCLUSIONS

Cancer of Esophagus is having a higher incidence in Baluchistan compared with rest of the country, probably due to the same environmental & cultural factors prevailing in this region of the country and neighbouring Esophageal cancer belt countries like Iran and Afghanistan.

Ca Esophagus is a fatal tumour as overall prognosis is poor. Good prognosis depends largely on early detection of the tumour.

Most of the patients in our study presented as stage 111 & beyond, therefore, early symptoms like minor dysphagia should be thoroughly investigated with the suspicion of Ca Esophagus particularly in this region of country.

100.0 Various reports have suggested that carotenoids, vitamins C and E may be involved as preventive of Esophageal cancer carcinogenesis. It appears likely that improved nutrition may help lower the incidence of Esophageal cancer among individuals at high risk.'

100.1 High risk subjects such as heavy smokers and drinkers, age >60 living in high incidence areas, previous upper digestive cancer or previous Squamous Esophageal dysplasia may benefit from periodic endoscopic controls with vital staining and multiple cysto-histological sampling from all visually abnormal areas.Smoking is one of the major risk factors studied in our study as more than 80 % of the patients gave the history of smoking. Habits like intake of naswar and hot foods and drinks are probably other important risk factors. Media, such as symposia, conferences etc. may play an important role to create the awareness among the general population about the said risk factors,

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