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DEMOGRAPHIC AND CLINICAL PROFILE OF PATIENTS OF CA ESOPHAGUS IN WESTERN UP

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ABSTRACT

Introduction: Esophageal cancer is the eighth most common cancer worldwide and the sixth most common cause of death from cancer.[1,2,3] Its high mortality rate makes it a major concern. Probably no other cancer causes greater misery to the patient due to development of an inability to swallow even fluids. The disease is specially common in countries of the so called "Asian esophageal cancer belt" including India. A detailed study of this disease and its management in SVBP Hospital Meerut has been attempted by our study. It also provides an elaborate review of current literature pertaining to the disease and concludes by comparing the results of the present study with the published data in the international scenario. **Aims:** Objective is to study the demographic and clinical profile of the patients of Esophageal cancer in western Uttar Pradesh. **Methods:** The study was conducted in SVBP Hospital Meerut between June 2016 to October 2017.Total of 46 patients with diagnosis of Carcinoma esophagus were admitted in department of surgery during this period and were analysed prospectively. The data regarding demographic and clinical profile were obtained by questionnaire-interview with the patients and their relatives. Follow up period was one and half year. The data was analysed by SPSSS 21.0 version. **Results:** Out of 46 patients 52% (N=24) were in age group 51-60 years. Male female ratio was 2.5:1. Most of the patients (80%) belongs to low socio-economic status level. About 57% of the patients in our study were non vegetarians, most of them consumed food which was hot and spicy. Alcohol and smoking was found to be independent risk factor for carcinoma esophagus and in our study. Majority of the patients 60.8% (N=28) present with complaint of dysphagia to both solid and liquid food. Apart from dysphagia, loss of weight and appetite, odynophagia, regurgitation, chest pain, hoarsness of voice and dyspnoea were other symptoms commonly present in our patients. Upper GI endoscopy and biopsy of lesion followed by CECT thorax and upper abdomen was the main investigation tool performed in our patients for confirmation of diagnosis and locoregional extent of the disease. Out of 46 patients only 18 patients were found to be candidate for esophagectomy.

KEYWORDS: Esophageal cancer, SVBP, CECT.

INTRODUCTION

Esophageal cancer is the eighth most common cancer worldwide and the sixth most common cause of death from cancer.[1,2,3] The disease is specially common in countries of the so called "Asian esophageal cancer belt" including India. Its high mortality rate makes it a major concern. Probably no other cancer causes greater misery to the patient due to development of an inability to swallow even fluids. Early stages of the disease are only found serendipitously or during screening of precursor lesion. As a result, the typical patient presents with locally advanced disease with lymph node involvement. Most of the time patients coming to the hospital with advanced disease have a very poor long term prognosis. Smoking and alcohol are independent contributing factors are shown by prospective studies of patients who drink but do not smoke and, conversely, of patients who smoke but do not drink.[4] For squamous cell cancer, in addition to drinking and smoking, dietary and environmental factors are important, especially in Asian countries.[5] The demographics of patients who suffer from squamous cell cancers and adenocarcinoma are different.[6] Patients with adenocarcinomas tend to be of heigher socioeconomic class and have obesity related chronic disease such as ischemic heart disease while patients with squamous cell carcinoma are blue collar workers, and general examination may show evidence of weight loss and muscle wasting. In Asia esophageal cancer remains predominantly squamous cell in type and are mostly located in the mid-esophagus.[7] Esophageal cancers are diagnosed by UPPER GI ENDOSCOPY with multiple biopsies for confirmation of diagnosis followed by CECT thorax and upper abdomen for locoregional

extent of the disease. Surgery remains the best option for these patients providing the only chance of cure. Numerous approaches have been described for resection of esophagus, each having its own advantages and disadvantages. Combined modality therapy including radiotherapy and chemotherapy has raised hope for improvement of survival with promising preliminary data.

Finally, for palliation of dysphasia in those patients with advanced disease, various newer therapeutic options have been introduced like endoscopic stenting and laser ablation.

A detailed study of this disease and its management in SVBP Hospital Meerut has been attempted by our study.

AIMS

Objective is to determine the demographic and clinical profile of the patients of Esophageal cancer presented to tertiary care hospital in western Uttar Pradesh and elaborate review of current literature pertaining to the disease and concludes by comparing the results of the present study with the published data in the international scenario.

METHODS

The study was conducted in SVBP Hospital Meerut between June 2016 to October 2017.Total of 46 patients with diagnosis of Carcinoma esophagus were admitted in department of surgery during this period and were analysed prospectively. The data regarding demographic and clinical profile were obtained by questionnaire-interview with the patients and their relatives.

RESULTS

Age - Most of the patients in our study were in 5th and 6th decade of life. 52.17% (N=24) of patients were in 5th decade of life while 23.9% (N=11) of patients were in 6th decade. Mean age of patients with carcinoma Esophagus was 53.4 years.

Sr. no.	Age group (years)	N	%
1	30-40	2	4.34
2	41-50	6	13
3	51-60	24	52.17
4	61-70	11	23.9
5	71-80	3	6.52

Sex - There was male preponderance in the prevalence of carcinoma Esophagus with male to female ratio of 2.5:1. out of 46 patients in our study 71.7% (N=33) were male while 28% (N=13) were female.

Sr. No.	Sex	N	%
1.	Male	33	71.7
2.	Female	13	28

Occupation - Common occupations among males included agriculture, business, manual labourer. A significant portion of males were not involved in any work as they were aged. Majority of females were housewives. Among those involved in heavy or moderately heavy labour, the onset of dysphagia seriously limited their work.

Socio-economic status - About 80% (N=36) of the patients belonged to low socioeconomic status. Rest of the patients belonged to lower middle class.

Dietary habit- About 57% (N=25) of the patients in our study were non vegetarians, most of them consumed food which was hot and spicy.

Smoking- In our study, a chronic smoker was defined as a person who smokes more than 1 pack / day for at least 10 years. 45.65% (N=21) of the patients were smoker while 8.7% (N=4) patients mainly women had the habit of tobacco chewing. Beedi smoking contains low-quality tobacco was slightly more common than cigarette smoking.

Alcohol: A patient was considered an alcoholic if he consumed 80 gm of alcohol/day for at least 5 years. In our study 67.3 % (N=31) of patients were alcoholic.

Sr. no.	Habit	N	%
1.	Smoking	25	54%
2.	Alcoholic	31	67.3%

Disease presentation: Dysphagia was present in all but 2 patients in which odynophagia was presenting complain. 60% (N=28) of patients had dysphagia for solid and liquid food both while 34.7% (N=16) had dysphagia for solid food only. Other common symptoms includes loss of weight and appetite, odynophagia, regurgitation, cough, and chest pain.

S. No.	Complaints	N	%
1	Dysphagia for both solid and liquid	28	60.8
2	Dysphagia for liquid only	16	34.7
1.	Loss of Weight and appetite	30	65.2
2.	Odynophagia	16	34.7
3.	Reguritation	14	30.4
4.	Chest Pain	8	17.4
5.	Cough	14	30.4
6.	Hoarsness of voice	3	6.5
7.	Dyspnoea	8	17.4
8.	Pain Abdomen	4	8.7

Systemic examination: Except for general features like pallor and cachexia, the systemic examination was grossly normal in most of the patients. Notably, the most common systemic signs were scattered crepitations present in 30% (N=14) of the patients.

8.69% of patients (N=4) had cervical lymphadenopathy other than supraclavicular lymph node and they were seen to have middle third growths. 13% of patients (N=6) had supraclavicular lymph nodes. Among these patients two had lower third growths, four had middle third growth.

15% (N=7) of patients had palpable liver which had a nodular surface. Of these patients, 4 were having lower thoracic esophagus growth and the other 2 had middle third growth.

10% (N=5) of patients had epigastric mass which turned out to be lymph nodal masses. Only 2 patients had clinically detectable ascites and another 2 had pleural effusions which were the signs of distant disease.

Diagnostic modalities: Mainly Two diagnostic modality was used in our study, upper GI endoscopy and biopsy of lesion for diagnostic confirmation and CECT chest and upper abdomen for loco-regional spread and staging of disease.

Upper GI endoscopy: All patients who presented to us with complains of dysphagia underwent upper GI endoscopy and biopsy of the growt except 2 patients who were too sick to underwent any procedure and the died at their first admission. Ulcero-proliferative lesion was the most common and present in 82.6% (N=38) of the patients.

Sr. No.	Types of lesion	N	%
1.	Ulcerative	23	50
2.	Exophytic	15	32.6
3.	Infilterative	8	17.4

Middle third esophagus was found to be the most common site of esophageal cancer in our study with 52.17% (N=24) of patients followed by lower third cancers in 41.3% (N=19). 3 patients had growth involving Gastro-esophageal junction.

Sr. no.	Site of lesion	N	%
1	Middle third	24	52.17%
2	Lower third	19	41.3%
3	GE junction	3	6.5%

Multiple punch biopsies were done using endoscopic biopsy forceps and sent for histopathology.

Histological findings: As noted in the chart, 71.7% (N=33) of patients had Squamous variety of carcinoma while 28.2% (N=13) of patients had Adenocarcinoma. All the patients with middle third growths had Squamous carcinoma while 77% (N=10) of patients with lower third growths had Adenocarcinoma.

Sr. no.	Histology	N	%
1	Squamous cell carcinoma	36	78.2
2	Adenocarcinoma	10	21.7

CT scan of thorax and abdomen

CT scan of thorax and abdomen were mainly performed in patients who were deemed to be surgical candidates for curative procedure. Patients who had evidence of metastatic disease either clinically or sonologically (N=7) were not considered for CT scan. 2 patients were too sick to perform any procedure and they died at their first admission, 3 patients had malignant ascites and in 3 patients with grade VI dysphagia while doing palliative feeding jejunostomy signs of metastatic disease (liver secondaries) was found. CECT thorax with upper abdomen was performed in total of 34 patients (73.9%).

Among these patients, 3 had aortic invasion by the disease and 2 of them had tracheal invasion also. 2 patients had tracheo-esophageal fistula. Mediastinal lymphadenopathy was observed in 5 patients. Notably CT scan could pick up liver metastasis in 4 patients in whom ultrasound of the liver does not show any metastasis.

Thus out of 34 patients who were considered to be surgical candidates, 16 had CT scan findings to preclude curative resection. For the remaining 18 patients, surgery was considered as best treatment modality.

Treatment offered: Patients are initially evaluated for operability. Patients who are candidates for surgery are then investigated for fitness for anaesthesia and a major surgical procedure with electrocardiogram, echocardiogram and chest evaluation. 2 patients refuse for surgical intervention because of high operative risk. Those patients who are fit undergo operation. Surgery was the first treatment of choice in our hospital. In patients who are not fit or refuse surgery, either palliation was used or reffered to higher centre. surgery was offered as the primary modality of therapy for 16 patients (34.78%). But, only 12 patients (26%) could

undergo resection procedure. The remaining 4 patients had intra-operative findings that precluded resection. 2 of the 4 patient had bulky celiac nodes, 1 had diaphragmatic infiltration, and 1 had esophago-gastric growth infiltrating into pancreas with bulky celiac lymph nodes also. In these patients, biopsies of the lesions were done and a feeding jejunostomy was performed.

S. NO.	Treatment Modality	N
1.	Surgery	12
2.	FJ in definitive surgery	12
3.	Palliative FJ	6
4.	Refused Treatment	4
5.	Reffered	14
6.	Death	4

DISCUSSION

Esophageal cancer is the eighth most common cancer worldwide[1,2] and the sixth most common cause of cancer related death.[3] India is one of the country included in "Asian esophageal cancer belt" in which the occurrence of esophageal cancer is 50 to 100 folds higher than that in the rest of the world.[8] Carcinoma esophagus is one of the common GI malignanacy in patients presenting to surgery department in tertiary care centre of westeren Uttar Pradesh.

In our series we found esophageal cancer is more common in male patients and male to female ratio in our series are 2:1. Almost similar male to female ratio was observed in global incidence report in 2012.[9] In another study male to female ratio was found to be 3:1.[2] Most of the patients (70%) in our series presented in fifth and sixth decade of life (N=30). Smoking and alcohol were found to be independent risk factors for the development of cancer esophagus as evident in our study because many patients were smoker only who do not drink and many were alcoholic who never smoked. This was also supported by many prospective studies.[4,3,10,11] Dysphagia (40% n=14) and weight loss (60% n=19) were two most common presenting complaints in patients of cancer esophagus in our series. Most of the patients presented to us with grade III dysphagia or above. As mentioned by Takita et al[12] approximately 80% of patients of carcinoma esophagus presents with grade III or more dysphagia.. Apart from dysphagia and loss of weight other common presenting symptoms are regurgitation, cough, odynophagia and hoarsness of voice. The frequency of these symptoms are almost the same in patients of cancer esophagus worldwide as in various observations.[1,13,14] The diagnostic confirmation in our study was done by upper GI endoscopy and multiple biopsy of the lesions as per ESMO guidelines.[15] In about 45% of the patients in our study the growth was found in middle 1/3rd of the esophagus. In one study on disease burden of cancer esophagus in Asia middle 1/3rd of esophagus was found to be most common site involved.[7] Most frequent histological type of cancer esophagus in our study was squamous cell carcinoma. Montgomery et al (2014) and world cancer report (2014)[2] also explained the high frequency of squamous cell carcinoma in developing countries. According to report published in "Global incidence of esophageal cancer by histological subtypes in 2012"[9] squamous cell carcinoma was the most common histological subtypes in 90% of the countries studies.

Out of 46 patients only 73.9% (N=34) patients were found to be surgical candidates remaining 12 patients had either metastatic disease or they were inoperable. Out of 34 surgical patients 34.8% (N=16) had CT findings to perclude resection so in only 39% (N=18) patients surgery was the primary treatment modalityfor the cure of the disease. But 4 patients had intraoperative findings of unresectability so in only 12 patients (26%) surgery was performed.

So only 1/4th of the patients are surgical candidates for curative intention remaining 3/4th had either advanced disease or they were inoperable. This explains poor prognosis of the disease.

CONCLUSION

Carcinoma Esophagus is one of the common malignancy of gastro-intestinal tract among the patients presented to our institution. Along with absence of any screening investigations for early diagnosis of carcinoma Esophagus many other social factors contributes to delayed presentation of disease which leads to very poor prognosis of the disease. Most of the patients present with stage IV disease and only 1/4th of the patients are candidates for surgical resection.

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