



## “CLINICOPATHOLOGICAL PROFILE AND MANAGEMENT OF GASTROESOPHAGEAL CANCER”

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### ABSTRACT

The gastroesophageal carcinoma has shown a geographical shift in few decades. The histological and advanced methods like EUS have become important methods in staging and diagnosis.

**Aims and Objectives:** To study clinicopathological profile of the patients of gastric and esophageal carcinoma and study the management of these patients in the department of surgery in Himalayan Institute of Medical Sciences.

**Materials and Methods:** Total of 104 subjects were analyzed for gastroesophageal carcinoma, at “The Himalayan Institute of Medical Sciences” as student of Masters in surgery. The prospective study of esophageal, cardia and gastric carcinoma had been conducted, in the department of surgery from February 2006 to may 2007. Retrospective study of esophageal carcinoma done in patients managed by department of surgery who have undergone palliative or surgical procedures from January 2001 to January 2006.

**Results:** Histologically adenocarcinoma found more common at gastric cardia and stomach, indicating the rising trends of adenocarcinoma in Uttarakhand as well as India. But in this squamous cell carcinoma still predominates in the middle and lower end of esophagus. With GIST also reported in traces. The surgical options chosen for the esophageal carcinoma patients are transhiatal Esophagectomy, Ivor Lewis Esophagectomy with palliative feeding jejunostomy. Adjuvant chemotherapy and radiotherapy included for better survival rates.

**KEYWORDS :** Gastroesophageal carcinoma, clinical assessment ,pathological staging.

### LITERATURE REVIEW

The gastroesophageal carcinomas have shown changing trends and locations in last decades. Among the histological categories of esophageal carcinomas, there is marked geographical variation in the incidence of squamous cell carcinoma of the Asian esophageal cancer belt, which stretches from turkey to china. By contrast disease is less common in United States.

### AIMS AND OBJECTIVES

- To study Clinicopathological profile of the patients of gastric and esophageal carcinoma.
- To study the management of these patients in the department of surgery in Himalayan Institute of Medical Sciences.

### MATERIALS AND METHODS

A total of 104 subjects were analyzed for Gastroesophageal carcinoma, at “The Himalayan Institute of Medical Sciences”. All prospective cases have been subjected to detailed history and examination. The patients have undergone with specific imaging and histopathological investigations to confirm their staging and diagnosing their diseases. Subjects included in the study have undergone conservative or surgical management in the department of surgery in “The Himalayan Institute of Medical Sciences”.

### Observations

This study included a total number of 104 patients of Gastroesophageal cancer. All the patients have been treated in different units of department of surgery at Himalayan Institute of Medical Sciences. Out of 104 patients, 57 patients had esophageal cancer, 8 had carcinoma GE junction and gastric carcinoma 39 in number. Among all the patients with Gastroesophageal cancer 80 were males and 24 females. The gender ratio of Gastroesophageal malignancies is (M:F) 3.3:1.

Table 1: Age wise distribution of Gastroesophageal Malignancies. N=104

Age	No. of patients	Percentage%
<20	0	0
21-30	4	3.8
31-40	10	9.6
41-50	24	23.07
51-60	27	25.96
61-70	24	23.07
71-80	15	14.42
>80	0	0

The 94.2% of patients are in the age group of 41 to 81 years. there was no case reported below the age of 20

Graph 1 Age Wise Distribution Of Gastroesophageal Malignancies

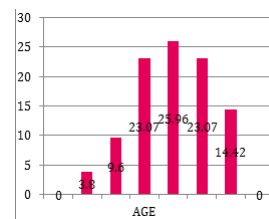


Table 2: Gender distribution N=104

Gender	Number	Percentage%
Male	80	76.92
female	24	23.07

The male and female ratio observed in Gastroesophageal cancer is 3.3:1.

GRAPH 2: GENDER DISTRIBUTION

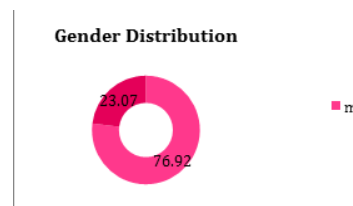


Table 3: mean age according to gender relation with Gastroesophageal Carcinoma N=104

Gender	Number	Mean age
Male	80	58.61
Female	24	46.95

GRAPH 3

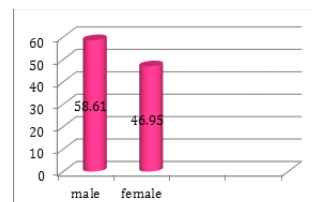


Table 4: distribution according to location N=104

Diagnosed location	Number	Percentage%
CA Esophagus	57	54.80
CA GEJ	8	7.6
CA Stomach/gastric	39	37.50

Out of the data studied of 104 patients 54.80% cases were esophageal cancer, 37.50% were gastric carcinoma and 7.6% were of carcinoma Gastroesophageal junction.

GRAPH 4

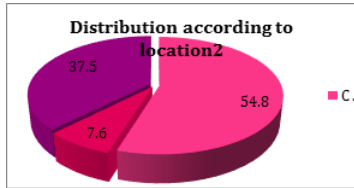
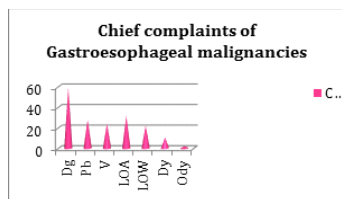


Table 5: chief complaints of Gastroesophageal malignancies N=104

Complaint	Number	Percentage%
Dysphagia	62	59.6
Pain abdomen	29	27.88
Loss of appetite	33	31.73
Loss of weight	23	22.11
Dyspepsia	11	10.57
Hematemesis	4	3.8
Malena	2	1.92
Vomiting	25	24.03
Reflux esophagitis	2	1.92
Cough	4	3.8
Odynophagia	2	1.92
Horseness of voice	4	3.8

The main complaint of gastroesophageal carcinoma is dysphagia 59.6%, with pain abdomen 27.88%, loss of appetite 31.73% and vomiting 24.03%, loss of weight 22.11% and dyspepsia 10.57% ,Odynophagia and malena in 1.92% cases also as the associated complaints.

GRAPH5

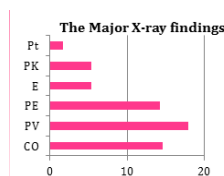


Key to graph axis: Dg-Dysphagia, Pb- pain abdomen, V- vomiting, LOA- loss of appetite, LOW- loss of weight, Dy-dyspepsia and Ody-odynophagia

Table 6: The major X-ray findings in chest x-ray N=56

Finding	Number	Percentage%
COPD (CO)	7	14.6
Prominent Bronchovesicular markings	10	17.8
Pleural Effusion (PE)	8	14.28
Emphysema (E)	3	5.35
Pulmonary Koch's (PK)	3	5.35
Pneumonitis (Pt)	3	5.35
Lymphadenopathy (L)	1	1.78
Normal Study (NS)	18	31.14

GRAPH6



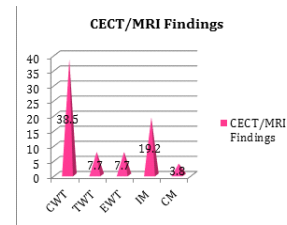
In patients with Gastroesophageal cancer 32.14% patients had normal x-ray finding with major findings of COPD 14.6%, prominent Bronchovesicular markings in 17.8% cases and pleural effusion in 14.28% and emphysema and Koch's in 5.35%.

Table 7: CECT/MRI findings N=26

Type of Growth	Number	Percentage%
Circumferential wall thickness	10	38.5
Transmural thickness	2	7.7
Eccentric wall thickness	2	7.7
Irregular Mass	5	19.2
Cavitatory Mass	1	3.8

The MRI/CECT findings reveal circumferential thickness to be most common 38.5% samples, with irregular mass to be 19.2%.

GRAPH 7

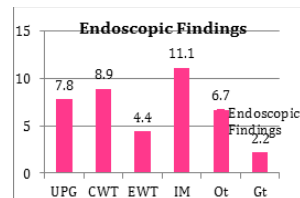


Key to graph 7: CWT- Circumferential thickness, TWT- Transmural thickness, EWT- Eccentric, IM- Irregular mass, CM- Cavitatory

Table 8: Endoscopic findings N=45

Findings	Number	Percentage%
Ulceroproliferative (UPG)	8	17.8
Circumferential (CWT)	4	8.9
Eccentric (EWT)	2	4.4
Irregular Mass	5	11.1
Esophagitis (Et)	3	6.7
Gastritis (Gt)	1	2.2
Polypoidal (PP)	2	4.4
Stenosed narrowing (SN)	5	11.1

GRAPH 8

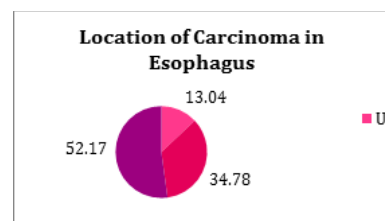


Key to graph 8: UPG- Ulceroproliferative growth, CWT- circumferential growth, EWT- Eccentric, IM- Irregular, Et- Esophagitis, Gt- Gastritis, PP- Polypoidal, SN- Stenosed Narrowing. In the endoscopic findings the most common is ulceroproliferative growth was found the commonest 17.8%, with irregular mass and stenosing narrowing in 11.1% cases.

Table 9: Location of carcinoma esophagus (N=46)

Location of esophagus	Number	Percentage %
Upper 1/3rd	6	13.04
Middle 1/3rd	16	34.78
Lower1/3rd	24	52.17

GRAPH 9



According to the available data the commonest location of carcinoma esophagus is in the lower 1/3rd 52.17%, then in middle 1/3rd 34.78% and least in upper 13.04%.

Table 10: the Biopsy findings (Gastroesophageal malignancies)N=64

Findings	Number	Percentage
SCCA	31	48.43
ADCA	29	45.31
GIST	2	3.1
Atypical	2	3.1

The squamous (SCCA) and adenocarcinoma (ADCA) have almost been diagnosed in same number, with leading trend of squamous cell carcinoma being 48.43%

GRAPH 10

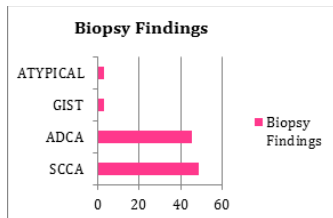
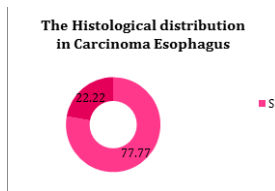


Table 11: The Histological distribution in carcinoma esophagusN=27

Histological type	Number	Percentage%
Squamous	21	77.77
Adenocarcinoma	6	22.22

In the type of carcinoma in esophagus, squamous type in 77.77% cases and adenocarcinoma observed in 22.22% cases.

GRAPH 11



Key to graph 11: SCCA- Squamous cell carcinoma, ADCA- Adenocarcinoma

Table 12: the Histological distribution in gastric and junction carcinoma.N=45

Histological Classification in Esophageal CA cases	Number	Percentage%
SCCA	0	0
ADCA	23	51.11
GIST	2	4.44

Among 45 cases of gastric and junction carcinoma with histological examination 51.11% were found adenocarcinoma and 4.44% as GIST.

GRAPH 12

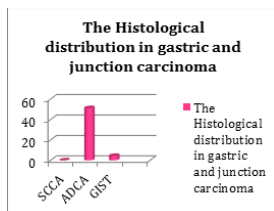


Table 13: Histological type and location in esophageal cancer N=46

Type and Location	Number	Percentage%
CAO-Sq-U/3	5	22.7
CAO-Sq-M/3	6	27.2
CAO-Sq-L/3	7	31.8

CAO-Ad-U/3	0	0
CAO-Ad-M/3	0	0
CAO-Ad-L/3	2	9

The esophageal carcinoma at almost all the three locations of upper middle and lower third esophagus, squamous cell carcinoma is more common than the adenocarcinoma. The squamous cell carcinoma at the lower end of esophagus is 31.8% and adenocarcinoma is 9%.

GRAPH 13

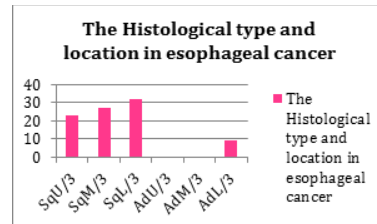


Table 14: Histological staging N=31

Stage	Number	Percentage
Poorly Differentiated	5	25.80
Moderately Differentiated	18	58.06
Well Differentiated	1	3.2
GIST	2	6.4

The poorly differentiated carcinoma was found in 25.8% cases, moderately differentiated in 58.6%, well differentiated in 3.2% while GIST in 6.4%.

GRAPH 14

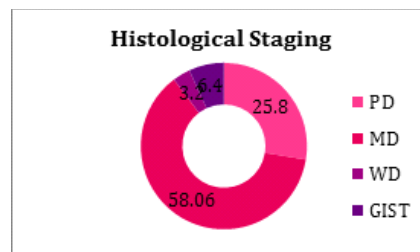
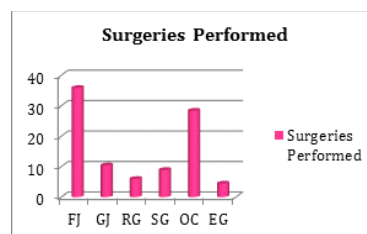


Table 15: Surgical PerformedN=67

Type	Number	Percentage%
Feeding jejunostomy	24	35.82
Gastrojejunostomy	7	10.4
Gastrostomy	5	7.4
Esophagectomy with gastric pull up	19	28.35
Gastrectomy-subtotal	6	8.90
Gastrectomy-radical with D2LND	4	5.95
Esophagogasterctomy with gastric pull up	3	4.41
Loop colostomy ( palliative)	1	1.4

As per the observations the total procedures performed are 67. Within which 28.75% Esophagectomy with gastric pull up 28.35%, feeding jejunostomy 35.82%, Gastrojejunostomy 10.47%, Gastrectomy radical with D2LND 5.95%, Gastrectomy subtotal 8.9%, Gastrostomy 7.4% and Esophagogasterctomy with gastric pull up 4.41%.

GRAPH 15



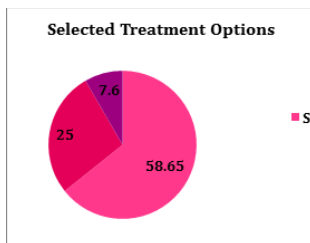
Key to graph 15: FJ- Feeding Jejunostomy, GJ-Gastrojejunostomy, RG-Radical Gastrectomy, SG-Subtotal Gastrectomy, OC-Oesophagectomy, EG-Esophagogastrectomy

In the treatment options 23.8% patients have received chemotherapy after surgery or intraoperative with 7.2% patients taking the adjuvant therapy (Surgery+ chemotherapy+ radiotherapy).

Therapy	Number	Percentage%
Surgery	61	58.65
Surgery+ Chemotherapy	26	25.00
Surgery+Chemotherapy+ Radiotherapy	8	7.60

According to the data the patients undergone only surgery are 58.65%, surgery with chemotherapy are 25% and surgery along with chemotherapy and radiotherapy is 7/60%.

#### GRAPH 16



Key to graph 15: S- Surgery, S+C- Surgery+ Chemotherapy, S+C+R- Surgery+ Chemotherapy Radiotherapy.

#### DISCUSSION

The worldwide incidence of esophageal cancer is increasing. In the developing countries it is the fourth most common cancer in men, with an annual incidence rate of 12.2 per 1,00,000, while in the developed countries the rate is 6.4 per 1,00,000<sup>1</sup>.

Some of the highest incidence rates-over 150 per 1, 00,000 have been reported earlier from the Caspian region in Iran<sup>2</sup>. The incidence rate in African men peaked in the early 1980s and since then they have shown a marked decline to the current rate of approximately 12 per 1, 00,000 person-years<sup>3</sup>. Incidence rate among white men continue to increase and now exceed 6 per 1, 00,000 person-years and reflected a marked increase in the incidence of adenocarcinoma of the esophagus of more than 400% in the past two decades<sup>4</sup>.

Although the incidence of adenocarcinoma in females is lower than men, rates of adenocarcinoma esophagus have increased in women by more than 300% over past 20 years. The ratio worldwide including all developed and developing countries vary from 1.8:1 to 8.0:1.

The mean age group in men varies from 5<sup>th</sup> to 7<sup>th</sup> decade of life and in the women varies from 3<sup>rd</sup> to 5<sup>th</sup> decade of life. In Indian men and women, esophagus is the fourth and fifth decade cancer respectively. The annual incidence rate varies from 4.6 to 10.8 per 1, 00,000 in men and 1.3 to 8.5 per 1, 00,000 in women. Again a decline in incidence rate has been reported to the data of Mumbai cancer registry<sup>3</sup>. A decline in the incidence rate among the Chinese population has been observed to the data of Shanghai registry<sup>1</sup>.

In India the ratio of M: F varies from 2.4:1.1 to 4.2:1.2. In our country the incidence reported in the age group of 45-75 years in men and 35-65 years in women.

Worldwide, gastric adenocarcinoma ranks second only to lung cancer as the leading cause of cancer mortality<sup>5</sup>. Gastric carcinoma is second most common in men and ranks fourth in case of women. An increase in the cases of adenocarcinoma, upto 20% in men and 10% in women has been reported after 1975. The incidence rate of gastric adenocarcinoma has not shown any decline in developing countries<sup>1</sup>.

The highest incidence rate of stomach cancer is reported from Japan (men 77.7 per 1,00,000; women 33.3 per 1,00,000). In India the incidence rate of gastric carcinoma varies from 6.8 to 15.9 per 1, 00,000 in men and from 2.5 to 7.0 per 1, 00,000 in women and accounts for 5% of total cancer burden in men and 3% in women. The higher

incidence rates were reported by urban registries of the southern part of the country, viz, Bangalore and Chennai<sup>5</sup>.

According to NCPR Bangalore, Nagpur is the leading site of esophageal carcinoma with an almost in equal ratio in male and female population with Bangalore, Chennai and Bharsi in the next deadly lead.

Reported cases of the esophagus and gastric carcinoma in Himalayan Institute of Medical Sciences in the span of approximately six and a half years, with about one and half years of prospective cases study and five years of retrospective study. The selected time span has been the first inclusion criteria of the patients in the study. Cases were included from January 2001 to may 2007. Hundred and four cases that fit in the inclusion criteria have been included in the study. The 94.2% of patient population were of age group of 58.61 years with 76.92% male and 23.07% female. The mean age of 58.61 years in men that is 5<sup>th</sup> decade of life and 49.95 years in women that is 4<sup>th</sup> decade of life. The ratio of male: female in this study was observed to be 3.3:1. Out of 104 patients, carcinoma esophagus was 54.80% and gastroesophageal junction being 7.6% and gastric cardia 37.05%.

Among carcinoma esophagus cases the upper esophagus involvement in 13.04%, middle esophagus in 34.78% and lower esophagus in 52.17%. The observations are indicating, the maximum number of cases of esophageal carcinoma of the lower end of esophagus and gastric cardia.

Smoking and drinking are independent contributing factors. It is the estimate that upto 90% of the risk of squamous cell carcinoma of the esophagus worldwide can be attributed to tobacco and alcohol use in any form. Squamous cell cancers, in addition to drinking and smoking, dietary and environmental factors are important, especially in Asian countries. Nitrosamines and their precursors (nitrates, nitrite, and secondary amines), such as pickled vegetables, are incriminated.

Nutritional depletion of certain micronutrients, particularly vitamin A, C, E, niacin, riboflavin, as well as inadequate intake of fresh fruits and vegetables and protein intake, predisposes the esophageal epithelium to neoplastic transformation. Other dietary risk factors include consumption of hot beverages, opium smoking, chewing betel nuts, and mate drinking<sup>6</sup>.

In this study 26 patients were chronic smokers (22.8%)- mostly beddi smokers with a frequency of 1 pack everyday, 17 were alcoholic (15%) 9 patients were tobacco chewers (16.4%) 3 were females were in smoking habits of hukka (5.4%)

Gastroesophageal reflux disease has been implicated as one of the strongest risk factors for the development of adenocarcinoma of the esophagus<sup>7</sup>.

Population based case-control studies examining the relationship between symptomatic reflux and risk of adenocarcinoma of the esophagus have been demonstrated that increased frequency<sup>8</sup>.

The symptoms most commonly associated with esophageal cancer are Dysphagia and weight loss. Unfortunately, in most instances dysphagia signifies locally advanced disease or distant metastases or both. In developed countries with a trend of yearly medical checkup 60% cases are caught as early esophageal and gastric cancer, but in African and Asian countries the disease is diagnosed at advanced stage of carcinoma.

At presentation, patients usually describe progressive dysphagia with difficulty initially in swallowing solids, then liquids, and, in the most extreme circumstances, their own saliva. In India 40% cases report on dysphagia for solids, and 20% when it turns dysphagia for liquids. Substantial weight loss accompanying dysphagia is seen in approximately 90% of patients with squamous cell carcinoma. Patients with adenocarcinoma of the esophagus tend to be white males from middle to upper socioeconomic classes who are overweight, have a history of symptomatic gastroesophageal reflux. Approximately 20% of patients experience odynophagia (painful swallowing).

H Pylori infection appears to lead to a five to six fold increase in risk of gastric malignancy, adenocarcinoma, and primary Non-Hodgkin's lymphoma.

Symptoms characterize gastric cancer such as weight loss, anorexia, fatigue, or epigastric discomfort, none of which unequivocally indicates gastric cancer. A history of dysphagia may indicate the presence of tumour in the cardia with extension through the gastroesophageal junction. Persistent vomiting is consistent with an antral carcinoma obstructing the pylorus.

In this study, dysphagia has been the commonest symptom (59.6%) and loss of weight with 22.11% in 104 patients in esophageal carcinoma and reflux Esophagitis in 1.92%. odyphagia was also noticed in 1.92% cases of gastroesophageal carcinoma, in gastric carcinoma the commonest symptoms has been vomiting 24.3%, loss of appetite in 31.73%, and dyspepsia and hematemesis in 27.88% cases in gastroesophageal carcinoma.

Findings on physical examination that would prompt further testing or tissue sampling include hoarseness due to the recurrent laryngeal nerve involvement, cervical or Supraclavicular lymphadenopathy, pleural effusion, and new onset of bone pain.

Routine chest radiograph should be performed, but in age of flexible endoscopy no contrast x-ray required. It is estimated that 24.8% cases of esophageal carcinoma in advanced stage or even in moderately differentiated tumours shows chest involvement worldwide. In India, Pakistan and China the relation is nearly 40%.

Malnourishment and inadequate diet is strongly related with esophageal carcinoma and chest conditions.

In this study we analyze a close relation of esophageal carcinoma and chest signs of COPD in 14.6% cases, prominent Bronchovesicular markings in 17.85% cases, pleural effusion in 14.28% cases, emphysema and pulmonary Koch's in 5.35% cases and mostly normal study in gastric cancer cases.

After a tissue diagnosis of gastroesophageal cancer, pretreatment staging procedures are essential to accurately determine the depth of the esophageal and gastric wall penetration, the status of regional lymph node basis, and the presence or absence of distant metastases so that the patients can be guided to the appropriate treatment options and provided with prognostic information. CT scans are highly accurate (approximately 100%) in detecting liver or lung metastases and suggesting peritoneal carcinomatosis (ascites, omental infiltration, peritoneal tumour studding, etc)<sup>9-10</sup>. CT scan is inaccurate in determining T stage, because it cannot define individual layers of the esophageal wall and will miss small T1 and T2 tumours. CT assessment of regional or distant lymph nodes is hindered by relatively low sensitivity (50-70%) due to its reliance on size criteria (larger than 1 cm) alone.

In this study 26 patients have undergone CT/MRI and we could analyze from the data that 38.5% patients had circumferential wall thickness, 19.2% had irregular mass and 7.7% transmural thickness and eccentric wall thickness. Among the types, circumferential wall thickness is the commonest type in esophageal carcinoma.

Endoscopy is generally considered to be the best method to diagnose gastric cancer. Endoscopy directly visualizes the mucosa, and allows biopsy of tissue for a histological diagnosis. Endoscopic ultrasound has the added capability to evaluate the deeper layers of the gastric wall to define the tumour staging T, type of growth, treatment options and prognosis<sup>11</sup>. Numerous studies have demonstrated that endoscopy is superior to CT in both T and N staging of esophageal cancer. In the studies worldwide the overall accuracy of endoscopic ultrasound for T staging is approximately 85% and for N staging is approximately 75%. In this study of endoscopy on patients of gastroesophageal carcinoma the commonest type is the ulceroproliferative growth 17.8%, then circumferential 8.9%, Esophagitis 6.7% and Polypoidal growth 4.4%. The tool accurately assesses the distance from incisors and hence the location of tumour and involvement of mucosa.

The overwhelming majority of esophageal malignancies may be classified as either squamous cell carcinomas or adenocarcinoma. Squamous cell carcinomas account for approximately 40% of esophageal malignancies diagnosed in United States and vast majority of cancers arising in high- incidence areas throughout the world<sup>12</sup>.

Approximately 60% of these neoplasms are located in the middle third

of the esophagus, whereas 30% and 10% arise in the distal third and proximal third of the intrathoracic esophagus, respectively<sup>13-14</sup>.

Typically, these tumours are associated with contiguous or non-contiguous carcinoma in situ as well as widespread submucosal lymphatic dissemination.

Approximately 95% of all the malignant gastric neoplasms are adenocarcinomas, and in general, the term gastric cancer refers to adenocarcinoma of the stomach. Other malignant tumours are very rare and include squamous cell carcinoma 2.3%, carcinoid tumours 1.8% and leiomyosarcoma 0.9%<sup>15</sup>.

In this study by histological reporting of 64 patient's data, we observed that 48.93% patients had squamous cell carcinoma, 45.31% adenocarcinoma, 3.1% atypical, GIST with 3.1% and hyperplasia with 2.1%. With a break analysis we analyzed cases 57 patients with CA Esophagus, 39 CA Stomach, and 8 cases of carcinoma GEJ junction.

On the histological basis we found that 90% cases of CA Esophagus were squamous cell carcinoma, and 9% adenocarcinoma with 1% miscellaneous. On the other hand CA Stomach was 100% CAGEJ in the 39 prospective cases. The another findings we observed was that in CA Esophagus upper one-third 13.045, middle third 34.78% and lower third 52.17% cases were squamous, while in 9% cases the lower one third was adenocarcinoma. Few Indian studies support our results as it had been discussed that Indian and other Asian countries still have adenocarcinoma more common as histological finding in stomach and squamous common in esophagus.

The conventional approaches to esophageal resection for cancer are, transhiatal and transthoracic. The transhiatal route for esophageal resection has gained favor, concurrent with the rising incidence of adenocarcinoma of the distal esophagus, which is readily approachable and effectively dissected through the diaphragmatic hiatus<sup>16-17</sup>.

The transthoracic approach provides direct visualization and exposure of the intrathoracic esophagus facilitating a wider dissection to achieve a more adequate radial margin around the primary tumour and more through lymph node dissection, which theoretically results in a more sound cancer operation. The collective review by Rindani<sup>18</sup> Etal encompassed 5483 patients from 44 series published from 1986 to 1996.

Perioperative mortality was significantly higher in the transthoracic Esophagectomy group than the transhiatal group. Whereas in Perioperative complications there was no significant difference found. A Dutch RCT compared transthoracic esophagogastric junction (TTEG, with abdominal and thoracic incisions) in patients with adenocarcinoma of the esophagus and esophagogastric junction.

In this study the transhiatal and transthoracic approach has been used in equal percentage, with a preference of Ivor Lewis in few cases, with feeding jejunostomy applied in 39.4% cases, the Esophagectomy with gastric pull up 28.35%, Esophagogastricotomy with gastric pull up 4.4%, Gastrojejunostomy in 7.4% and loop colostomy in 1.4% ( as palliation).

In this study 61 patients have undergone 67 surgical procedures, 26 patient's surgery along with chemotherapy and 8 patients have undergone neo-adjuvant therapy as well.

Interest has been shown in adjuvant radiation therapy in the treatment of gastric cancer owing to the substantial incidence of local and regional failure after primary surgical resection. A study from China randomized 370 patients with tumours of gastric cardia to receive surgery alone or with tumours of gastric cardia to receive surgery alone or with preoperative dose of 40Gy in 20 fractions. Adjuvant radiation therapy improved the 5-year overall survival, and regional control rates. A British stomach cancer group study randomized patients to receive postoperative radiation therapy; postoperative chemotherapy with 5 FU, Doxorubin, Mitomycin C; or surgery alone. At a 5 years follow-up, there were no significant differences of survival in any of the three arms, but the local recurrence rate was lowered in the radiation therapy arm.

In our study the chemotherapy preferred was 5FU for day 1 to day 3 in 61% cases, Paclitaxil in 19.4% cases and Cisplatin in almost equal

ratios with 5FU in 58.3% cases. For radiotherapy patients are referred out to the tertiary center.

In esophageal carcinoma successive pathologically determined stage groups are predictive of length of survival. It has been suggested that extensive nodal disease may be associated with better survival than visceral metastases, and it does appear that survival with stage IV A disease more closely mimics that with stage III disease than that with stage IV B.

The gross morphological appearance of gastric cancer and the degree of histological differentiation are not independent prognostic variables. Ming<sup>19</sup> has proposed a histomorphological staging system that divides gastric cancer into either a prognostically favorable expansive type or a poor prognosis infiltrating type. Based on the study, the expansive –type tumours were uniformly Polypoidal or superficial on gross appearance whereas the infiltrative tumours were almost always diffuse. Grossly ulcerated lesions were equally divided between the expanding or infiltrative forms. Border's classification of gastric cancer grades tumours histologically from 1 well differentiated to 4 anaplastic. 90% of protruding or superficial cancers were well differentiated, whereas almost one-half of all ulcerated tumours were poorly differentiated<sup>20</sup>.

In this study with 31 patients histological study, we analyzed that 25.80% of the gastroesophageal carcinoma were poorly differentiated, 58.06% were moderately differentiated, 3.2% well differentiated and 6%GIST, with 6.4% atypical cells. The staging is the accurate guide line to the treatment option selection and judgment of the prognosis.

## SUMMARY AND CONCLUSION

The study was aimed to understand the clinicopathological profile and management of gastroesophageal malignancies.

Total 104 patients with gastroesophageal malignancies were taken in this study by both retrospective and prospective manners from January 2001 to may 2007. Most of the patients were in 5<sup>th</sup> to 7<sup>th</sup> decades of life, which means elderly population are more prone for gastroesophageal malignancies.

Most of the patients were from remote hilly districts and neighboring areas of Uttarakhand, and Western Uttar Pradesh belt.

The elderly male population is found 3.3 times more prone to gastroesophageal malignancies than female population. In this study females were mostly in 4<sup>th</sup> and 5<sup>th</sup> decade of life while males were in 5<sup>th</sup> to 7<sup>th</sup> decade of life. The mean age of male population was found to be 58.61 years and mean age of female population being 46.95 years.

Most of patients were tobacco in one form or the other (smoker's-22.8%, tobacco chewer's-16.4%, hukka- 5.4%) but alcohol had no direct relation with the gastroesophageal malignancies.

Histologically adenocarcinoma found more common at gastric cardia and stomach, indicating the rising trends of adenocarcinoma in Uttarakhand as well as India. But in this squamous cell carcinoma still predominates in the middle and lower end of esophagus. With GIST also reported in traces.

Among the reported cases, esophageal carcinoma was more than gastric carcinoma and GE Junction, but if we compare with the previous data there are increasing trends of carcinoma GE Junction and gastric carcinoma with a histological inclination towards adenocarcinoma.

In this study in esophageal carcinoma, dysphagia (59.6%) and loss of weight (22.11%) were the prominent symptoms while in gastric carcinoma vomiting (24.03%), loss of appetite (31.73%) and pain abdomen (27.88%) were commonest presenting symptom.

There has been a strong relation in chest findings and esophageal carcinoma especially in middle and lower end involvement, with prominent Bronchovesicular markings, COPD (14.6%) and pleural effusion (14.28%) the commonest findings.

Endoscopy used for almost all the cases (56%) for exact location, extent and microscopic biopsy purpose.

CT and MRI (31%) were used for staging, extent's exact measurements, and type of growth, helped in judging best treatment options and prognosis.

The surgical options chosen for the esophageal carcinoma patients are transhiatal Esophagectomy, Ivor Lewis Esophagectomy with palliative feeding jejunostomy. Adjuvant chemotherapy and radiotherapy included for better survival rates.

The surgical options for gastric carcinoma patients decided were subtotal Gastrectomy or radical Gastrectomy and Gastrojejunostomy as palliation.

The chemotherapy with 5FU, Paclitaxil and Cisplatin as preferred as management tool.

Radiotherapy also advised in few cases and referred to other tertiary centers.

Surgical approach was preferred in early stages, and in advanced stages adjuvant therapy approaches were preferred.

Surgeons excel at life saving resuscitations and procedures and that's why they should consider the patients need and goal of the life as correctly there is the saying "SURGEONS must be very careful when they take the knife! Underneath their fine incisions stirs the culprit-LIFE"

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