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STUDY OF POSTOPERATIVE SURVIVAL IN THE PATIENTS OF CARCINOMA ESOPHAGUS AND GASTRO-ESOPHAGEAL JUNCTION

Anatomy

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ABSTRACT

Aim - To assess duration of survival in the patients of carcinoma esophagus and gastro-esophageal junction after surgery.

Material methods - Patients who underwent operation for carcinoma esophagus and gastro-esophageal junction in the last 10 years were included and contacted telephonically or by post to obtain long term follow up data for disease free survival, overall survival and delayed complications.

Result - 30 day survival was of 87.5% ,6 month survival of 85.7%, 1 year survival was 64.4% cases, 50% cases shows 3 year survival while 7.1% cases reported 5 year survival. (Excludes 2 in hospital mortality). The median duration of survival is 10.5 months

Conclusion- Among various modalities available for treatment. surgery is best option for cure in early stage esophageal cancers and remains the superior modality for local control in locally advanced disease.

KEYWORDS

Carcinoma, esophagus , gastro esophageal junction, transhiatal esophagectomy

INTRODUCTION

Esophageal cancer is among the 10 most common solid tumors in the United States. It is a particularly virulent malignancy associated with 5-year overall survival rates of approximately 5%[01].

In India carcinoma esophagus is the most common malignancy involving gastrointestinal tract in Kashmir, Orissa, Karnataka, Tamilnadu, Kerala and Assam.

Highest urban incidence per lakh peoples is in Dibrugarh (19.7) and lowest in Chandigarh (3.5) as per 1997 data[01].

Esophageal cancer is a leading cancer in India because of the use of betel quid chewing, tobacco chewing and smoking, alcohol, poor nutrition, salted tea and use of nitrosamines, nitrosocompound, smoked food and environmental factors which predisposes to squamous cell carcinoma[02].

The most important risk factor for the development of adenocarcinoma of the esophagus is the presence of Barrett's esophagus (BE) which is found in approximately 10% of patients with gastro-esophageal reflux. The presence of BE is associated with an increased risk of adenocarcinoma by a factor of between 30 and 125. It is estimated that up to 90% of all adenocarcinomas arise from BE. It has also been demonstrated that symptomatic gastro-esophageal reflux, even in the absence of BE, is a risk factor for the development of esophageal cancer.[3,4,5]

The recent increase in the incidence of esophageal carcinoma and the relationship of esophageal carcinoma to gastro-esophageal reflux suggests that the incidence will continue to rise and esophageal cancer will increase in importance. Diagnosis of symptomatic esophageal cancer is usually straightforward since most cases are advanced at presentation. Diagnosing the disease at the asymptomatic or early stage is crucial in improving prognosis, although at present this is only possible in the minority of patients. In high-incidence areas such as China, abrasive cytology is used for population screening. Two principal types of samplers have been used: an inflatable balloon developed in China, and an encapsulated sponge sampler developed in Japan. When early-stage cancers are diagnosed by this method, excellent long-term results with 5-year survival rates approaching 90% and 25-year survival rates of 50% can be achieved. For symptomatic patients, the spectrum of symptoms varies depending on the extent of disease. The duration of symptoms does not necessarily correlate with tumor stage, curability or resectability. In advanced cases the most common presenting symptom is dysphagia (80–95%), which is progressive in severity. However, many patients delay seeking medical attention until severe dysphagia and weight loss have occurred.

The role of surgical resection in patients with esophageal cancer is controversial**.** The fact that most patients have advanced disease at the time of diagnosis—even if not demonstrable with clinical and radiographic staging—makes surgery futile in the majority of cases. In addition, the morbidity associated with esophagectomy raises concerns about its applicability in most patients.

Nevertheless, surgery is the best option for cure in patients with early stage disease and remains the superior modality for local control in patients with locally advanced disease.

The Complications of esophagectomy includes -

1) Lung complications (especially pneumonia)- most common cause of death post operatively is respiratory failure
2) Severe infection in the chest (mediastinitis) resulting from a "leak" from the esophago gastric anastomosis
3) Cardiac complications - atrial fibrillations ,cardiac failure, thromboebolism
4) Mortality-
5) Conduit related - leak, stricture, ischemia
6) Post gastrectomy syndrome, reflux, delayed gastric emptying, dysphagia
7) Diaphragmatic hernia
8) Recurrent laryngeal nerve palsy-risk factor for recurrent nerve injury is cervical anastomosis.left side neck incision is preffered over right as recurrent nerve is farther from esophagus.
9) Bleeding

METHODOLOGY

This is a retrospective & prospective study. Patient who underwent operation for carcinoma of the esophagus and gastro-esophageal junction in the last 10 years in the Department. of Surgery NSCB Medical College Jabalpur will be included.

Data collected regarding ;

1. Demography/Addiction/Co-morbidites :
2. Pre-operative parameters -
- Hematological indicators-Hb, CBC, PLT
- Biochemical indicators-LFT, Sugar, Urea, Creatinine, Electrolyte, Calcium
- Endoscopic findings- location of growth, length, shape, remaining lumen
- CECT Thorax + Abdomen- for staging of carcinoma esophagus and distant spread
- Pulmonary function test - if available
3. Per-operative findings as to local extent of disease
4. Need of blood transfusion-
- pre-operative/intra-operative/post-operative
5. Post-operative complications-

a. 30 days mortality
b. Cervical anastomotic leak- diagnosed by clinically evident leak / Ba.swallow
c. Pneumonia and other chest complication - diagnosed by clinical features, X ray chest, need for reinsertion of ICD
d. Vocal cord paralysis- evidenced by new onset post-operative changes on Indirect Laryngoscopy
e. Sepsis and wound infection- diagnosed by fever, shallow breathing, tachypnoea, tachycardia, hypotension, raised leucocyte count, altered mental status.

- Criteria for sepsis as per American College of Chest Physician(ACCP) and Society of Critical Care Medicine(SCCM) should have presence of 2 or more of following variables-

1. Temperature: >100.4 F or < 96.8 F
2. Heart Rate: >90/min
3. Resp.Rate: >20/min or PaCo2 < 32 mm Hg
4. Total Leucocyte Count: >12000 or < 4000 /micro litre >10% immature band forms

f. Anastomotic stricture
g. Others

6. Use of adjuvant treatment- duration / completed or not

- Radiotherapy
- Chemotherapy
- CT+RT

Patients will be contacted telephonically / by post to obtain long term follow up data including-

1. Disease free survival
2. Overall survival
3. Delayed complications like anastomotic stricture, CT/RT induced complications, any others

OBSERVATION & RESULTS

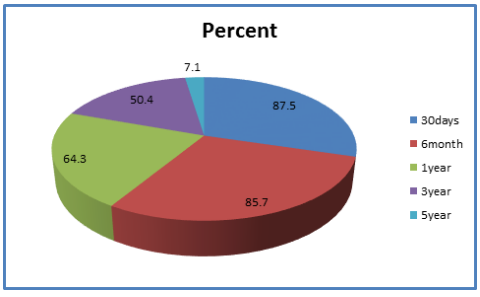
This study was carried out in the Department of Surgery, N.S.C.B. Medical College, Jabalpur between Feb. 2006 & Oct. 2015 it was conducted on patients undergoing transhiatal esophagectomy for cancer lower end esophagus and gastroesophageal junction.

There were 10 males and 6 females in the study with a mean age of 54 years (range 40 - 75 yrs).

This table defines overall 5 years survival of the studied cases. we observed that 30 day survival was of 87.5% ,6 month surival of 85.7%, 1 year survival was 64.4% cases, 50% cases shows 3 year survival while 7.1% cases reported 5 year survival. (Excludes 2 in hospital mortality). The median duration of survival is 10.5 months.

Table 10 Postoperative survival

Survival	No (%)
30days	14 (87.5)
6month	12 (85.7)
1year	9 (64.3)
3year	7 (50.4)
5year	01 (7.1)



Bar diagram for overall survival

DISCUSSION

The following discussion is made on the basis of the observation of the retrospective and prospective observational study of 16 patients who underwent transhiatal esophagectomy for carcinoma esophagus between Feb 2006 and October 2015 in the Department of Surgery, NSCB Medical College and Hospital, Jabalpur.

While comparing the result with the worldwide data, the operative morbidity and mortality associated with this procedure performed in our institute is higher as compared to high volume centers with comparable complication rate as compared to specialized units. What we lack in our institute are sophisticated operative equipment, postoperative intensive care units and interventional radiological support for management of early complications. Our patients tend to have a nutritionally depleted state, which translates into a greater chance of post operative complications.

However, considering the cost of treatment in higher centers and the inter hospital transit time that many a times convert a potentially resectable disease to inoperable one, it is prudent to perform curative surgeries in peripheral institutes with acceptable complications. Nevertheless our findings point out the scope for improvement in our management to optimize our results for our patients.

CONCLUSION

Patients were assessed postoperative morbidity, mortality and survival. Patients were followed on their hospital visits and by telephonic conversation. Retrospective data about the patients were obtained from the department records and by telephonic conversation from the contacts obtained from the records.

In our patients, the common symptoms were dysphagia 16 (100%), weight loss 11 (68.8%) and loss of appetite14 (87.5%).

In our study leak rate was 31.3%, which was treated conservatively in all patients . Other complications include pumonary complication 37.5%, wound infection 25%, 30 day mortality was 12.5%, vocal cord palsy and stricture 6%.

The mean post operative hospital stay was 19.50 ± 12.86 ranging from 1-45 days. 30 day mortality was 12.5%. The mean hospitalisation in the pateint who died was 20.45 ±15.436 and in who survived was17.40 ±4.159. Of the patient who died in the hospital both were hypertensive. Overall 5 years survival of the studied cases. we observed that 1 year survival was 64.4% cases, 50% cases shows 3 year survival while 7.1% cases reported 5 year survival.

Due to small number of patients in study no risk factors could be identified for anastomotic leak, wound infection, stricture, pulmonary complications and mortality .We could also not identify any factors which could predict long term survival.

However, considering the cost of treatment in higher centers and the inter hospital transit time that many a times convert a potentially resectable disease to inoperable one, it is prudent to perform curative surgeries in peripheral institutes with acceptable complications. Nevertheless our findings point out the scope for improvement in our management to optimize our results for our patients. Among various modalities available for treatment. surgery is best option for cure in early stage esophageal cancers and remains the superior modality for local control in locally advanced disease.

BIBLIOGRAPHY

1. Blot WJ, Devesa SS, Kneller RW, Fraumani JF Jr. Rising incidence of adeno-carcinoma of the esophagus and gastric cardia .JAMA1991; 265:1287–89
2. Spechler SJ, Robbins AH, Rubins HB. Adenocarcinoma and Barrett's esophagus.Gastroenterology1984; 87:927–933
3. Spechler SJ: Clinical practice: Barrett's esophagus.N Engl J Med2002; 346:836–842.
4. Nasser K. Altorki MD, Susan Oliveria , David S. Schrump.Epidemiology and molecular biology of Barrett's adenocarcinoma. Semin Surg Oncol 1997; 13:270–280
5. Warren A. Williamson, F. Henry Ellis Jr, S. Peter Gibb, David M. Shahian, H. Thomas Aretz, Gerald J. Heatley et al. Barrett's esophagus: prevalance and incidence of adenocarcinoma. Arch Int Med 1991;151:2212–16.