

Characteristics of esophageal cancer in patients admitted to the First Chair of Surgical Clinic service of the Hospital de Clínicas San Lorenzo from 2010-2022

Características del cáncer de esófago en pacientes internados en el servicio de la Primera Cátedra de Clínica Quirúrgica del Hospital de Clínicas San Lorenzo del 2010-2022

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ABSTRACT

Introduction: Esophageal cancer is one of the most aggressive neoplasms of the digestive tract, with high morbidity and mortality, and is the eighth most common cancer worldwide.

Objective: To determine the management of esophageal cancer in patients admitted to the First Department of Clinical Surgery at the San Lorenzo Clinics Hospital from 2010 to 2022. **Materials and methods:** An observational, retrospective, descriptive, and cross-sectional study. **Results:** Thirty-one patients were diagnosed with esophageal cancer at the First Department of Clinical Surgery at the San Lorenzo Clinics Hospital from 2010 to 2022. 83.9% of the patients were men. Mean age was 63.7 years. The most frequent clinical manifestation was dysphagia and weight loss with constitutional syndrome. 41.9% presented vegetative lesions. 67% of the lesions were located in the middle third. The most common histological type, 83.9%, was squamous cell carcinoma.

Conclusion: The current challenge is to implement screening policies for this disease, taking into account the associated risk factors.

Keywords: Esophageal cancer, screening, squamous cell carcinoma, adjuvant treatment.

RESUMEN

Introducción: El cáncer de esófago es una de las neoplasias más agresivas del tracto digestivo, presenta alta morbilidad y mortalidad, ocupa el octavo lugar dentro de los cánceres a nivel mundial. **Objetivo:** Determinar el manejo del cáncer de esófago en pacientes internados en la Primera Cátedra de Clínica Quirúrgica del Hospital de Clínicas San Lorenzo del 2010 al 2022. **Material y método:** Estudio observacional, retrospectivo, descriptivo y transversal. **Resultados:** 31 pacientes con diagnóstico de cáncer de esófago en Primera Cátedra de Clínica Quirúrgica del Hospital de Clínicas durante el período de 2010 a 2022. El 83,9% de los pacientes eran hombres. Media de edad, 63,7 años. La manifestación clínica más frecuente fue la disfagia y pérdida de peso con síndrome constitucional. Presentaron lesiones vegetantes 41,9%. Las lesiones estaban ubicadas en tercio medio

67%. El tipo histológico más frecuente en 83,9% fue carcinoma escamoso. **Conclusión:** El desafío actual es implementar políticas de screening de esta enfermedad teniendo en cuenta los factores de riesgo asociados.

Palabras claves: Cáncer de esófago, screening, carcinoma escamoso, adyuvancia.

INTRODUCTION

Esophageal cancer is one of the most aggressive malignancies of the digestive tract, with high morbidity and mortality, ranking eighth among cancers worldwide and sixth as a cause of death from this disease. ⁽¹⁻⁴⁾

There is a geographic predisposition, such as in Asia, where the occurrence is 50 to 100 times higher than in other parts of the world. ^(5,6) It is the fourth most common cancer in China. Its age frequency ranges from 60 to 70 years, with a predominance in males, although there are areas with an approximately equal sex ratio due to the high incidence. ⁽⁷⁻⁹⁾

In the last three decades, there has been a shift in the epidemiological pattern, with adenocarcinoma increasingly located in the lower esophagus and cardia among Caucasian populations in Western countries. ⁽¹⁰⁻¹³⁾

In South America, the overall incidence rate is low, estimated at 7 cases per 100,000 men and 2 cases per 100,000 women; Colombia, Chile, Argentina, and Uruguay are considered the countries at highest risk. ⁽¹⁴⁻¹⁵⁾

There are factors involved in the development of esophageal cancer. Toxic habits such as smoking and alcohol consumption are important independent risk factors. ⁽¹⁶⁻¹⁸⁾

The diagnosis of esophageal cancer in its asymptomatic or early, low-stage phase is important for improving prognosis; unfortunately, this is only possible in a few patients. ⁽¹⁹⁾

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MATERIALS AND METHODS

Observational, descriptive, cross-sectional, and retrospective study. Non-probabilistic sampling of consecutive cases.

The complete records of male and female patients over 18 years of age, diagnosed with esophageal cancer and hospitalized in the 1st Course of Surgical Clinic at the Clinics Hospital, between 2010 and 2022, were included.

The studied variables were:

- Sex
- Age
- Toxic habits
- Reason for consultation
- Tumor location
- Type of surgery
- Surgical approach
- Macroscopic characteristics
- Biopsy
- Degree of differentiation
- Stage
- Postoperative complications

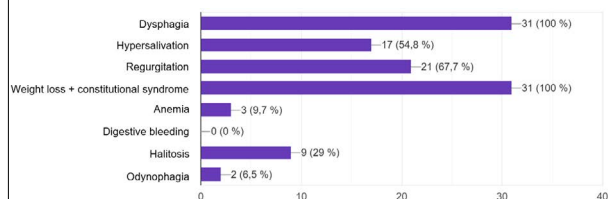
The data was logged into a data collection sheet, then transferred to an electronic spreadsheet in Microsoft Excel 365®, and processed using the free statistical analysis software PSPP. The presentation was prepared with the Microsoft Word 365® word processor.

RESULTS

A total of 31 patients diagnosed with esophageal cancer were studied in the First Chair of Surgical Clinic at the Hospital de Clínicas between 2010 and 2022, of whom 83.9% were male and 16.1% female. The mean age was 63.7 years, with most cases (61%, 19 patients) in the 60 years and older group, and 39% (12 patients) under 60 years of age, ranging from 37 to 84 years.

All patients presented with dysphagia and weight loss associated with constitutional syndrome, and less frequently with regurgitation, observed in 67.7% of cases (*Graph 1*).

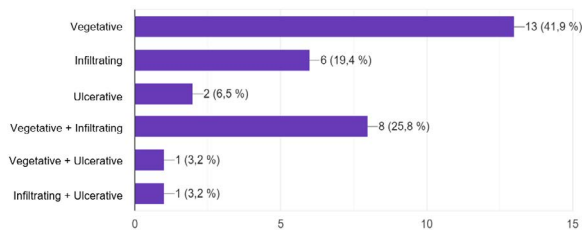
Graph 1: Most frequent clinical manifestations in patients diagnosed with esophageal cancer (n:31) at the 1st Course of Surgical Clinic, Clinics Hospital, 2010–2022



Source: Bases de datos del Servicio de la I Cátedra de Clínica Quirúrgica.

Among the endoscopic findings, most esophageal lesions were of the exophytic (vegetative) type, observed in 41.9% of cases, followed by combined exophytic-infiltrative lesions in 25.8% of cases (*Graph 2*).

Graph 2: Endoscopic findings in patients diagnosed with esophageal cancer (n:31) at the 1st Course of Surgical Clinic, Clinics Hospital, 2010–2022.



Source: Bases de datos del Servicio de la I Cátedra de Clínica Quirúrgica.

Regarding the most frequent location, lesions in the middle third accounted for 66.7% of cases, followed by those in the distal third with 25.8%, and the upper third with 7.5% of cases. In terms of friability during endoscopic manipulation, 64.5% were non-friable, while 35.5% were friable.

The most frequent histological type in the biopsies was squamous cell carcinoma, accounting for 83.9% of cases, while adenocarcinomas represented 16.1%. A total of 61.3% of tumors were passable, and 38.7% were impassable. The predominant degree of differentiation was GII, found in 64.5% of cases, followed by GIII in 35.5% of malignant esophageal tumors.

Regarding the treatment provided, only 16.1% of patients underwent curative surgery (esophagectomy using the McKeown technique in 60% of cases and the transhiatal approach in 40%). Palliative surgeries accounted for 41.9%, consisting of Stamm-type gastrostomies (69.2%) and Witzel-type jejunostomies (30.7%). Unfortunately, 42% of patients did not undergo any surgical intervention.

Table 1 summarizes the types of esophagectomies performed, the stage, and the length of hospital stay.

Table 1: Healing surgery in patients diagnosed with esophageal cancer (n:5) at the 1st Course of Surgical Clinic, Clinics Hospital, 2010–2022.

Surgery type (n:5)	Stage	Percentage (%)	ICU	In-patient days in ICU	Day average
McKeown	II	60 %	Yes	1	7,6 days
Transhiatal	II		Yes	8	
McKeown	III	40 %	Yes	3	
McKeown	III		Yes	16	
Transhiatal	III		Yes	10	

Source: Bases de datos del Servicio de la I Cátedra de Clínica Quirúrgica.

In this series, three patients developed postoperative complications: mediastinitis, anastomotic necrosis, and postoperative peritonitis. Two patients died in the immediate postoperative period, representing a 40% mortality rate among those who underwent curative surgery.

Meanwhile, among the palliative surgeries (Stamm gastrostomy and Witzel jejunostomy), 76.9% (10 cases) were in stage IV, 15.4% (2 cases) were in stage III, and 7.7% (1 case) was in stage II of the disease. Patients who underwent palliative surgery had a mortality rate of 15.3%. (*Table 2*).

Table 2: Complications and morality within surgeries performed in patients diagnosed with esophageal cancer (n:18) at the 1st Course of Surgical Clinic, Clinics Hospital, 2010–2022.

Patients submitted to surgery	Stage	Surgery type	Complications	Mortality
Healing (n:5)	II (n:3)	McKeown (n:3) Trashia-tal (n:2)	Anastomotic necro-sis (n:1) Peritonitis PO (n:1) Mediastinitis (n:1)	40%
	III(n:2)			
Palliative (n:13)	II (n:1)	Gastrostomy (n:9) Jejunos-tomy (n: 4)	Pneumonia (n:3) Peritonitis (n:1) Pneumonia (n:1)	15,3%
	(n:13)			
	IV (n:10)			

Source: Bases de datos del Servicio de la I Cátedra de Clínica Quirúrgica.

Regarding toxic habits, 74.2% of patients reported a history of tobacco use; among them, 47.8% also consumed alcoholic beverages, while 25.8% denied any toxic habits.

DISCUSSION

A total of 31 patient records with a diagnosis of esophageal cancer, hospitalized in the First Chair of Surgical Clinic at the Hospital de Clínicas, were reviewed.

The mean age was 63.7 years, with most patients (61%) aged 60 years or older. The youngest patient was 37 years old and the oldest 84 years old, findings consistent with other publications reporting an average age between 60 and 70 years. (1-6)

83.9% (26) of the patients were male, a finding that is consistent with published studies reporting a higher prevalence of esophageal cancer in men compared to women. (7-9)

Clinical manifestations such as dysphagia and constitutional syndrome associated with weight loss were present in 100% of patients in this study. However, Bujanda and Sarasqueta (2009)(10) reported these same symptoms in 57% of patients; Youmes M. and Henson E.D. (2002)(11) in 73.6%; and El-Serag H.B., Mason A.C., and Petersen N.(12) in 90%. This difference is presumed to be due to the fact that patients attending consultations at the Hospital de Clínicas generally present at an advanced stage of the disease.

The most frequent histological type in the biopsies was squamous cell carcinoma, representing 83.9% (26 cases) of neoplasms, consistent with reference studies. Adenocarcinomas accounted for 16.1% (5 patients), a lower proportion compared with recent publications such as Mukkamalla et al. (2022) (13), which reports that in the United States the incidence of squamous cell carcinomas has decreased to less than 30%, while adenocarcinomas have increased to over 60%. When stratified by anatomical location, the incidence of adenocarcinoma of the distal esophagus and gastroesophageal junction (GEJ) continues to rise rapidly, largely due to Barrett's esophagus cases that are not monitored regularly and present with established neoplasia. Tumors of the proximal third remain a minority compared with those of the distal third, where in this series a lower percentage was found—6.7% (2 patients). Regarding histological grade, GII was the most frequent, representing 64.5% (20 cases), in line with other publications but with a higher percentage, followed

by GIII in 35.5% (11 cases). Notably, no GI histological grades were found, which is believed to be due to the disease being diagnosed at advanced stages. (14,15)

Patients who underwent curative surgeries accounted for 16.1% (5 patients). These patients were in stage II and III of the disease, and none of them received adjuvant treatment. In comparison with other publications, in the same stage, RT-QM was performed as reported by the American Cancer Society in the treatment of esophageal cancer (16) in 2022 with curative intent.

All patients were staged using contrast-enhanced computed tomography, as the service does not have endoscopic ultrasound for staging, which is currently preferred since it improves staging accuracy and thereby speeds up the indication of appropriate treatment, as reported by Lepage, Rachet, and Jooste V et al. in the American Journal of Gastroenterology. (18)

Among the endoscopic findings, most of the lesions (13 cases) were exophytic in 41.9%, followed by 25.8% (8 cases) of combined exophytic–infiltrative lesions, with a higher percentage compared to other publications such as that of Lepage, Rachet, Jooste V et al. in the American Journal of Gastroenterology. (18)

A high mortality rate was observed among patients who underwent esophageal resection, representing 60% in our service; this figure is higher compared to specialized centers, which report mortality rates of 10%. This could be related to risk factors present in our patients, such as advanced age, nutritional status, and toxic habits, which could influence the high morbidity and mortality in our patients. (18,19)

CONCLUSION

The majority of patients were elderly males with a long history of smoking, and in all patients the main presenting symptom was dysphagia.

At the time of diagnosis, most patients were in stage III or IV and underwent palliative treatment (gastrostomy and jejunostomy).

The most frequent histological type was squamous cell carcinoma, located in the distal third. Regarding curative surgery, only 5 patients were able to undergo a surgical intervention with esophageal resection, with a postoperative mortality rate of 60%.

CONFLICTS OF INTEREST

None.

AUTHOR CONTRIBUTIONS

All authors participated in the information search, data collection, drafting of the manuscript, critical review of the manuscript, and final approval of the same.

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