



## Evaluation of the Patients Life Quality with Esophageal Cancer Treated with Self-Expanding Stent

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### Abstract

The study of the life quality related to health in patients with inoperable esophageal cancer with the use of endoprostatic-expandable stents provides useful information to select the appropriate treatment option. The EORTC QLQ-C30 instrument to evaluate the patient with esophageal cancer and the complement module EORTC QLQ-OES18, allow direct exchange with the patient and predict the impact of the disease and treatment on it. The aim of this study is to determine the life quality of oncological patients with the use of self-expanding esophageal stents.

**Methods:** An observational, descriptive study of a series of cases was performed, taking into account a universe that coincides with the sample of 13 patients with surgically unresectable esophageal tumor, who were treated at the center in the period from April to December 2017.

**Results:** There were improvements in the areas of functional capacity (physical appearance, emotional factors) and symptoms (pain). Patients with symptoms related to the dysphagia scale predominated. Only two patients had tumor overgrowth and a second prosthesis was placed and reposition of it in one of their cases.

**Conclusion:** The life quality related to health is considered at present one of the most important pillars in the impact of a treatment on patients with less than three months survival.

**Keywords:** Life Quality; Oncological Patient; Endoprostatic-Expandable; Esophageal Cancer

### Abbreviations

EORTC: European Organisation for Research and Treatment of Cancer; EORTC QLQ-C30: The EORTC quality of life questionnaire (QLQ) is an integrated system for assessing the health-related quality of life (QoL) of cancer patients participating in international clinical trials; EORTC QLQ-OES18: To assess quality of life in patients with oesophageal cancer

### Introduction

In Cuba, esophageal cancer occupies the 7<sup>th</sup> place, predominantly male patients with 14076 deaths and a range of ages (60 to 79 years old) [1,2] predominating squamous cell carcinoma and adenocarcinoma [3].

The gastroenterology service of the National Center for Minimally Access Surgery focuses its study on advanced endoscopic and therapeutic treatment with extensive experience in the use of self-expanding metal endoprotheses with more than 101 endoprotheses placed in 86 patients from clinical hospitals of the country, which presented benign and malignant stenoses; the latter being of greater predominance [4].

In the reviewed literature there are no 'studies that evaluate the life quality of the oncological patient with self-expanding metal esophageal stents in our country, in order to improve the patient in the most important vital areas according to their perception.

Hence the importance of conducting studies to assess the patient's life quality given the presence of recurrent symptoms such as long-standing dysphagia that negatively influences the patient's nutritional status and impact on other vital areas of importance such as physical, psychological, spiritual functioning and affective relationships [5,6].

Therefore, it is proposed to carry out a study to evaluate the life quality of the oncological patient with self-expanding esophageal stents [7] and describe the endoscopic treatments used to correct these complications.

In Cuba, the incidence of esophageal cancer and the placement of self-expanding metal endoprotheses as part of palliative treatments in oncological patient management are known, however there are few reports related to the life quality of these patients.

## Aim of the Study

The aim of this study is to determine the life quality of oncological patients with the use of self-expanding esophageal stents.

## Materials and Methods

An observational, descriptive study of a series of cases was performed, taking into account a universe that coincides with the sample of 13 patients with surgically unrespectable esophageal tumor, who were treated at the center in the period from April to December 2017, met the following inclusion criteria: Patients with indication of self-expanding metallic esophageal prostheses and who presented contraindications from the clinical point of view and anesthesiology for surgery.

## Procedures

Patients with a positive diagnosis of advanced esophagic cancer were applied a data collection form (Appendix 1) for the evaluation of their general condition at the beginning and after the placement of the self-expanding esophageal prosthesis. An EORTC QLQ-C30 (European Organization for Research and Treatment of Cancer Life Quality Questionnaire-Core 30) and the EORTC QLQ-OES18 (European Organization for Research and Treatment of Cancer Life Quality Questionnaire Oesophagus-specific- EORTC complement module was used. 18).

According to the application of the instruments for the evaluation of the life quality EORTC QLQ-C30 and EORTC QLQ-OES18 scores were taken at the scale of 100 points. They were evaluated as good or improving  $\geq 50$  points and bad or getting worse  $< 50$  points for the EORTC QLQ-C30 and good or improving  $< 50$  points and bad or getting worse  $\geq 50$  points for the EORTC QLQ-OES18. Patients were evaluated a month before, at month and three months after prosthesis placement.

## Statistical processing of information

The statistical analysis will be carried out by a first degree specialist in Biostatistics. The statistical program SPSS for Windows (version 21) was used to perform this analysis.

Absolute numbers and percentages were used to summarize the qualitative variables (demographic, location and histology of the tumor, personal pathological history, toxic habits, initial assessment of dysphagia and after placement of the prosthesis, EORTC QLQ-C30, OES18, Complications and behaviors.

## Ethical considerations

The client's letter and the endorsement of the scientific council of the institution were obtained. As a practice of usual ethics, whenever an oncological patient is assisted, indicating the placement of a self-expandable esophageal prosthesis in a classification consultation, the patient and his family members expressed the need to do the study and they explained everything related to the patient proceed and its complications.

In addition to publicizing the advantages in the application of the self-expanding prosthesis, applying the surveys and always respecting the identity of the participants and their voluntary incorporation to this research protocol.

Before the starting of the procedure, informed consent was obtained for the procedure to be carried out, as described in P.G.01, Informed Consent for the placement of self-expanding stents.

## Results and Discussion

### Results

According to the primary data collection out of thirteen patients assisted, the male sex predominated with nine patients for 69.2%, with an age range of 41 to 59 years. The presence of malignant lesions in the middle esophagus predominated in eight patients for 61.5%, which corresponds to a predominance of epidermoid lesions. 53.8% presented hypertension and diabetes mellitus four patients for 30.7%. Regarding the presence of toxic habits, 46.1% reported being smokers and 30.7% ingested alcoholic beverages.

From the initial assessment of dysphagia described by Brown, 38.4% had dysphagia (grade I) and 61.5% had afagia (grade IV). After the placement of the esophageal prosthesis, 92.3% of the patients did not present dysphagia and only 7.6% remained dysphagia to solids.

Taking into account the EORTC QLQ-C30 health-related life quality measurement instrument, there were improvements in the areas of functional capacity, specifically in the physical aspect, emotional factors and in the symptoms (pain).

According to the complement module OES-18, patients with symptoms related to the dysphagia and pain scale predominated.

In the initial application of the instruments 100% of the patients were in poor condition or worse, at month and three months after, 84.6% were getting better; 15.3% were in poor condition and at six months only 7.6% remained below the established parameters, despite their improvement in symptoms.

100% of the patients referred to pain after the placement of the prosthesis for a period of seven to ten days, 92.3% of them alleviated with oral analgesics, only 7.6% remained with recurrent pain, which coincides with the longest patient of prosthesis placement. Only 15.3% had complications related to overgrowth, and a second self-expanding metal esophageal prosthesis was placed with prosthesis relocation, dilation of the prosthesis with Savary No. seven and nine in one of their cases. There were no reports of drilling or deaths.

### Discussion

The placement of self-expanding prostheses is one of the pillars of palliative treatment, especially in patients with less than three months survival [8].

Currently, the most widely used method to manage recurrent dysphagia is the use of self-expanding stents. It also has satisfactory results in the stenosis of the light that causes dysphagia and in the treatment of tracheo-respiratory fistulas as a complication of advanced esophageal cancer [9,10].

The study confirms the effectiveness of the use of self-expanding esophageal stenting as a palliative method, given that a resolution of recurrent dysphagia was achieved in 12 patients assisted, coinciding with the literature reviewed 9 except, one patient who has a survival of over a year and a half after the diagnosis of the disease.

It is important to highlight the significance of studies that evaluate the early detection of esophageal cancer given the early onset of the disease in the majority of patients studied, with a notable increase in the adult group with a tendency to young adults, which is inconsistent with the literature [9,11] and where the age group exceeded 60 years.

Regarding, the location of the tumor, it differs from the literature [12], given that the lesions of the lower third of the esophagus predominate, which points to squamous carcinomas due to an increase in Barrett's esophagus, gastroesophageal reflux diseases and long-term achalasia, whereas in The Cuban context is dominated by epidermoid lesions due to the increase in people with toxic habits (smokers and alcoholics).

In relation to the personal pathological background, the results coincide with international literature, given results shown by a review article [13] in which arterial hypertension and diabetes mellitus present a great increase in the majority of cancer patients undergoing palliative care for recurrent dysphagia.

Regarding the EORTC QLQ-C30 health-related life quality measurement, it coincides with results [13,14], where patients showed improvements in emotional and cognitive factors and pain reduction after the first three months of the prosthesis. In the OES-18 specific symptom scores of the esophagus, the patients showed a significant improvement in dysphagia and feeding [15].

Another study consulted [16] coincides with an increase in the problems related to swallowing in most patients, esophageal pain and disagrees with others such as cough and reflux.

In general, according to the analysis of the results found by different researchers who applied the instrument, we can say that it is difficult to see the results of the general evaluation instrument and its complement in an isolated way. They are interrelated, since it is very difficult to find marked differences according to the established score for improvement when dealing with the same patient, the same ailment and the same effect on health and society, despite having different scales of measurement. The possibility of carrying out the instrument on a single scale could be seen in the future.

The complications presented by symptoms, pain and recurrent dysphagia in one of their cases coincides with the reviewed literature 9 and the behaviors coincide with results by researchers for more than 20 years of experience [17] in the follow-up of patients

with self-expanding prostheses. The complications presented by the patients during the study coincide with that reported by other authors [13,17] unlike the fact that no patient with perforation was present in the study, and there are no reports of deaths so far.

## Conclusions

The totality of the patients assisted in the period improved their life quality related to health and presented a minimum of complications that were alleviated by performing procedures of endoscopic therapy.

## Conflict of Interest

There is no conflict of interest between the parties or financial interests of other organizations.

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