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Research Article

STENTING OF UNRESECTABLE ESOPHAGEAL CANCER COMPLICATED BY DYSPHAGIA AND FISTULA

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Shamuradov Ilxom Ismailovich
Samarkand Branch Of The Republican Specialized Scientific And Practical Medical Center Of Oncology And Radiology, Uzbekistan

Djuraev Mirjalol Dekhkanovich
Samarkand Branch Of The Republican Specialized Scientific And Practical Medical Center Of Oncology And Radiology, Uzbekistan

Kamalova Barno Zafarovna
Samarkand Branch Of The Republican Specialized Scientific And Practical Medical Center Of Oncology And Radiology, Uzbekistan

Raufov Farkhod Makhmudovich
Samarkand Branch Of The Republican Specialized Scientific And Practical Medical Center Of Oncology And Radiology, Uzbekistan

ABSTRACT

The article analyzes the experience of palliative treatment of 68 patients with dysphagia due to esophageal obstruction. In 61 patients, stenting was performed as planned, and 7 patients were operated on for emergency indications due to progressive dysphagia of the III-VI degree with damage to the upper 5 (7.3%) patients, the middle 24 (35.29 %) patients and the lower third of the esophagus of 39 (57.3 %) patients. Among them, esophageal tracheal and esophageal bronchial fistulas were detected in 28 patients with esophageal cancer. In 9 (32.14 %) patients, a fistula appeared after radiation therapy on the area of the primary tumor, in 19 (67.85 %) it was the result of the collapse of the primary tumor. According to our study of patients with esophageal cancer with dysphagia, men were 43 (63.2%), and women – 25 (36.7%), the average age was 65-85 years. Of the 68 patients with esophageal cancer with dysphagia, the urban population was 23 (33.82 %) patients and the rural population was 45 (66.17 %) patients.

All patients were recanalized and self-expanding stents with a company coating (FLEXTENT) were installed.

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The study of morphological variants of the tumor showed: that 39 (57.35%) patients had adenocarcinoma and 29 (42.640%) squamous cell carcinoma.

Based on our analysis, endoscopic stenting should be recognized as the leading method of palliative treatment of patients with esophageal cancer complicated by dysphagia.

KEYWORDS

E sophageal obstruction, stent, palliative care, dysphagia, endoscopic stenting, tumor stenosis.

INTRODUCTION

One of the main reasons for the development of dysphagia in the proximal parts of the digestive tract is local advanced esophageal cancer, which ranks 8th among low-quality tumors and 7th in terms of the death rate from them in the conditions of Uzbekistan. In 2018, 7,750 new cases of stage III and stage IV - 33.6 and 30.9%, respectively, were detected in Russian Federation, with 59% mortality rate in the first 1 year [1]. According to WHO data of 2019, 58.8% of I and II stage of esophageal cancer, 38.8% of III stage, 17.4% of VI stage, and its prevalence decreased to 3.1% in the last 5 years. In this case, the age bias of diagnosis is 65 years and older, and the number of patients in the stage of exacerbation of comorbid esophageal cancer is 60-70% [1,2]. Dysphagia is the main clinical symptom observed in advanced cancer of the esophagus and cardiac part of the stomach occurs when the permeability is narrowed by 50-75%. The life expectancy of patients with severe tumor dysphagia is 90-180 days [2,3], which emphasizes the relevance of this problem in the 21st century.

Even after radical surgery, 20% of patients have local recurrence of the tumor in the area of anastomosis with complete or partial stenosis [4]. Unfortunately, palliative methods are leading in the treatment of stenotic esophageal cancer in patients seeking help (in case of unresectable tumor and local recurrence). The main task of palliative care can be assessed as reducing dysphagia and improving lifestyle. Various methods (including the endoscopic method) are selected individually according to the stage of the tumor process, clinical symptoms, patient's age, general condition and comorbid background.

Traditional methods of treatment of oncological patients with incurable dysphagia include: open or laparoscopic gastrostomy, rarely percutaneous endoscopic gastrostomy (with preservation of patency for the endoscope), chemotherapy and radiation therapy after surgical operations. Gastrostomy, while eliminating the symptoms of dysphagia, limits the independent feeding of patients, worsens the lifestyle, prevents the absorption of nutrients, and the patient is an additional psychological trauma. Therefore, treatment methods are being improved and updated in order to eliminate dysphagia and restore oral nutrition.

To date, there are the following indications for the use of endoscopic stenting [8, 9]:

• Complications with dysphagia of the esophagus, cardia, gastric outlet, duodenum of poor quality, unresectable stenosing stage II-IV (preparation for chemotherapy - radiation therapy or surgical treatment, and in incurable patients - as an independent palliative method, alternative gastrostomy).

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• Intrusion of low-grade tumors into adjacent organs (compression).

• Relapse of the tumor in the anastomotic area after operative treatment.

• Esophago-respiratory fistulas.

• Failure of anastomoses after surgery.

• In benign strictures and anastomoses of the esophagus that are refractory to other surgical treatments.

• Esophageal perforation (including iatrogenic).

• Hemostasis in bleeding from varicose veins of the esophagus [10,11].

Research materials and methods

In this study, 68 cases of palliative stenting in tumor stenosis of the esophagus were analyzed according to urgent and planned referrals of patients. In the analysis, the 3-year stenting experience of the endoscopy department of the Samarkand branch of the Republican Specialized Scientific-Practical Oncology and Radiology Center was analyzed.

Currently, we are focusing on self-expanding endoprostheses. They are covered with a polymer film, and due to their elasticity, they have a mesh construction that is able to expand after being placed in the esophageal cavity. In the preparatory stage of stenting, balloon dilatation, electrorecanalization, or bulging with silicone plugs was performed to expand the esophageal cavity in 10% of cases. The method of implementation is selected individually.

Stenting in all 68 cases, both planned (61) and urgent indications in 7 indications, in stages III-VI of acute dysphagia, damage to the upper part of the esophagus was 5 (7.3%), middle part was damaged in 24 (35.29 %), and the lower part was damaged in 39 (57.3%) was performed in patients. Cancer of the middle and lower part of the esophagus predominated. At the same time, esophageal-tracheal and esophageal-bronchial fistulas were detected in 28 patients. In 9 (32.14 %) patients, the fistula occurred after radiation therapy at the site of the primary tumor, and in 19 (67.85 %) patients, it occurred as a result of erosion of the primary tumor. According to research data, 43 (63.2%) men and 25 (36.7%) women with esophageal cancer have dysphagia, and the average age is 65-85 years. Out of 68 esophageal cancer dysphagia patients, 23 (33.82%) are urban and 45 (66.17%) rural residents.

All patients underwent recanalization and were implanted with self-expanding sheathed stents (FLEXTENT).

The study of the morphological variants of the tumor showed the following: adenocarcinoma in 39 (57.35%) patients and squamous cell carcinoma in 29 (42.640%).

According to the results of the analysis, endoscopic stenting in esophageal cancer complicated by dysphagia is the leader among palliative treatment methods.

Based on the current experience, it can be said that patients with inoperable esophageal cancer have a longer survival after endoscopic stenting to prevent tumor stenosis.

Upper third esophageal cancer growth into the trachea. Stenting after the esophagus and trachea.

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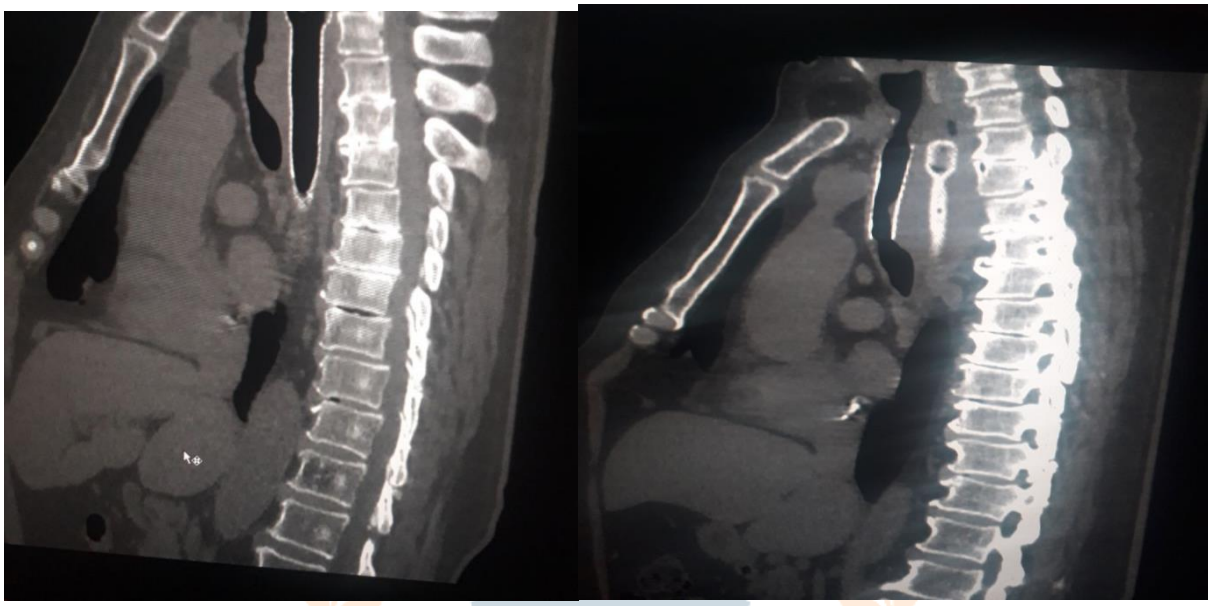
1 picture.

2 picture.



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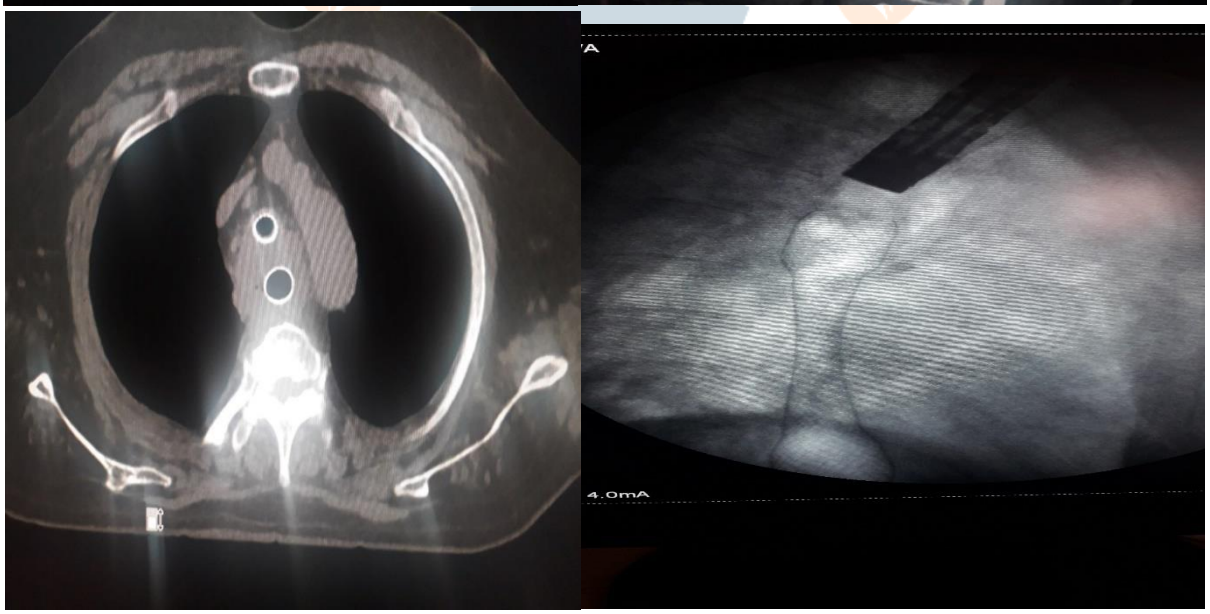

4 picture.

Upper-middle third esophagus complicated by stenosis and fistula.

Status after stenting.

5 picture.

6 picture.

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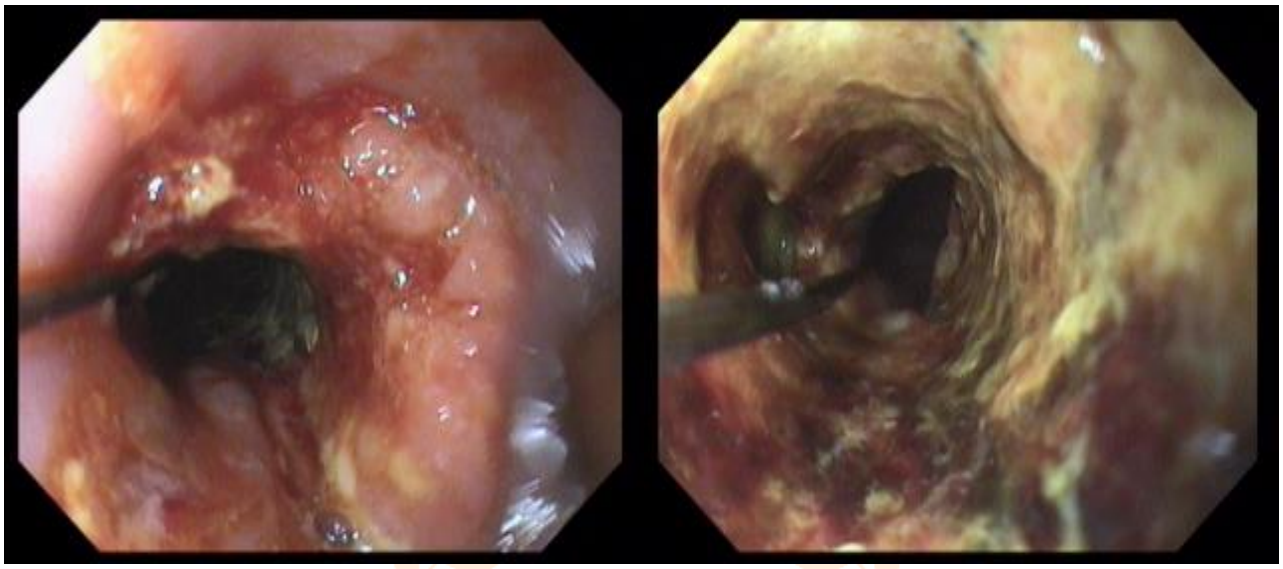

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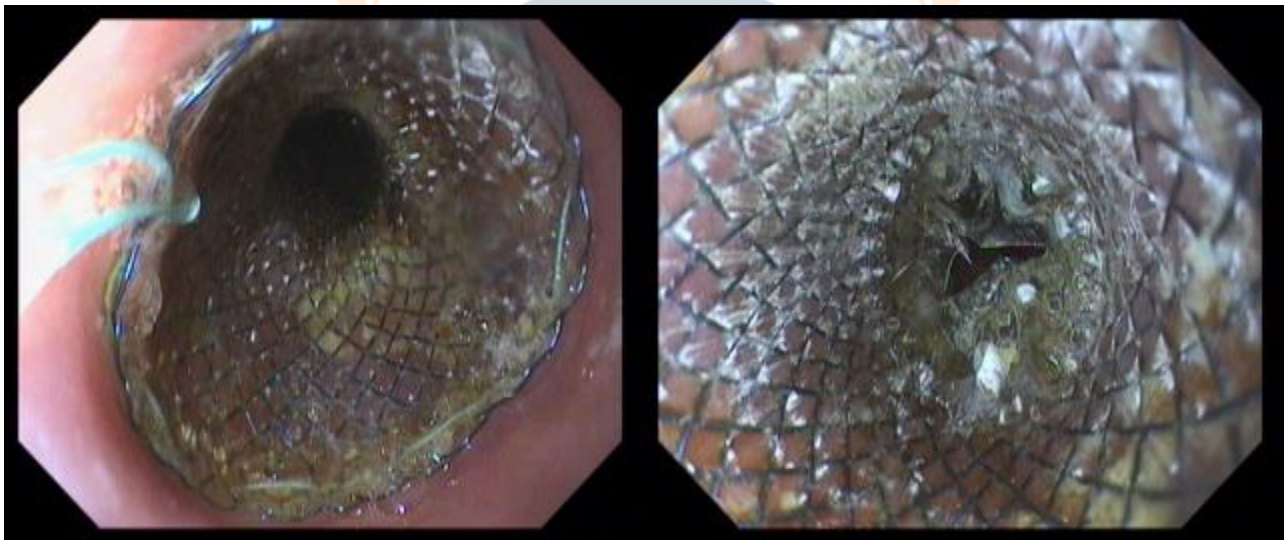

8 picture.

RESULTS AND THEIR DISCUSSION

Dysphagia was resolved in all cases after stenting. Patients were able to receive full oral nutrition. All patients reported chest pain in the immediate postoperative period, which was insignificant in most (94%) cases and required the use of narcotic analgesics in only 6% of cases.

Only 6 of 68 patients had stent migration and all had successful stent repositioning.

Improvement of the general condition, stabilization and increase of body weight were noted in 100% of cases.

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Inpatient response after endostenting was performed 2–3 days after X-ray control - control of dilatation, patency and correct position of the stent.

After one month, the patency of the stent, its full expansion and correct position were determined in a comprehensive control examination (Fig. 7,8). The maximum survival of patients after prosthetic surgery of the tumor process was 19 months.

Complications were observed in 13 (19.1%) patients during the study, which require separate discussion and analysis.

As a result of complications related to recanalization and stenting, chest pains of varying intensity were observed 5-7 days after stent placement. The intensity of pain depends on the spread and degree of esophageal stenosis. After the full expansion of the stent, the pain syndrome disappeared or was relatively reduced after 7 days, and there was no need to use strong painkillers.

Bleeding was observed in 3 patients with a diagnosis of cancer of the lower third of the esophagus complicated by bleeding. Partially covered stents were placed in these patients. Bleeding factors include the exophytic component of the tumor, radiation and/or chemotherapy. In our case, all bleedings were successfully resolved by radiofrequency coagulation and stenting.

In one case, a tumor of the middle third of the esophagus was found to grow into the trachea, which was immediately resolved by stenting the esophagus and trachea. Stenosis of the trachea developed rapidly, and treatment measures (tracheal stent placement) were performed immediately.

Distal migration of the stent to the stomach (in cardiac cancer) was detected 24 hours after stenting in 7 patients.

Distal migration of the stent in 3 patients is a consequence of active peristalsis. Only 1 case resulted in stent migration as a result of pathology.

In partial migration, the stent is repositioned with the help of an endoscope and, of course, under X-ray control. In complete proximal migration, the stent is removed and reinserted. In case of complete distal migration, the stent is surgically removed only when the patency is lost or the integrity of the digestive tract is broken (intestinal perforation). In all cases, stent repositioning was successfully performed and palliative care was continued.

In 10 patients, after 6-8 months, the tumor grew from the proximal or distal part of the stent and relapse of dysphagia was observed. In this case, a second stent implantation (stent-to-stent) or artificial proximal or distal stent migration was performed in the area of stenosis.

According to the literature, the frequency of such complications when using an esophageal stent is 18% [15]. The reason for the occurrence of this type of complication is explained by the progression of the oncological process. The reason for ingrowth into the coated stent is due to the erosion of the membrane.

Installation of stents in tumor stenoses is considered palliative care, and subsequent radiation therapy has a negative effect on the implant: increase in pain syndrome and dyspeptic conditions, temperature reactions, worsening of the patient's general condition. This is due to the materials the stent is made of (45% titanium and 55% nickel). Titanium is a radio-negative metal, it does not store radiation, the same

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cannot be said about nickel. Nickel accumulates radiation in itself and is an additional source of radiation to tissues, esophagus and adjacent tissues.

According to the results of the analysis, endoscopic stenting takes the leading place in the palliative treatment of esophageal cancer complicated by dysphagia.

The presence or absence of distant metastases does not affect the methods of palliative treatment, and the leading place is occupied by intracavitary procedures.

CONCLUSION

The use of modern minimally invasive methods of treatment opens a wide way for palliative therapy of incurable patients with scattered, stenosed esophagus, cardia and pyloroduodenal tumors. When choosing one or another intracavitary endoscopic surgical treatment, it is necessary to pay attention to the experience of the doctor - endoscopist, technical support, individual characteristics and the general condition of the patient, as well as the stage, localization and spread of the tumor process.

Despite the superiority of this method, several questions remain open. To date, the use of stents and the ability of patients with high-grade esophageal stenosis to bear the stent remains controversial. In addition, the occurrence of complications of radiation and/or chemotherapy is considered a controversial situation. New technical developments - absorbable stents, stents equipped with radioactive isotopes, etc. - may improve patient survival and quality of life, but their use and promotion require extensive research and studies.

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