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CASE REPORT
ΕΝΔΙΑΦΕΡΟΥΣΑ ΠΕΡΙΠΤΩΣΗ

Palliative nutrition therapy in esophageal cancer patients with metastasis

Esophageal cancer (EC) remains a major cause of cancer-related mortality worldwide, with a high incidence in Asia. Despite therapeutic advances, prognosis is poor in cases with distant metastasis. Malnutrition, which affects up to 85% of patients with cancer, worsens treatment tolerance and quality of life. We report a 50-year-old male with advanced EC, severe dysphagia, and weight loss who received dietary counseling, megestrol acetate, and a self-expandable metal stent for palliation. Nutritional and quality-of-life improvements were noted during chemotherapy; however, the patient's condition declined after several cycles. This case underscores the importance of integrated nutritional support, including enteral or parenteral routes, in optimizing palliative care for advanced EC.

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Παρηγορητική διατροφική θεραπεία σε ασθενείς με μεταστατικό καρκίνο οισοφάγου

Περίληψη στο τέλος του άρθρου

Key words

Esophageal cancer
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Esophageal cancer (EC) is the ninth most common cancer and the sixth leading cause of cancer-related mortality worldwide.[1–3] According to GLOBOCAN 2020, there were 604,100 new EC cases globally, with 79.7% (481,552) occurring in Asia. The continent accounts for 78.5% (523,122) of the 666,388 global five-year prevalence cases, with a prevalence rate of 11.27 per 100,000 – 1.32 times higher than that of Europe and 4.49 times higher than Africa.[2] EC

consists of two primary histological subtypes: Esophageal squamous cell carcinoma, representing about 80% of cases and occurring throughout the esophagus, and esophageal adenocarcinoma, typically found distally.[1] In Asia, the age-standardized incidence rate is 8.5 per 100,000 and the mortality rate is 7.6 per 100,000, the highest among all continents.[2] Despite advances in therapy, the prognosis remains poor, with an overall 5-year survival rate below 20%. At diagnosis, approximately 50% of patients present with distant metastases –most commonly to the liver, followed by the lungs, bones, and brain– resulting in a 5-year survival rate below 5%.[6,7] A study by Tanaka et al on 58 patients with metastatic EC found a median overall survival of 6.4 months, with 1- and 2-year survival rates of 23.7% and 11.2%, respectively, and no significant survival difference by metastasis site (p=0.8786).[8]

Malnutrition affects approximately 85% of all patients with cancer and up to 90% of upper gastrointestinal cancers, including EC; it reduces treatment tolerance, increases therapy-related side effects, prolongs hospital stays, and diminishes quality of life.[3,4] Cancer-related cachexia, often a consequence of malnutrition, is responsible for approximately 20% of cancer deaths.[3,5] Maintaining nutritional status is a key goal of palliative care in advanced disease, as adequate intake of energy and protein can help prolong survival and improve quality of life even in incurable cases.[9,10] This case report presents palliative nutrition therapy in a patient with EC and liver metastasis, focusing on the treatment goals and integrated approach applied.

CASE PRESENTATION

A 50-year-old male presented with progressive dysphagia over one month, initially to solids and later to liquids, accompanied by vomiting, nausea, epigastric discomfort, and weight loss of 10 kg. The patient appeared increasingly weak, with a smoking history and a family history of pancreatic cancer. Examination revealed a body mass index of 22.9 kg/m^2; PG-SGA SF assessment classified him as category C, indicating severe malnutrition requiring urgent nutritional intervention.

Gastroscopy revealed a distal esophageal stricture (fig. 1). A Freka tube was inserted under scope guidance for nutritional access, and biopsies were taken from the esophagus and gastric fundus. Histopathology revealed poorly differentiated adenocarcinoma in the esophagus and chronic gastritis in the stomach. Thoracic multi-slice computed tomography (MSCT) demonstrated a 13.9-cm irregular esophageal mass extending to the gastroesophageal junction, with enlarged lymph nodes (1.3-cm right side, 2.5-cm right peribronchial, 2.1×4.1 cm subcarinal, 1.1-cm left lower paratracheal) and multiple enhanced liver nodules indicating metastases, consistent with AJCC 8th edition T4N2M1, stage IVB. Surgery was not performed, and a fully-covered self-expandable metal stent (SEMS) was placed via gastroscopy to relieve dysphagia (fig. 2). Nutritional counseling targeted carbohydrates at 3–4 g/kg/day, protein at 1.2–2 g/kg/day, and lipids at 1.5–2 g/kg/day, with soft or blended textures. Megestrol acetate was prescribed to improve appetite, and palliative chemotherapy with FOLFOX was initiated.

After several cycles, the patient's weight increased by 5 kg, his appetite improved, and he returned to work. Evaluative gastroscopy after the third FOLFOX cycle (fig. 3) revealed stable distal cancer and minimal stent migration. However, after the fifth cycle, his condition deteriorated with severe nausea, vomiting, and reduced intake of food. The patient required repeated hospitalizations, transfusions of red blood cell concentrates (PRC), and albumin administration. Follow-up gastroscopy revealed tumor infiltration at the proximal end of the stent (fig. 4). Hematemesis and melena developed, necessitating central line placement for parenteral nutrition. The patient died less than a year after the diagnosis.

COMMENTS

Nutritional problems are common in cancer, including EC, owing to tumor-induced dysphagia and treatment-related side effects. In a cohort of 922 patients with EC, 17% experienced >10% weight loss within 3 months before

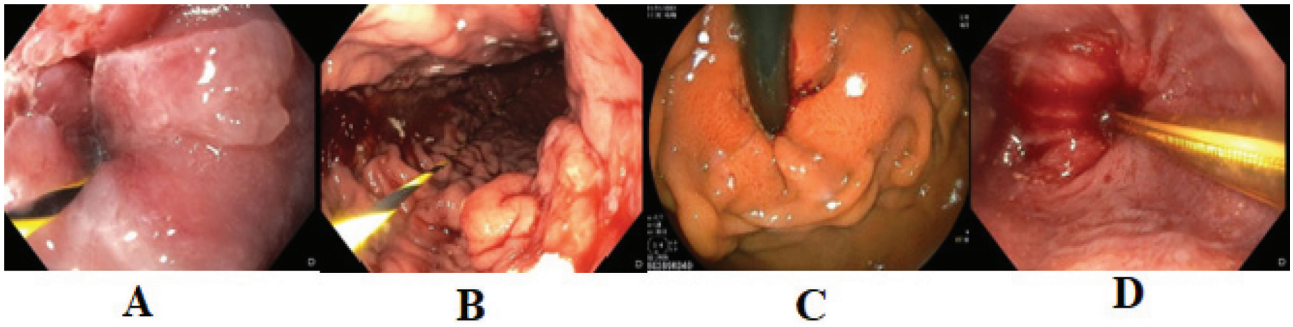

Figure 1. First gastroscopy examination result. **(A)** Mass and narrowing of the esophageal-gastric junction. **(B and C)** Mass was also found in the superior fundus and cardia. **(D)** Inserting Freka tube using scope guiding.

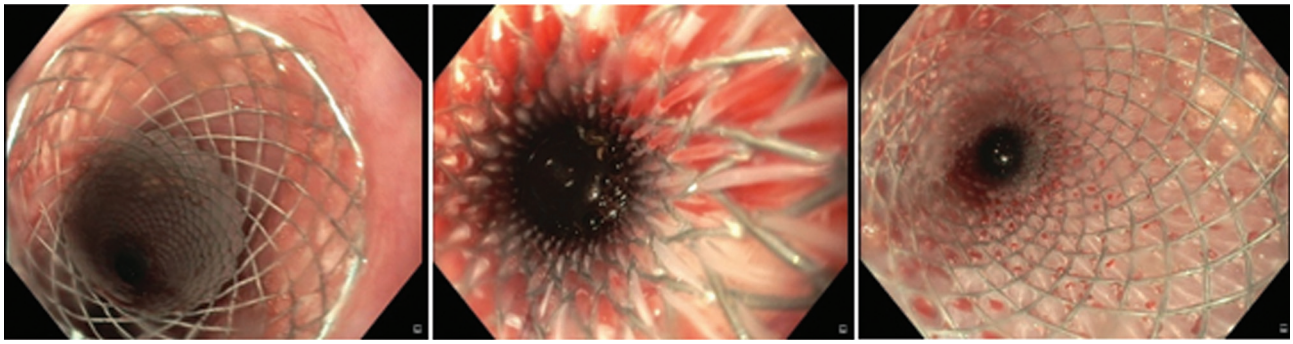

Figure 2. Fully-covered self-expandable metal stent placement.

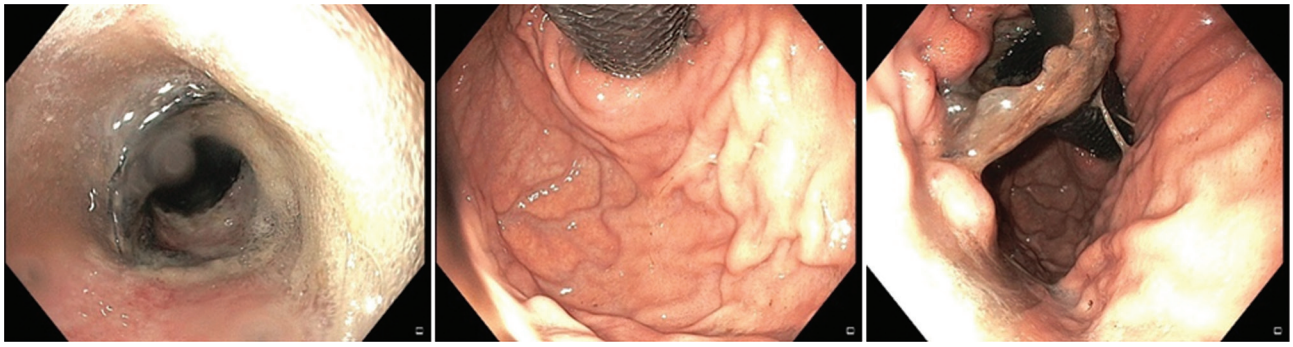

Figure 3. Gastroscopy examination after the third cycle (self-expandable metal stent is well installed and no new mass is observed).

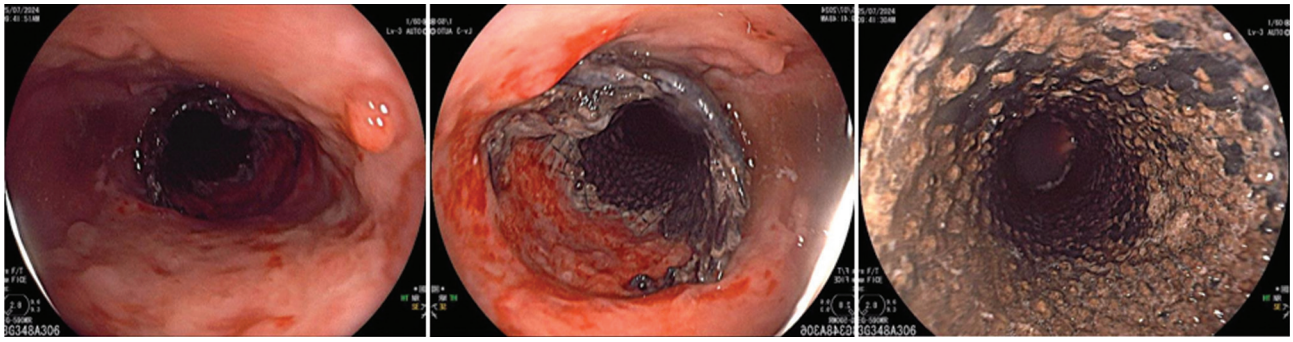

Figure 4. Gastroscopy examination after the fifth cycle (new mass growth is observed proximal to the self-expandable metal stent).

diagnosis, which significantly increased the five-year mortality risk (hazard ratio [HR] 1.34; 95% confidence interval [CI] 1.02–1.74).[11] Psychological issues, such as anxiety and depression, along with chemotherapy-induced mucositis, enteritis, ulceration, and malabsorption,[12] further worsened the nutritional decline. Malnutrition reduces treatment tolerance, increases complications, prolongs hospitalization, and raises healthcare costs.[9,13] Cachexia accounts for 20% of cancer deaths,[3,5] and over half of patients with solid tumors present with malnutrition, resulting in lower response rates and survival.[14] In some cases, nutritional status is a stronger prognostic factor than tumor stage.[15]

The Patient-Generated Subjective Global Assessment (PG-SGA) is recommended by the Academy of Nutrition and Dietetics for nutritional assessment; however, its short form (PG-SGA SF) (fig. 5) is faster and can be self-administered by patients.[16] The weight history, food intake, symptoms, activity level, and physical function are evaluated. Higher PG-SGA SF scores indicate a higher risk of malnutrition. Combining this score with TNM staging improves prognostic accuracy.

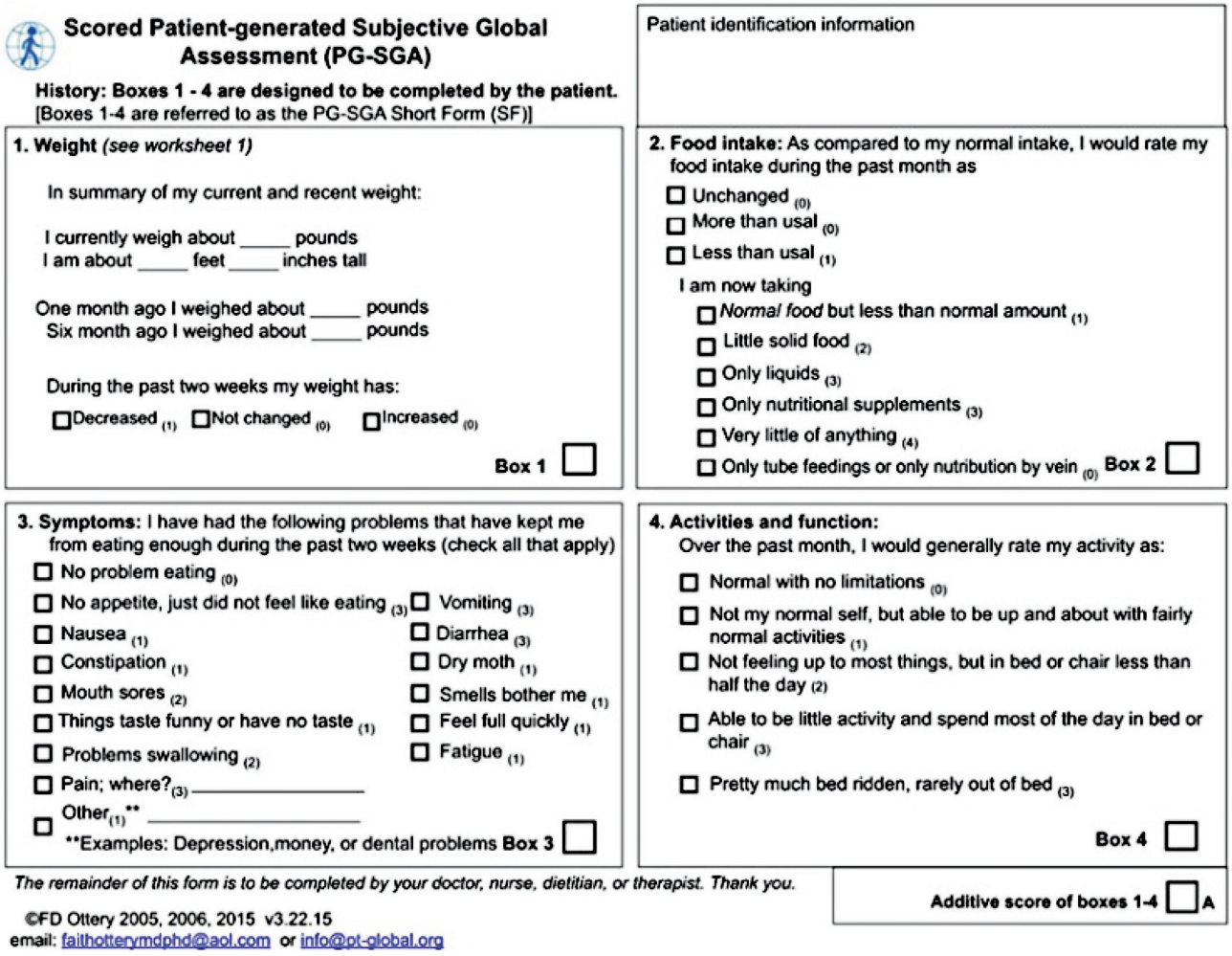

Figure 5. Patient-generated Subjective Global Assessment short form (PG-SGA).[16]

Palliative care in cancer is not limited to end-of-life, but aims to improve the quality of life and survival.[17] Maintaining adequate nutrition is essential in advanced EC. When oral intake is insufficient, therapy options include counseling, oral nutritional supplements, enteral nutrition (EN), and parenteral nutrition (PN).[9,11,12] EN is preferred when gastrointestinal function is intact. Short-term EN (<2–3 weeks) can be performed using nasogastric or nasoenteric tubes, whereas long-term EN (>2–3 weeks) is delivered via gastrostomy or jejunostomy (fig. 6). PN is reserved for cases where EN is contraindicated or insufficient.[11,12]

Self-expandable metallic stent (SEMS) placement is effective for relieving dysphagia[18,19] and enables the oral intake of texture-modified foods per the International Dysphagia Diet Standardization Initiative (IDDSI) guidelines (tab. 1).[20] Smith et al found that SEMS immediately improved swallowing, whereas jejunostomy feeding did not have the same rapid effect.[19]

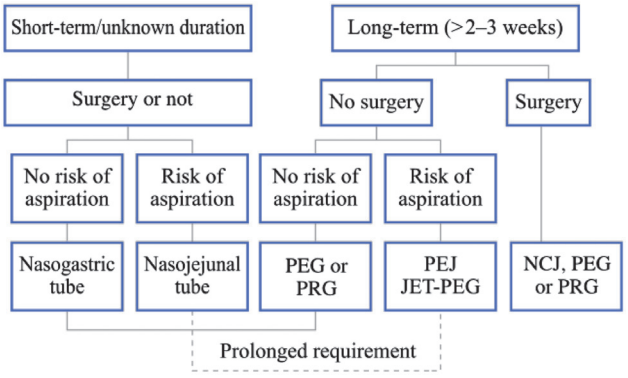

Figure 6. Enteral nutrition route algorithm. PEG: Percutaneous endoscopic gastrostomy, PRG: Percutaneous radiological gastrostomy, PEJ: Percutaneous endoscopic jejunostomy, NCJ: Needle catheter jejunostomy.

Palliative chemotherapy combined with optimized nutrition can improve survival and quality of life for unresectable or metastatic EC. According to the European

Table 1. International Dysphagia Diet Standardization Initiative (IDDSI) diets.[20]

Level	IDDSI Diet
7	Regular
7	Easy to chew
6	Soft and bite sized
5	Minced and moist
4	Pureed
3	Liquidized
2	Moderately thick
1	Slightly thick
0	Thin

Society for Clinical Nutrition and Metabolism, nutritional therapy should be prioritized when the risk of malnutrition outweighs cancer-related risks.[21] The recommended caloric intake is 30 kcal/kg/day for bedridden patients and 35 kcal/kg/day for active patients, with carbohydrates providing 50–70% of energy, lipids 30–50%, and protein 1.2–1.5 g/kg/day (up to 2 g/kg/day in patients with normal kidney function).[22,23] Micronutrient supplementation is considered safe when aligned with WHO/FAO guidelines.[22,24]

Appetite stimulants, such as megestrol acetate (480–800 mg/day), are effective in improving appetite, weight, and quality of life. Yavuzsen et al reviewed 29 trials using MEGACE in 4,139 patients with cancer. A total of 23 trials involving 3,436 patients with doses ranging from 160 to 1,600 mg per day for 2 weeks to 2 years showed increased appetite and weight gain with MEGACE compared with placebo.[5,22]

Providing nutritional therapy to patients with cancer with metastases presents unique challenges, particularly when patients are undergoing palliative chemotherapy. Although dysphagia can be improved with SEMS placement, the side effects of chemotherapy, such as nausea, vomiting, mucositis, and malabsorption, still significantly impact the patient's nutritional intake. Consequently, even though the patient may be able to consume enough food, the risk of malnutrition remains high. Therefore, in addition to intensive nutritional monitoring, nutritional therapy must be tailored to the patient's condition, both in terms of the type of food provided and the nutrition delivery method. In some cases, the choice between enteral or parenteral nutritional therapy should be carefully considered based on the patient's gastrointestinal status and the symptoms they are experiencing. With all these challenges, the medical team must work in a multidisciplinary manner, including nutritionists and palliative care physicians, to manage the patient's condition with a holistic approach to maintain their quality of life and reduce the risk of ongoing malnutrition.[25,26]

In conclusion, in metastatic EC, palliative nutritional therapy is crucial for maintaining the quality of life. SEMS placement can improve dysphagia; however, the side effects of chemotherapy often reduce the intake, thereby maintaining the high risk of malnutrition. Nutritional therapy should be tailored to the patient's condition, with enteral or parenteral routes chosen based on gastrointestinal function. Continuous monitoring and multidisciplinary collaboration between doctors, nutritionists, and other healthcare professionals are essential for optimizing the nutritional status of patients and prolonging their survival.

Further research should strengthen multidisciplinary approaches to identify best practices and improve the effectiveness of palliative nutritional therapy in enhancing the quality of life and reducing suffering.

ΠΕΡΙΛΗΨΗ

Παρηγορητική διατροφική θεραπεία σε ασθενείς με μεταστατικό καρκίνο οισοφάγου

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Ο καρκίνος του οισοφάγου (ΚΟ) παραμένει μια σημαντική αιτία θνησιμότητας που σχετίζεται με τον καρκίνο παγκοσμίως, με υψηλή συχνότητα εμφάνισης στην Ασία. Παρά τις θεραπευτικές εξελίξεις, η πρόγνωση είναι κακή σε περιπτώσεις με απομακρυσμένες μεταστάσεις. Ο υποσιτισμός, ο οποίος επηρεάζει έως και 85% των ασθενών με καρκίνο, επιδεινώνει την ανοχή στη θεραπεία και την ποιότητα ζωής Περιγράφεται η περίπτωση ενός 50χρονου άνδρα με προχωρημένο ΚΟ, σοβαρή δυσφαγία και απώλεια βάρους, ο οποίος έλαβε διατροφική συμβουλευτική, οξική μεγεστρόλη και αυτοεπεκτεινόμενο μεταλλικό stent για παρηγορητική αγωγή. Κατά τη διάρκεια της χημειοθεραπείας παρατηρήθηκαν βελτιώσεις στη διατροφή και στην ποιότητα ζωής. Ωστόσο, η κατάσταση του ασθενούς επιδεινώθηκε μετά από αρκετούς κύκλους. Υπογραμμίζεται η σημασία της ολοκληρωμένης διατροφικής υποστήριξης, περιλαμβανομένων των εντερικών ή παρεντερικών οδών, για τη βελτιστοποίηση της παρηγορητικής φροντίδας σε προχωρημένο ΚΟ.

Λέξεις ευρετηρίου: Διατροφική υποστήριξη, Καρκίνος οισοφάγου, Παρηγορητική φροντίδα

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