

Esophageal Cancer and Palliation of Dysphagia

Sarah Massey, RN, BSN

Progressive dysphagia is the most common presenting symptom of esophageal cancer but also may occur as a side effect of treatment. Evaluation of patients' dysphagia includes determining its cause and assessing the severity. Several palliative options are available for dysphagia; the clinical situation, local expertise, and cost effectiveness help determine the appropriate treatment modality.

Esophageal cancer is a highly aggressive upper gastrointestinal malignancy. According to the American Cancer Society (IACS), 2010, 16,640 new cases of esophageal cancer were diagnosed in 2010, with 14,500 deaths caused by the disease. Most cases are diagnosed at stage III or IV (Edmondson & Schiech, 2008). The five-year survival rate is 17% for all stages of esophageal cancer (ACS, 2010); therefore, palliation is the goal for many patients. The two main types of esophageal cancer are squamous cell carcinoma and adenocarcinoma (Siersema, 2008) (see Figure 1). Each type has different risk factors. Squamous cell is associated with cigarette smoking and chronic, heavy alcohol consumption, whereas adenocarcinoma is linked to a history of gastroesophageal reflux disease, Barrett esophagus, and obesity. The risk of esophageal cancer increases with age, and men are three times more likely than women to acquire the disease (ACS, 2010).

Case Study

Mr. X, a 61-year-old African American, had a history of gastroesophageal reflux disease, a 40-pack-year history of smoking cigarettes, and hypertension. He was obese with a baseline weight of 210 lbs at 5'9" tall (body mass index = 31). Five months ago, Mr. X was experiencing dysphagia with solid foods such as sandwiches and meats. He modified his diet to avoid troublesome foods. His symptoms progressed over the next six weeks to dysphagia with liquids. At that time, Mr. X visited his primary care provider, who referred him for an esophagogastroduodenoscopy (EGD) to determine whether

any structural blockage existed. An EGD procedure involves passing a flexible tube with a light and camera on the end down the throat to directly visualize the esophagus, stomach, and duodenum. A mass was found in the lower third of Mr. X's esophagus; the pathology report revealed adenocarcinoma of distal esophagus with moderate differentiation.

Mr. X underwent computed tomography scans of the chest, abdomen, and pelvis, along with a positron emission tomography scan. The scans revealed metastatic disease in both lungs with multiple pulmonary nodules ranging in size from 9 mm to 2 cm. Mr. X was staged at IVb. He then underwent palliative chemotherapy with 5-fluorouracil and cisplatin and external beam radiation. After the completion of treatment, Mr. X was found to still have dysphagia to solids (grade 3). He was referred back to a gastroenterologist for additional interventions to palliate his dysphagia. The gastroenterologist performed an upper endoscopy and placed a self-expanding metal stent. Two days after the procedure, Mr. X was able to eat solid foods with only slight modifications to meats (grades 1-2). Mr. X tolerated the procedure well without any complications of bleeding, perforation, or severe pain.

Pathology

Dysphagia, or difficulty swallowing, has several possible causes in esophageal cancer. Progressive dysphagia is the most common presenting symptom of esophageal cancer (Javle et al., 2006). The esophagus lacks a serosal lining, allowing for unimpeded radial distention and swallowing despite progressive tumor growth. This delays dysphagia from occurring until the tumor occupies 80%-90% of esophageal circumference (Javle et al., 2006). Dysphagia also occurs as a result of treatment for esophageal cancer. Treatment modalities such as external beam radiation, ablation therapy, photodynamic therapy, and brachytherapy can cause esophagitis, fibrosis, and strictures resulting in dysphagia (Javle et al., 2006). Esophagectomy for tumor resection also can cause postoperative anastomotic strictures, creating dysphagia (Javle et al., 2006).

Evaluation

Evaluating dysphagia in patients with esophageal cancer includes determining the cause and assessing the severity, which can be done by grading the dysphagia (see Table 1). The grades range from 1 (normal

Sarah Massey, RN, BSN, is a family nurse practitioner and graduate student in the School of Nursing at the University of North Carolina at Chapel Hill. The author takes full responsibility for the content of the article. The author did not receive honoraria for this work. No financial relationships relevant to the content of this article have been disclosed by the author or editorial staff. Mention of specific products and opinions related to those products do not indicate or imply endorsement by the *Clinical Journal of Oncology Nursing* or the Oncology Nursing Society.

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