Case Report

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Esophageal Squamous Cell Carcinoma Presenting as Two Simultaneous Adjacent Masses Confirmed by Pathologic Findings: Report of a Rare Case

Hamidreza Khorshidi[1], Mehrdad Taghipour[1], Babak Yousefi[1], Arash Dehghan[2]

1- Department of General Surgery, School of Medicine, Hamadan University of Medical Sciences, Hamadan, Iran
2- Department of Pathology, School of Medicine, Hamadan University of Medical Sciences, Hamadan, Iran

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Corresponding author:
Mehrdad Taghipour

Email:
m.taghipour@edu.umsha.ac.ir

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ABSTRACT

Esophageal squamous cell carcinoma (SCC) is a common neoplasm which incidence shows an increasing trend in most populations. This article presents a case of 79-year-old woman with diagnosis of differentiated squamous cell carcinoma of the esophagus as two adjacent mas with metastasis, which invaded the perigastric and distal esophagus lymph nodes. The patient underwent esophagectomy and gastroesophagotomy. The jejunostomy tube was also embedded. The presence of two simultaneous esophageal tumoral lesions is extremely uncommon and requires further assessments. The prognosis and survival of such patients not seems to be worse than those of patients with isolated esophageal neoplasm.

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Introduction

Esophageal malignancies (EM) are of the most common causes of mortality resulted from cancer in the Middle East which of poor prognosis (1). It is considered to be a health challenge in many human societies (2). The 5-year survival rates of EM are usually mentioned to be less than 10% (3). EM can be categorized into two major types of esophageal squamous cell carcinoma (ESCC) and adenocarcinoma (EAD). In Asian countries, ESCC is the most common types (4-6). The increased prevalence of some risk factors such as overweight, gastroesophageal reflux disease (GERD), and obesity, the rising incidence of EAD in some western countries during the past decades (5, 7).

The association of ESCC with other malignancies such as respiratory tract and the head and neck have been reported (8, 9).

Often these tumors are seen alone, and the second mass exists far from the primary lesion. Here, we report a co-existence of such mass lesions in an elderly woman patient represented with two simultaneous esophageal masses with the final diagnosis of carcinoma.

Case Report

A 79-year-old white, non-smoker, married woman presented with the chief complaint of dysphagia for eight months, retrosternal discomfort, and upper abdominal pain to the Besat hospital, Hamadan, Iran. At first, the patient had dysphagia with solids, and then progressively with liquids. Her medical history was significant for hypertension and ischemic heart disease. At primary physical examination, no palpable lymphadenopathy was detected. Pulmonary and cardiac auscultation were normal. Moreover, no palpable masses existed in the abdomen, nor rectal examination.

An initial endoscopic evaluation for the dysphagia and upper abdominal pain in November 2017 revealed and confirmed two adjacent masses in the third end of the esophagus.

The patient underwent surgery. During the surgery, a mass in the lower esophagus and another mass appeared above the initial tumor. Based on these findings, the patient candidate for transhiatal esophagectomy and gastroesophagotomy in addition to tube jejunostomy placement. Cervical and upper thoracic esophagus released, and then gastrolisis conducted with preserving right gastric and gastroepiploic arteries. Resected specimens were sent to pathology.

The specimen consisted of two parts of the tissue, the first portion of the esophagus with a length of 14 cm, a maximum diameter of 5.3 centimeters, and a small margin of 1 cm, and the second part with a maximum diameter of three centimeters. In macroscopic examination, two separate masses were evident in the esophageal tissue (Figure 1).

Figure 1. Macroscopic finding of the surgical specimen, showing two separate masses in esophagus

Celiac metastatic lymphedene is also indicated in figure 2.

Figure 2. Resected celiac metastatic nymph node

The microscopic evaluation confirmed the diagnosis of well differentiated invasive squamous cell carcinoma (Figure 3-6).

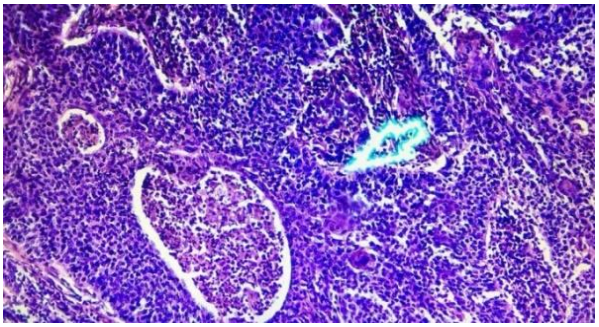

Figure 3. First tumoral lesion, esophagus mucosa with ulcerative pattern and neoplastic transformation Hematoxylin and eosin (H&E) staining; original magnification: × 4

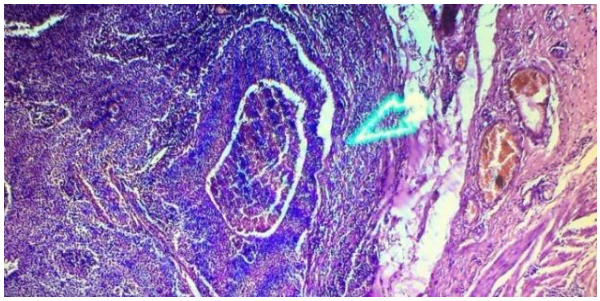

Figure 4. First tumoral lesion, esophagus wall and neoplastic infiltration with specification of squamous cell carcinoma (SCC) and a central necrosis
Hematoxylin and eosin (H&E) staining; original magnification: × 10

The proximal and distal (stomach) surgical margins were intact. Moreover, two from eight perigastric and distal esophagus lymph nodes dissected were involved by metastatic carcinoma.

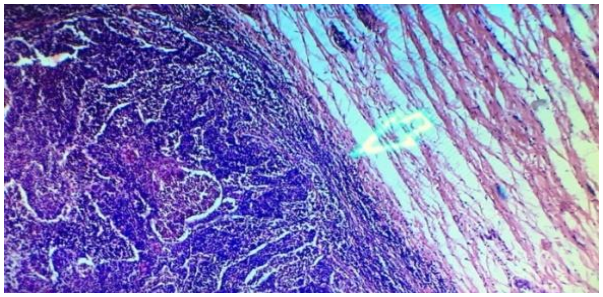

Figure 5. Second tumoral lesion and esophagus wall (arrow)
Hematoxylin and eosin (H&E) staining; original magnification: × 4

The patient stayed in intensive care unit (ICU) eight days after the surgery, and the diet was also introduced by jejunostomy.

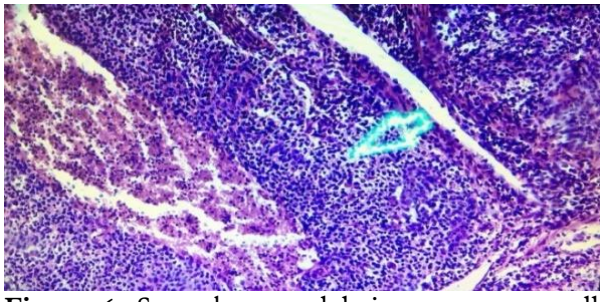

Figure 6. Second tumoral lesion, squamous cell carcinoma (SCC), with central necrosis (arrow)
Hematoxylin and eosin (H&E) staining; original magnification: × 10

On the 9th postoperative day, barium swallow was performed for the patient, where no contamination fluid leakage was reported. She was discharged on the 15th postoperative day.

Discussion

EC usually has refractory nature with current therapeutic strategies, and has a poor prognosis. About 400,000 new cases of EC have diagnosed annually. It is one of the most common reasons for cancer-related mortality (10). The racial background and geographic region are responsible for the worldwide differences seen in the incidence of esophageal cancer (11). The prevalence of esophageal SCC is on the decline slope, but still common in Asia. The "Asian Esophageal Cancer Belt" encompasses areas such as Iran, northern and central China, Turkey, and Kazakhstan which more than 100 cases/100000 individual-years are estimated to affect with esophageal squamous carcinoma (12). The risk factors associated with esophagus cancer can be gastroesophageal reflux disease, diet, obesity, smoking and alcohol consumption, genetic mutations, and epigenetic factors (13).

The synchronous occurrence of gastrointestinal tract neoplasms has been explained by the concept of field carcinogenesis. Some risk factors for gastrointestinal tract cancers are the same. Our patient had some obvious above-mentioned risk factors, such as age, diet, and low socioeconomic status, but it is worth mentioning that no genetic studies have been carried out for her.

A few reports are documented in scientific texts on the double cancerous lesions of the esophagus. Presence of such tumoral lesions in the esophagus is rarely encountered and easily misdiagnosed with a rate of about 83% (14, 15). There is a medical term called collision tumors which are rare neoplasms consisting of two separate cell populations. These tumors manage distinctly with

individualized manner. No specified guidelines are presented. But in general, treatment should target the more aggressive component (16, 17). In spite of all this, the introduced patient in this paper was not a case of collision tumors, but a case with simultaneous SCC in esophagus, that there was no similar case found like this in the literature.

In order to evaluate simultaneous adjacent tumor, some arrangements should be considered. Primary imaging assessments, surgical procedures if needed, and final pathologic re-evaluation (18). Endoscopic examinations are more frequently used for routine screening, diagnosis, and treatment of esophageal malignancies. Tumoral lesions, which do not infiltrate beyond the mucosa (T1a), are scarcely accompanied by lymph-node metastasis. Endoscopic resection could be an effective curative treatment for such lesions; and is indicated for the masses not exceeding two-thirds of the circumference of the esophagus (19).

Lesions with deep invasion (more than 200 μm) to the submucosa are usually associated with lymph-node metastasis. Traditionally, surgical resection of localized esophageal SCC was the best treatment method in terms of achieving disease control (20).

As seen and performed in our patient, esophagectomy might be an optimal management of the simultaneous occurrence of esophageal tumoral lesions. In our case, a metastatic invasion was seen in perigasatric lymph nodes, too. Han et al. showed that docetaxel plus cisplatin, as first-line treatment in patients with metastatic SCC, showed the response rate of 33.3%, and the median overall survival rate of 8.3 months (21). Our patient treated successfully with the surgical approach and discharged, and was introduced to an oncologist to continue the treatment. She is now alive.

Co-existence of two tumoral mass in esophagus is a rare event. In the face of gastrointestinal problems that can be diagnosed with cancer, an expert should always consider rare cases, and take appropriate treatment accordingly. Carrying out a radical surgery could be a proper clinical approach for both tumors.

Conflict of Interests

Authors have no conflict of interests.

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References

1. Napier KJ, Scheerer M, Misra S. Esophageal cancer: A Review of epidemiology, pathogenesis, staging workup and treatment modalities. World J Gastrointest Oncol 2014; 6(5): 112-20.
2. Zhang Y. Epidemiology of esophageal cancer. World J Gastroenterol 2013; 19(34): 5598-606.
3. Pennathur A, Gibson MK, Jobe BA, Luketich JD. Oesophageal carcinoma. Lancet 2013; 381(9864): 400-12.
4. Alema ON, Iva B. Cancer of the esophagus: Histopathological sub-types in northern Uganda. Afr Health Sci 2014; 14(1): 17-21.
5. Zhang HZ, Jin GF, Shen HB. Epidemiologic differences in esophageal cancer between Asian and Western populations. Chin J Cancer 2012; 31(6): 281-6.
6. Tran GD, Sun XD, Abnet CC, Fan JH, Dawsey SM, Dong ZW, et al. Prospective study of risk factors for esophageal and gastric cancers in the Linxian general population trial cohort in China. Int J Cancer 2005; 113(3): 456-63.
7. Domper Arnal MJ, Ferrandez Arenas A, Lanas Arbeloa A. Esophageal cancer: risk factors, screening and endoscopic treatment in western and eastern countries. World J Gastroenterol 2015; 21(26): 7933-43.
8. de Villiers EM, Gunst K, Stein H, Scherubl H. Esophageal squamous cell cancer in patients with head and neck cancer: Prevalence of human papillomavirus DNA sequences. Int J Cancer 2004; 109(2): 253-8.
9. Kim JS, Kim BW. Esophageal cancer and head and neck cancer: The earlier, the better. Gut Liver 2015; 9(2): 131-2.
10. Lambert R, Hainaut P. The multidisciplinary management of gastrointestinal cancer. Epidemiology of oesophagogastric cancer.

Best Pract Res Clin Gastroenterol 2007; 21(6): 921-45.
11. Brown LM. The role of race/ethnicity in the epidemiology of esophageal cancer. J Assoc Acad Minor Phys 2000; 11(2-3): 32-7.
12. Melhado RE, Alderson D, Tucker O. The changing face of esophageal cancer. Cancers (Basel) 2010; 2(3): 1379-404.
13. Huang FL, Yu SJ. Esophageal cancer: Risk factors, genetic association, and treatment. Asian J Surg 2018; 41(3): 210-5.
14. Jian X, Lianshang W, Fauli M. Missed Diagnosis and Prevention of Multicentric Tumors of Upper Alimentary Tract-Report of 28 Patients. Chinese Journal of Clinkal Oncology and Rehabilitation 1998; 2: 025.
15. Sun X, Zou Y, Hao Y, Cheng H, Zhou C, Meng X. Pathological analysis of collision (double primary) cancer in the upper digestive tract concomitant with gastric stromal tumor: A case report. Int J Clin Exp Pathol 2015; 8(10): 13523-7.
16. Schizas D, Michalinos A, Alexandrou P, Moris D, Baliou E, Tsilimigras D, et al. A unique tripartite collision tumor of the esophagus: A case report. Medicine (Baltimore) 2017; 96(49): e8784.
17. Zhang HD, Chen CG, Gao YY, Ma Z, Tang P, Duan XF, et al. Primary esophageal adenosquamous carcinoma: A retrospective analysis of 24 cases. Dis Esophagus 2014; 27(8): 783-9.
18. Huguenin JF, Azevedo VV, Almeida HI, Oliveira IM, Pinto CE. Synchronous esophageal squamous cell carcinoma and gastric adenocarcinoma. Arq Bras Cir Dig 2013; 26(3): 246-7.
19. Maleki I, Shekarriz R, Nosrati A, Orang E. simultaneous esophageal squamous cell carcinoma and adenocarcinoma: A case report. Middle East J Dig Dis 2015; 7(4): 257-60.
20. Li X, Lin S, Zhang Y, Wang H. Synchronous primary esophageal squamous cell carcinoma and gastric adenocarcinoma: Analysis of 41 cases treated in a single institution. Sci Rep 2015; 5: 13335.
21. Han JS, Choi SR, Jang JS, Roh MH, Kim DC, Ryu SH, et al. A Case of synchronous esophagus and stomach cancer successfully treated by combined chemotherapy. Korean J Gastroenterol 2012; 60(2): 113-8.