CASE REPORT
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A Case of Esophageal Carcinosarcoma Treated by Endoscopic Resection

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Esophageal carcinosarcoma is a rare malignant neoplasm that is composed of both carcinomatous and sarcomatous components. A 78-year-old man with esophageal carcinosarcoma presented with dysphagia, and was treated by endoscopic resection. Although surgery is the standard treatment for esophageal carcinosarcoma, endoscopic resection is an excellent alternative when the tumor is superficial and has no metastasis. **(Korean J *Helicobacter* Up Gastrointest Res 2016;16:111-114)**

Key Words: Carcinosarcoma; Esophagus; Endoscopy

INTRODUCTION

Esophageal carcinosarcoma is a rare malignant neoplasm consisting of both carcinomatous and sarcomatous components. Its incidence is only 0.5% to 2.8% out of all esophageal neoplasm.[1,2] Although esophagectomy is the standard treatment for esophageal carcinosarcoma, endoscopic resection is a less invasive and well tolerable option when the tumor is superficial and has no metastasis.[3-5] We present a case of esophageal carcinosarcoma that was treated by endoscopic resection.

CASE REPORT

A 78-year-old man complained of dysphagia for 2 months. He denied cigarette smoking and alcohol drinking. He had no palpable cervical lymph nodes. The laboratory results showed leukocytosis, white blood cell counts 12,620/mm^3 and elevated CRP 5.35 mg/dL. Otherwise there were no remarkable findings. On the esophagogastroduodenoscopy, a large pedunculated polypoid mass was found at the lower third of the esophagus (Fig. 1A~C). Endoscopic mucosal resection was performed to remove the polypoid mass, and ablation using argon plasma coagulation was underwent at the resection site for bleeding control and prevention of recurrence (Fig. 1D, E). The size of the resected tumor was 5.0×2.7×2.0 cm (Fig. 1F). Low power histologic examinations revealed a mucosal polypoid lesion with surface erosion, which had both sarcomatous and carcinomatous components. It was mostly poorly differentiated sarcoma and the foci of squamous cell carcinoma occupied just a tiny space (Fig. 2A). The sarcoma area showed proliferation of highly pleormophic atypical spindle and ovoid cells. The carcinoma cells with keratin pearl invaded the lamina propria of esophagus (Fig. 2B). Low grade squamous dysplasia was noted on the polypectomy resection margin. On the immunohistochemistry stains, vimentin and actin were positive for the sarcoma areas, and the carcinoma area reacted with keratin antibody (Fig. 3). The pathologic diagnosis was carcinosarcoma of esophagus. After endoscopic resection of the tumor, CT scans of chest, abdomen and pelvis were performed, there were no evidence of metastasis. The patient was discharged from hospital without complication and is observed in an outpatient setting.

DISCUSSION

In 1865, Virchow first described carcinosarcoma as a

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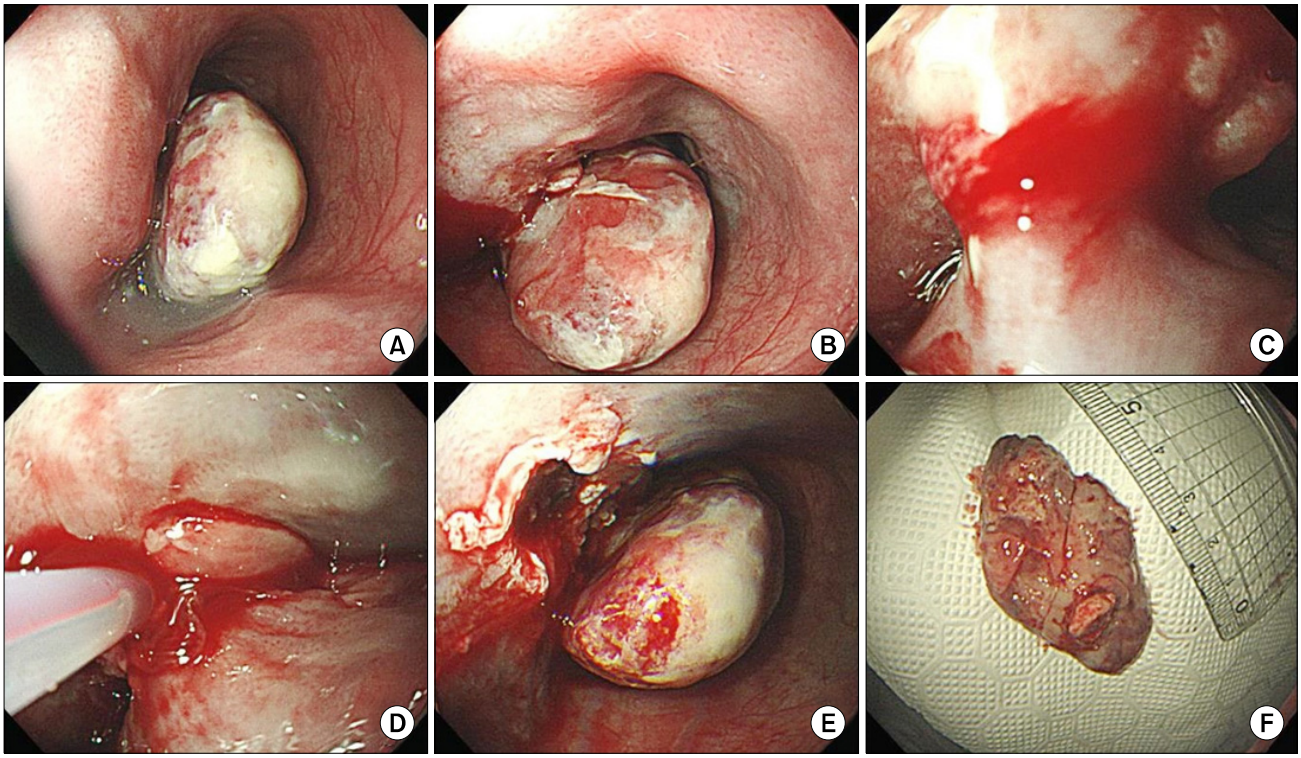

Fig. 1. Endoscopic findings of the tumor. (A, B) Large polypoid mass was seen at lower third of the esophagus. (C) Stalk of the polypoid mass is observed. The tumor was attached to esophageal wall by stalk. (D, E) Endoscopic mucosal resection was done to remove the tumor. (F) The size of resected tumor was 5.0×2.7×2.0 cm.

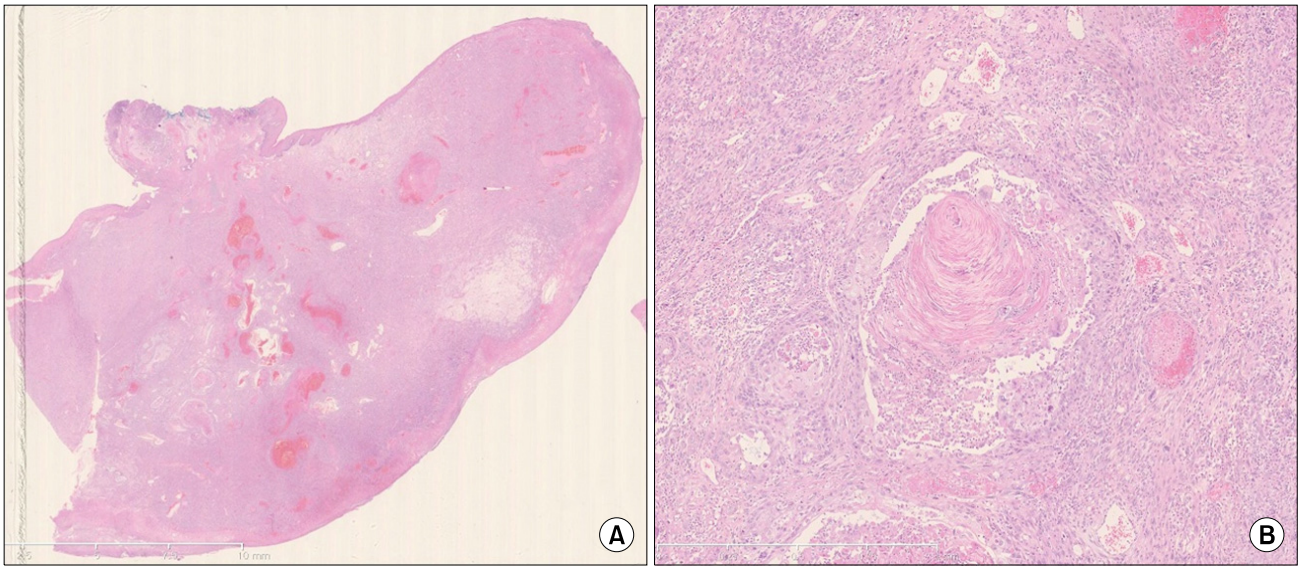

Fig. 2. Pathologic findings of the tumor. (A) The polypoid lesion showed markedly increased cellularity with surface erosion (H&E, 1:1). (B) The squamous cell carcinoma was at the center of high magnification examination picture, which showed abundant keratin pearl. On the periphery, there were spindle and ovoid cells with pleomorphism and hyperchromatism, which was consistent with sarcoma (H&E, ×200).

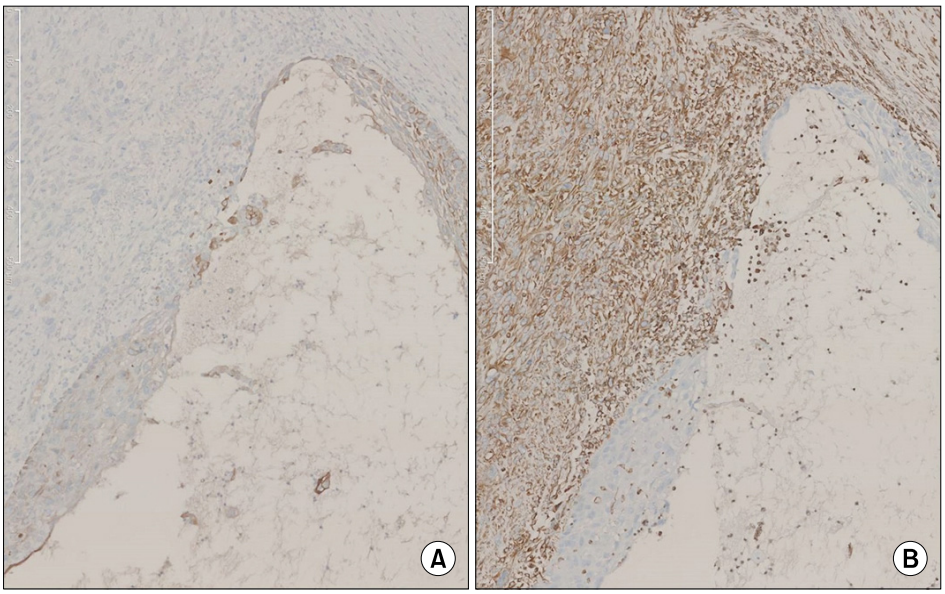

Fig. 3. Immunohistochemistry. (A) Cytokeratin was positive in only carcinoma area, not in sarcoma area (cytokeratin, ×200). (B) On the contrary, sarcoma cells reacted with vimentin antibody (vimentin, ×200).

Table 1. Case Reports of Esophageal Carcinosarcoma Treated by Endoscopic Resection in the World

Study	Sex/age (yr)	Treatment	Outcome
Pesenti et al. (2004)[9]	M/73	Endoscopic treatment and chemoradiotherapy	No relapse after 2.5 yr
Ji et al. (2009)[4]	M/61	Endoscopic treatment alone	No relapse after 17 mo
Xu et al. (2013)[10]	M/84	Chemotherapy for multiple carcinosarcoma of the esophagus and stomach. Palliative endoscopic resection for esophageal carcinosarcoma	The patient died after 7 mo
Gubler and Bauerfeind (2013)[5]	M/79	Endoscopic treatment alone	No relapse after 2 yr
Cha et al. (2014)[11]	M/53	Endoscopic treatment alone	After 21 mo, SCC was occurred at different site of the esophagus
Choe et al. (2015)[12]	M/75	Endoscopic treatment alone	No relapse after 3 yr

M, male; SCC, squamous cell carcinoma.

malignant neoplasm composed of both malignant epithelial and spindle cell components. In 1949, Stout et al.[6] reported the first case of esophageal carcinosarcoma treated by surgical resection. Many various terminologies have been used for carcinosarcoma including pseudosarcoma, sarcomatoid carcinoma, spindle cell carcinoma and polypoid carcinoma reflecting the uncertain histogenesis of the tumor.[3] There are three theories regarding the histogenesis of esophageal carcinosarcoma. The first theory is that the spindle cell component is not a malignancy and it is a result of reaction induced by carcinoma. The second is that the carcinoma and the sarcoma are separate tumors which are collided. The third is that the sarcomatous cells are derived from metaplastic epithelial cells.[7,8] Immunohistochemical stain, electron microscopic findings and the common p53 point mutations of both components support the third theory.[3]

Most esophageal carcinosarcoma present as large polypoid mass and most frequent symptom is dysphagia. Diagnosis is achieved by biopsy or entire resection of the tumor. EUS and CT scan are useful for staging. Surgery, endoscopic treatment and chemoradiotherapy can be used for the treatment of esophageal carcinosarcoma. The prognosis of esophageal carcinosarcoma is poor like other esophageal cancers. In a report comparing 20 cases of esophageal carcinosarcoma and 773 cases of squamous cell carcinoma, there was no significant difference in the 5-year-survival rates.[2]

Although surgery is still standard treatment for esophageal carcinosarcoma, endoscopic resection is also an ex-

cellent treatment option.[3-5] Because many cases of esophageal carcinosarcoma have stalks, complete resection of the tumor can be achieved successfully by endoscopic resection. If the tumor is considered as T1N0 stage, endoscopic resection can supersede surgery. Especially if the patients are very old or cannot tolerate surgery, endoscopic resection can be considered as first treatment option. The efficacy, safety and recurrence rate of endoscopic resection for esophageal carcinosarcoma are uncertain, because there has been only several case reports of esophageal carcinosarcoma treated by endoscopic resection. Table 1 shows case reports of esophageal carcinosarcoma treated by endoscopic resection, four cases showed good outcomes after endoscopic treatment.[4,5,9-12] Further large studies and meta-analysis may be needed to determine the value of endoscopic treatment for esophageal carcinosarcoma.

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