Carcinosarcoma of the Esophagus: A Report of Two Cases

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Abstract: Among 137 cases of esophageal neoplasms surgically treated at Kobe City General Hospital from 1983 to 1990, there were two patients with a huge polypoid lesion identified as carcinosarcoma by light microscopic examination, both of whom underwent radical resection and esophagogastronomy. Microscopic examination of the resected specimens revealed the tumors to be composed of carcinomatous and sarcomatous elements. Additional immunohistochemical examination disclosed keratin-positive cells in the carcinomatous element and vimentin-positive cells in the sarcomatous element. In case 1, keratin-positive cells were also found in the sarcomatous element, which suggested that the sarcomatous cells were derived from epithelial cells. Despite the huge size of the tumors, the depth of invasion to the esophageal wall was limited to the mucosal layer in case 1 and the submucosal layer in case 2, and there has been no evidence of recurrence in either case since surgery.

Key Words: carcinosarcoma, polypoid carcinoma, esophagus

Introduction

Carcinosarcoma of the esophagus is a rare malignant neoplasm composed of both carcinomatous and sarcomatous elements, the incidence of which has been reported to be approximately 1% to 2% of all esophageal neoplasms. 1-4 Previous reports 1,2,5,6 have demonstrated that the prognosis of carcinosarcoma of the esophagus is better than that of squamous cell carcinoma. Among 137 cases of esophageal neoplasms surgically treated at Kobe City General Hospital from 1983 to 1990, 2 were identified as carcinosarcoma by light microscopic examination. We present these two cases herein followed by a discussion on the histogenesis of this neoplasm and the most appropriate treatments.

Case Reports

Case 1

A 62-year-old man was admitted to our hospital in August, 1990, in a poorly nourished condition with a 2-month history of progressive dysphagia. Six years previously, he had undergone a pharyngolaryngectomy with tracheostomy for mesopharyngeal carcinoma, at which time the neck lymph nodes were totally resected followed by radiation. Upper gastrointestinal barium study and gastrofiberscopy revealed a huge polypoid tumor in the thoracic esophagus with tracheostomy for mesopharyngeal carcinoma, at which time the neck lymph nodes were totally resected followed by radiation. Upper gastrointestinal barium study and gastrofiberscopy revealed a huge polypoid tumor in the thoracic esophagus (Figs. 1, 2) and thus, subtotal esophagectomy with intrathoracic esophagogastronomy was performed. The resected specimen comprised a polypoid tumor 3.5 × 3.0 × 10.5 cm in size, with a pedicle of 2.0 cm in width (Fig. 3). His postoperative course was uneventful, and he was discharged on the 50th day after his admission. There has been no evidence of recurrence demonstrated throughout the routine follow-up.

Case 2

A 65-year-old man was admitted to our hospital in March, 1984, with a 1-month history of dysphagia and chest pain. An esophagogram disclosed a spindle-shaped mass in the thoracic esophagus. Total esophagectomy was performed and an anastomosis made between the esophagus at the neck end and the stomach tube, elevated retrosternally. The resected specimen comprised a spindle-shaped tumor similar to case 1, 1.5 × 2.5 × 6.0 cm in size, with a pedicle of 1.5 cm in width (Fig. 4) which was diagnosed as carcinosarcoma.
Fig. 1. The barium swallow esophagogram of case 1. The tumor is shown by white arrows

Fig. 2. Gastrofiberscopic findings of case 1. An elevated tumor is seen in the esophageal lumen

by microscopic examination. Although the patient showed no evidence of recurrence for 6 years, a laryngeal tumor was found by an otolaryngologist, and a pharyngolaryngectomy was performed in August, 1990. However, histologic examination confirmed this tumor to be squamous cell carcinoma and denied the recurrence of carcinosarcoma.

**Histologic Findings**

The most characteristic histologic finding of these two cases was the coexistence of carcinomatous and sarcomatous elements in one tumor, which led to a diagnosis of carcinosarcoma in both cases. In case 1, the tumor was composed of poorly differentiated squamous cell carcinoma and spindle-shaped cells which looked like fibroblasts, these two elements being mixed together (Fig. 5). An immunohistochemical study for keratin demonstrated keratin-positive cells in both the carcinomatous and sarcomatous elements (Fig. 5a), while vimentin-positive cells were also found in the sarcomatous element (Fig. 5b). In case 2, these two elements were separated in location, with most of the tumor being composed of the sarcomatous element,