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Effectiveness of neoadjuvant chemotherapy with cisplatin and irinotecan followed by surgery on small-cell carcinoma of the esophagus: A case report

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ABSTRACT

INTRODUCTION: Small-cell carcinoma of the esophagus (SCCE) is a rare disease with aggressive progression and a poor prognosis. A standard treatment strategy for SCCE is yet to be established.
PRESENTATION OF CASE: A 40-year-old woman with dysphagia was admitted to our hospital. A clinical diagnosis of SCCE (T3N1N0 stage IIIA) was established. She was initially treated with chemotherapy using cisplatin (CDDP) and irinotecan (CPT-11). After two courses of treatment, the primary lesion in the esophagus was not detectable by esophageal endoscopy. Likewise, swelling of the right recurrent nerve lymph node present prior to treatment could not be detected. The chemotherapy resulted in a complete response. One month after the conclusion of chemotherapy, radical esophagectomy with three-field lymph node dissection was performed. Histopathological examination of the excised specimen revealed no residual tumor or lymph node metastasis. The patient was discharged from hospital 29 days after surgery with no complications. The patient is alive and has remained cancer-free for 48 months after the surgery.
DISCUSSION: Systemic chemotherapy for SCCE in combination with surgery was treated after surgery in most reports. Neoadjuvant chemotherapy is advantageous from three viewpoints, namely achievement of downstaging, increasing complete resection rates, and a better completion of treatment compared with postoperative chemotherapy. Neoadjuvant chemotherapy following esophagectomy could be a useful treatment option for patients with limited disease (LD) of SCCE.
CONCLUSION: We report a case of SCCE achieving a pathologically complete response with neoadjuvant chemotherapy using CDDP and CPT-11, and long-term survival followed by surgery.

1. Introduction

Extrapulmonary small-cell carcinoma is a rare condition, accounting for 2–5% of all small-cell carcinomas [1]. The most common extrapulmonary sites of small-cell carcinoma include the esophagus, other gastrointestinal organs, genitourinary tract, head and neck area, and the breast [2]. Gastrointestinal small-cell carcinomas, including small-cell carcinoma of the esophagus (SCCE), have a poor prognosis [3]. SCCE is a rare disease, accounting for 0.94–1.6% of all esophageal cancers [4,5]. SCCE has a poor prognosis because of its aggressive progression and widespread dissemination with a median survival time (MST) of 3.4–19 months, and the 5-year survival rate is 6.7–15.4% [6].

A standard treatment strategy for SCCE is yet to be established because of its low incidence. Here, we report a case of SCCE achieving a pathologically complete response following chemotherapy with cisplatin and irinotecan, and long-term survival following surgery.

2. Presentation of case

A 40-year-old woman with dysphagia was admitted to our hospital. Esophagogastroscopy revealed an ulcerated mass in the upper thoracic esophagus (Fig. 1a), and histopathological examination of the biopsy showed primary small-cell carcinoma (Fig. 2). A barium esophagram revealed a 20-mm mass with central ulceration in

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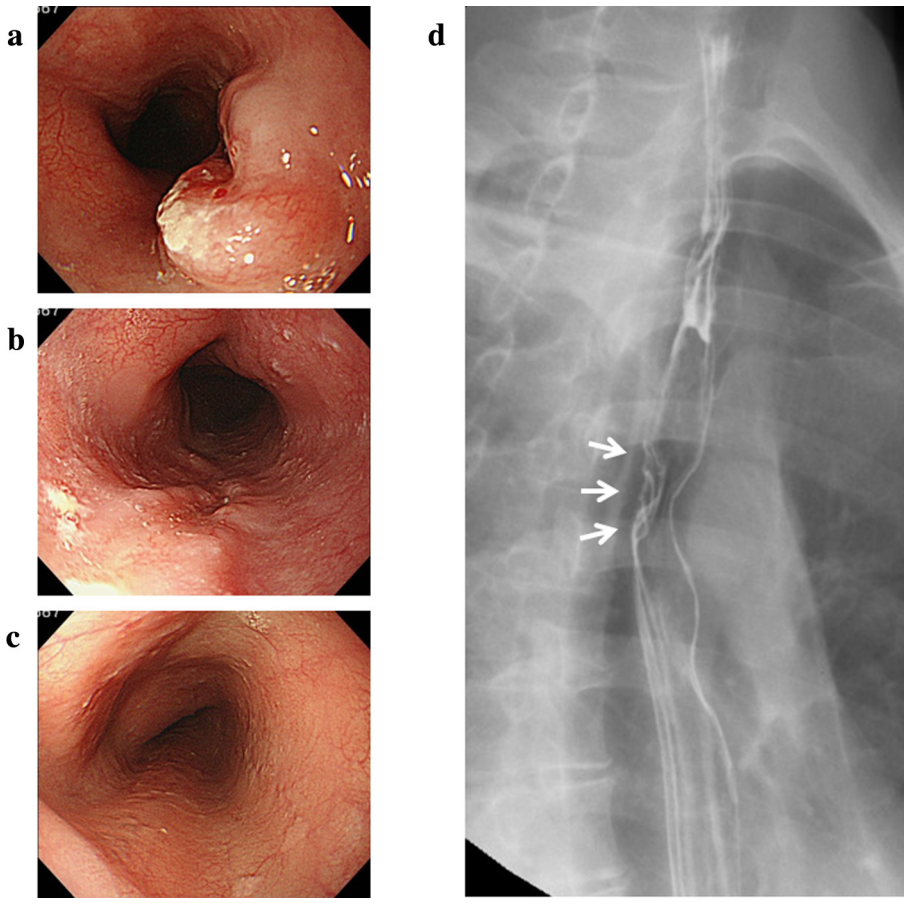

Fig. 1. Esophagogastroscopy and barium esophagography for small-cell carcinoma. (a) Esophagogastroscopy performed at admission revealed an ulcerated mass in the upper thoracic esophagus. (b) Esophagogastroscopy after one course of preoperative chemotherapy with cisplatin and irinotecan revealed that the lesion had markedly flattened. (c) Esophagogastroscopy after two courses of preoperative chemotherapy with cisplatin and irinotecan failed to detect any remaining signs of the tumor. (d) A barium esophagram generated upon admission revealed a 20-mm mass with central ulceration in the upper thoracic esophagus.

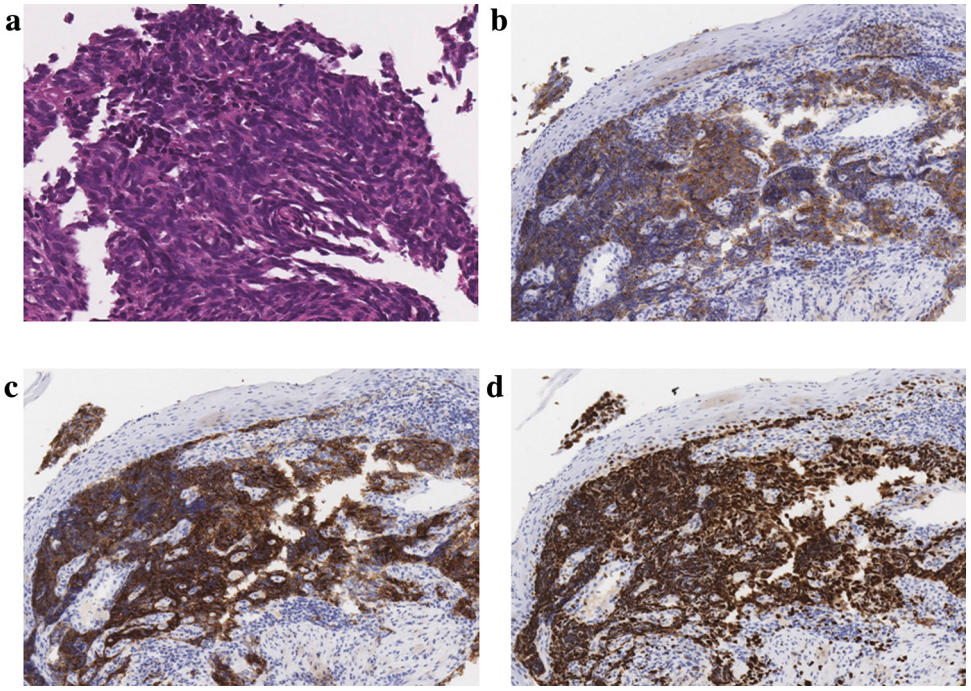

Fig. 2. Pathological examination of endoscopic biopsy specimens from the esophagus. (a) The tumor cells had small round or spindle-shaped nuclei, ill-defined cell borders, finely granular nuclear chromatin, and inconspicuous nucleoli (hematoxylin-eosin stain; 400× magnification). (b) The tumor cells stained positive for synaptophysin (200× magnification). (c) The tumor cells stained positive for CD56 (200× magnification). (d) More than 80% of the nuclei were positive for Ki-67 (200× magnification).