A case report of advanced thoracic esophageal cancer with severe malignant stricture

Tomoko HANASHI[*1], Akiko ISHII[*1], Kazuhiro ISHIZU[*1], Hideo MATSUI[*1], Yasumasa KONDOH[*1] and Hiroyasu MAKUUCHI[*2]

[*1] *Department of Surgery, Tokai University Tokyo Hospital*
[*2] *Department of Surgery, Tokai University*

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We experienced one case with locally advanced esophageal cancer that he gained a good result by the multidisciplinary treatment including the operation followed by chemoradiation.
The case was a 74-year old man with the middle thoracic esophageal cancer accompanied by severe malignant stricture. He couldn't take any water, and his general condition was poor, because he lost 5 kg of his weight. By the clinical examinations, his cancer had no apparent invasion to adjacent organ. So, we planned the operation gone ahead the chemoradiation for him to take water and meals earlier, and to prevent pneumonia. The esophagectomy through right-thoracotomy was done, and the pathological findings were type 3, well differentiated squamous cell carcinoma, pT3 N0, pStageII. Two months later after the operation, he took the chemoradiotherapy. 50 gray radiation therapy was done with chemotherapy including Cisplatin (10 mg/a time/week) and Tegafur (200 mg/day). About one and half a year after the operation, he sends good daily life with no recurrence.
Recently, chemoradiotherapy is the first choice of the treatment for the locally advanced esophageal cancer. But in cases without apparent invasion to adjacent organ, it might be advisable that the operation goes ahead the chemoradiotherapy in the multidisciplinary treatment.

Key words: esophageal cancer, esophageal malignant stenosis, multidisciplinary treatment, chemoradiation

INTRODUCTION

Recentry, it is said that the prognosis of locally advanced esophageal cancer could be improved by neoadjuvant or definitive chemoradiotherapy. But cases with severe malignant stricture could not take enough meal during the treatment. And even after the treatment, some of them could not gain enough improvement of the stricture. In a patient with locally advanced esophageal cancer accompanied by severe malignant stricture and without apparent invasion to adjacent organ, multidisciplinary treatment consisting of surgical intervention before chemoradiation may be performed. The patient can take meal in the earlier time without disturbing the possibility of radical curability. So we will report a case with some discussion from the papers.

CASE REPORT

A 74-year old Japanese man was admitted to our hospital because of severe dysphagia. He had discomfort in the pharynx while eating in January 2004, and he noted difficulty in swallowing by the end of January. Thereafter, he had been disturbed by salivary regurgitation and a difficulty in water drinking. The patient has been receiving medication for hypertension, but had no contributory family histry. Over the last 2 months, his body weight was decreased by 5 kg, and the finding of emaciation was noted on admission as he was 163 cm tall and weighed 48 kg. No superficial lymph node was palpable.

In blood biochemistry on admission, the level of SCC increased to 2.6 ng/dl. There was no apparent abnormality in the general physical condition.

An Esophagogram demonstrated a type 3 esophageal cancer in the middle third thoracic esophagus. The major axis of the tumor was 4 cm. The axial deviation was also noted, that was suggestive of the depth of invasion as T4 (Fig. 1).

A computed tomography also demonstrated the left main bronchus compressed by the tumor, which suggested the possibility of tumor invasion. No lymph

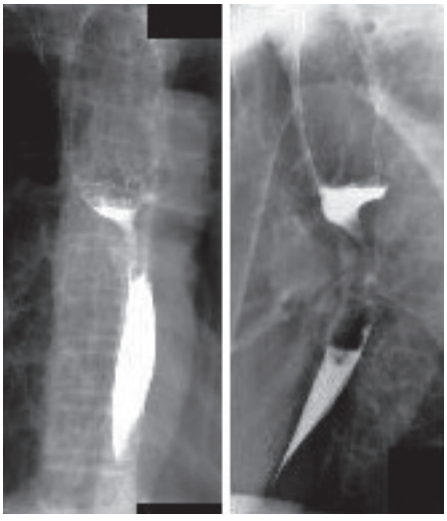

Fig. 1 Esophagogram

Tomoko HANASHI, Department of Surgery, Tokai University Tokyo Hospital, 1-2-5 Yoyogi, Shibuya-ku, Tokyo, 151-0053, Japan Tel: 03-3370-2321 FAX: 03-3379-1955 E-mail: hanashi-t@mtj.biglobe.ne.jp

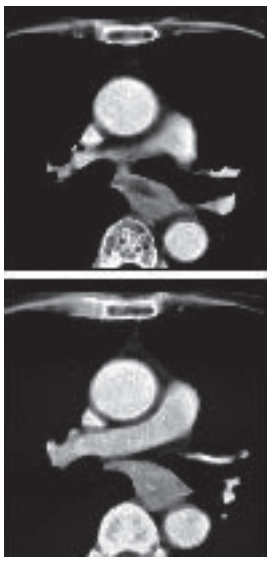

Fig. 2 CT

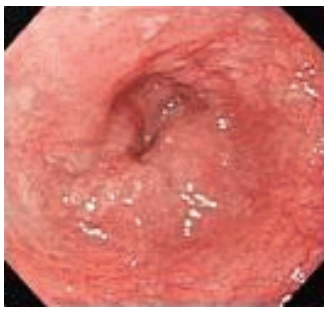

Fig. 3 Endoscopy

Fig. 4 Macroscopic finding

node and organ metastasis were demonstrated (Fig. 2).

Ultrasonography of the abdomen and the cervix found no organ metastasis and lymph node metastasis.

A conventional endoscopy revealed severe stenosis in the entire circumference of the esophagus at 30 cm from the incisor and it prevented further insertion of an endoscope (Fig. 3). For the presence of tumorous ulcers was not clearly confirmed, the diagnosis of advanced squamous cell carcinoma, type 5, T3 or deeper, was established based on the histological diagnosis on biopsy specimen from the stenotic region. A bronchoscopy revealed a slightly compression from the outside in mebranous portion of the left main bronchus, but the appearances of their mucosa were normal. Macroscopically invasion of the tumor was not demonstrated. Clinical diagnosis was an advanced esophageal carcinoma developing in the middle third thoracic esophagus {major axis 4 cm; type 3; clinically T3 or T4, N0, clinical Stage II or III}.

The Course of treatment: The patient had risks of exacerbating the general physical condition due to emaciation and pneumonia due to severe esophageal stenosis. And clinically, apparently macroscopic invasion to left main bronchus was not demonstrated. Therefore, multidisciplinary treatment consisting of surgical intervention before chemoradiation was scheduled to perform.

On March 8, 2005, radical esophagectomy through right-thoracotomy with 2-field lymph node dissection was carried out, and esophagogastrostomy were performed through ante-sternal route. During local dissection of the tumor, invasion to left pleura in small area was doubted, so we had to remove it with tumor. At the same time, the tumor had adhesion to left main bronchus. We could dissect them, but the dissected part of left main bronchus appeared white color, so tumor invasion could not be denied.

Tumor size was 3.5 × 4.5cm. Clinical diagnosis was type 3, clinically T4 (left main bronchus), N0, clinical Stage III.

Pathological diagnosis was a well-differentiated squamous cell carcinoma of type 3, pT3, N0, ly1 v2 INF α , pathological Stage II (Fig. 4).

The postoperative course was not eventful, and the oral food intake was favorably recovered, resulting in discharge from the hospital on 40 days after the operation.

About 2 months later after operation, adjuvant Chemoradiotherapy (CRT) was initiated. A total of 50 Gray was irradiated within the rage of long-T. Considering the general physical condition, chemotherapy consisting of daily administration of Tegafur (200 mg/day) and intravenous injection of Cisplatin (10 mg/once a week) was concomitantly performed.

About one and half year later, currently, there is neither elevation of tumor marker levels, nor tumor recurrence, and the patient is following favorable daily life with taking normal foods.

DISCUSSION

Although this case was diagnosed as pathological T3, we thought that residual tumor existed in a local macroscopically, and it might be controlled by additional CRT.

Recently, due to recent increases in therapeutic values of CRT, CRT became the first-choice of treatment modality for locally advanced esophageal carcinoma suspected of being T4 [1-3]. Ohtsu et.al reported that 9 patients (25%) achieved a complete response, and 5 patients (14%) had survived for more than 5 years of 36 patients with T4 [4]. On the other hand, to improve the outcome, neoajuvant CRT had been carried out. However, the therapeutic values were controversial, because of the report that in responder cases of CRT there was no significant difference in the prognosis between patients who underwent esophagectomy and those who did not [5]. In any case, the long-term survivor was the patient who obtained a complete reaction by CRT, or could underwent a curative treatment by CRT following operation.

During CRT, patients with severe esophageal stenosis could not take meal enough. And CRT alone may

not be able to relieve stenosis even when complete reaction (CR) is obtained. Mizutani *et al.* performed CRT or radiotherapy in patients with dysphagia to evaluate the severity and prognosis of dysphagia, and the rate of improvement of stenosis. In their study, they defined dysphagia scores as follows: score 1 represents a state that allows the ingestion of solid foods by effort, score 2 represents a state that allows the ingestion of soft foods alone, score 3 represents a state that allows the ingestion of liquid foods alone, and score 4 represents a state that allows the ingestion of no foods. They also noted that one-year survival rates in patients with dysphagia scores 2, 3 and 4 were 58.9%, 21.4%, and 33.3%, respectively. Thus, the prognosis was poorer in patients with more severe dysphagia. In addition, the rate of improvement of dysphagia after treatment was only 25% in 12 patients with score 4 dysphagia [6].

Two treatment modalities for esophageal stricture after CRT were considered. One is the operation, and the other is the dilation by a self-expandable metallic stent (SEMS). However, increased incidence of intractable complications was reported after radical surgery following definitive CRT. Among 6 surgically resected cases, Gotoda *et al.* reported the development of complications in 4 of them and 2 cases of death in association with the treatment [7]. Also, it is said that the SEMS insertion in the stricture after CRT has to abstain because of the severe complications, e.g. bleeding and rupture of the esophagus [8]. Therefore, the patients who could not be improved the stenosis have to live with a supportive nutrition for a life.

From the above, in cases which have no apparently macroscopic invasion to adjacent organ with severe stenosis, and have the possibility of curativity, a therapeutic strategy used in this study that consisted of surgery before the administration of CRT might be a useful procedure of multidisciplinary treatment, for it allows the maintenance of QOL without reducing the possibility of radical curability. Especially, in patients who had risks of exacerbating the general physical condition due to emaciation and pneumonia due to severe esophageal stenosis, the strategy might be helpful to take meal in earler time of the treatment.

CONCLUSION

We experienced a case of locally advanced esophageal cancer with severe malignant stricture. In cases like this, if they have no apparently macroscopic invasion to adjacent organ, the surgical operation followed by CRT may result in successful multidisciplinary treatment without disturbing the possibility of radical curability.

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