

Esophageal Carcinomas with Synchronous and Metachronous Primary Malignant Carcinomas in Other Organs

Masao TOMITA, Terumitsu SAWAI, Akihiro NAKAMURA, Masaaki JIBIKI, Fumitaka AKAMA, Tetsuya UCHIKAWA, Nobufumi SASAKI, Hiroshi SHINGU, Kazuhiko HATANO, Yoshihiro MATSUMOTO, Masashi MURAOKA, Tsutomu TAGAWA, Ken HAYASHIDA, Shinya YAMAGUCHI, Seiichiro IDE, Atsushi NANASHIMA, Yoshitaka TANIGUCHI, Naoki FUJISE, Nobuko KUROSAKI

The First Department of Surgery, Nagasaki University School of Medicine

Seventeen patients with 10 synchronous and 7 metachronous double cancers with carcinomas of the esophagus were surgically treated in the First Department of Surgery, Nagasaki University School of Medicine. All patients were men with an average of age 68.5. The incidence of double cancers with carcinoma of the esophagus accounted for 12.7% in a total of 134 of this series. The three triple cancers were included. Of the three, one was synchronous triple cancers in the esophagus, the stomach and the colon. The outcome was not necessarily satisfactory. Two had recurrence 3 and 5 months after surgery, but one is still alive for 33 months, free from carcinoma.

Introduction

It is well known that the incidence of double cancer is relatively high in the head and the neck. And also it is believed double cancers are more likely to occur in the esophagus^(1,2). According to improvement of the outcome for carcinomas of the esophagus, physicians have become to encounter more often the chances of the treatment of double cancer patients associated with esophageal cancers.

Great concern is focused on the treatment of carcinomas of the esophagus implicated in high incidence of the presence of double cancers.

The purpose of this study is to clarify clinical characteristics of triple cancers related to esophageal cancers on the

basis of a result of our clinical experience.

Patients and Results

Ten synchronous and four metachronous double cancer patients with carcinoma of the esophagus were experienced our department. Of 10 synchronous one, associated organs were the stomach in 7 and the larynx, the pancreas and stomach with the colon in one, respectively. On the other hand, of metachronous double cancer patients, they were the stomach in 4, the lung, the kidney with larynx and the larynx with the prostata in one, respectively as shown in Table 1.

Among them, three triple cancer patients were treated in two synchronous and one metachronous primary malignant neoplasmas. The first case, 70-year-old man, had a resection for renal carcinoma, followed by an interval of 24 months, underwent neck dissection and irradiation therapy for laryngeal carcinoma, and 32 months later, esophagectomy with radiation therapy for a₃ esophageal carcinoma. He had expired with recurrence 3 months after the last operation. The second case, male age 73, had received laryngectomy with irradiation and chemotherapy for carcinoma of the larynx, elapsing 31 months, endocrine-chemotherapy for prostatic cancer, and 18 months later, esophagectomy for a₂ esophageal cancer. He is still living 5 months after surgery with tumor-bearing. The last case, man aged 65, underwent simultaneous combined resection of the esophagus and the stomach as shown in Table 2 for early esophageal cancer (a₀, 0-IIc) and early gastric cancer (I type) and also polypectomy for carcinoma in adenoma of the colon. The patient is now in good health, 33 months after surgery. All of the triple cancers were in early stage. The reasons for fair outcome were that a complete resection was achieved with minimal surgical invasion and all were in early stage of carcinoma.

Table 1 Esophageal cancers with synchronous and metachronous primary malignant tumors

Synchronous	10
gastric cancer	7
carcinoma of the larynx	1
pancreas cancer	1
gastric and colon cancer	1
Metachronous	7
gastric cancer	4
lung cancer	1
renal and laryngeal cancer	1
laryngeal and prostata cancer	1

Table 2 Triple cancers

case 1								
70 yrs, M								
renal cancer resection	<u>24M</u>		laryngeal cancer neck dissection irradiation	<u>32M</u>		esophageal cancer resection irradiation	<u>3 M</u>	death
case 2								
73 yrs, M								
laryngeal cancer resection irradiation chemotherapy	<u>31M</u>		prostata cancer endochemotherapy	<u>18M</u>		esophageal cancer resection	<u>5 M</u>	alive
case 3								
65 yrs, M							<u>33M</u>	
esophageal cancer resection			gastric cancer	colon cancer				alive

Discussion

The definition of double cancers is 1) malignant diseases in each tumor 2) arising from different sites 3) denying that each is not metastatic. It is generally accepted that the time interval discriminating synchronous from metachronous one is within 6 months^{3,4)}.

The incidence of double cancers in carcinomas of the esophagus has been reported to be in the range of 2.9 to 6.5 % in spite of 3.6 % in the nationwide survey⁵⁾ in 1977. It is more frequent in Japan^{2,5)} that double cancers of the esophagus accompany gastric cancer, despite a low incidence of 1.4% in Europe⁶⁾. It is common that gastric cancer associated with double cancer of esophageal cancer is frequently detected. It is attributable to carcinogenesis related to daily diet and reflects the digestive tract fragile to continuous stimulation of carcinogens. Physicians should be aware of concomitant occurrence of gastric cancer with esophageal cancer in postoperative follow-up study.

On the other hand, Tepperman⁷⁾ reported the second cancer occurred at the incidence of 3.6 % every year after the treatment of carcinomas in the floor of the oral cavity and most were squamous cell carcinoma of the upper air way and upper digestive tract in origin. In the peri- and postoperative follow-up course of carcinomas of the esophagus, much attention should be paid to the presence and occurrence of synchronous and metachronous primary malignant tumors in the stomach and the oral cavity. In particular, a high incidence of gastric cancer is troublesome with respect to the use of the stomach susceptible to concomitant or subsequent carcinomas as an organ of reconstruction following esophagectomy.

The prognosis of double cancers associated with esophageal cancers correlates with advancing stages of esophageal cancers⁵⁾. Application of endoscopic surgery is also recommended for synchronous double cancers which is in early stage of carcinoma. In contrast, it is most common that subsequent carcinoma to preceding esophageal cancers is gastric cancer that is relatively advanced. In fact, undue delay in detection of metachronous cancer is not infrequently experienced so that no effective therapy is prescribed. Furthermore, the elapsing time following surgery for esophageal cancers develops a high incidence of metachronous cancers. It is mandatory for meticulous follow-up to improve surgical outcome for metachronous double cancers.

References

- 1) Shibuya H, Takagi M, Horiuchi J, et al: Carcinomas of the esophagus with synchronous or metachronous primary carcinoma in other organs. *Acta Radiol (Oncol)* 21: 39-67, 1982.
- 2) Takeda N, Kuwata K, Seiko Y, et al: Double cancers with the esophagus and other organs *J Jpn Soc Clin Surg* 21: 381-385, 1986.
- 3) Moertel CG: Multiple primary malignant neoplasms: Historical perspectives. *Cancer* 40: 1786-1792, 1977.
- 4) Gluckman JT, Crissman JD: Survival rates in 548 patients with multiple neoplasms of the upper aerodigestive tract *Laryngoscope* 93: 71-74, 1983.
- 5) Abo H, Miura H, Kudou. T et al: Esophageal cancers with synchronous and metachronous primary malignant neoplasms in other organs. *Jap J Gastroenterol Surg.* 13: 377-381, 1980.
- 6) Souquet JC, Berger F, Bonvoisin S et al: Esophageal squamous cell carcinoma associated with gastric adenocarcinoma. *Cancer* 63: 786-790, 1989.
- 7) Tepperman BS, Fitzpatrick PJ: Second respiratory and upper digestive tract cancers after oral cancer. *Lancet* 2: 547-549, 1981.