

Synchronous oesophagectomy and hepatic resection for metastatic oesophageal cancer: report of a case

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Abstract

Background: Oesophageal cancer with liver metastasis is rare and when diagnosed is usually advanced and surgical management is contraindicated.

Method-Results: We report the case of a patient who presented with oesophageal cancer and liver metastasis. The patient received chemotherapy combined with RFA to liver tumour. Subsequently she was subjected to oesophagectomy and liver resection of segment 5 extended into segment 8. Patient underwent adjuvant chemotherapy post-operatively and remains disease-free until now, 29 months after operation.

Conclusion: Oesophageal cancer with concomitant liver metastasis is a rare and lethal disease. Multimodal management including surgery may offer prolonged survival in highly selected patients. Hippokratia 2010; 14 (4): 291-293

Keywords: oesophageal cancer, liver metastasis, chemotherapy

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Synchronous presentation of oesophageal cancer with hepatic metastasis is rare, and often the disease is advanced to an extent that surgical curative treatment is not an option. On the other hand hepatic resection for colorectal metastatic disease is well established, and in selected cases, the hepatic and bowel resection are simultaneously performed^{1,2}.

To the best of our knowledge there have been only a few reports globally on simultaneous resection of oesophageal and liver cancer, all of them from Japanese centres^{3,4}. We report a successful case of synchronous oesophagectomy and liver resection for metastatic oesophageal cancer.

Case report

A 51 year-old lady presented in July 2006 with occasional dysphagia which had not been resolved with administration of omeprazole. A barium swallow indicated a stricture at the oesophago-gastric junction, which was later shown also on endoscopy. Histology showed a poorly differentiated adenocarcinoma. Abdominal computed tomography (CT) showed a lesion extending into the surrounding fat, lymphadenopathy in the region of the celiac axis and a probable metastasis in segment eight of liver. The liver metastasis was confirmed with MRI (Figure 1), which also demonstrated three liver cysts. EUS showed large pathological looking lymph nodes in the aorto-pulmonary window and PET scan confirmed the

known tumour extending from the gastro-oesophageal junction to the lesser curve of the stomach, with malignant perigastric lymph nodes and nodes at the level of the celiac axis. The liver metastasis was also identified along with mediastinal lymphadenopathy above the diaphragm. The patient commenced on EOX (epirubicin, oxaliplatin and capecitabine) neoadjuvant chemotherapy on July 2006. There was a partial response of the primary tumour and the liver metastasis after three cycles of chemotherapy (Figure 2). RFA was applied to the liver metastasis, and another CT scan on January 2007

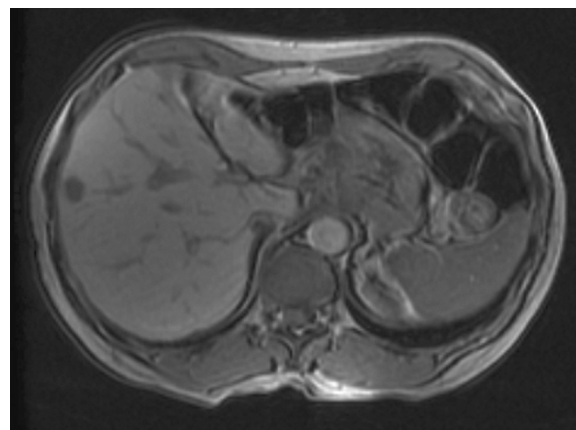


Figure 1: MR image demonstrating the lesion on segment 8 with characteristics of a metastasis and measuring 1.5 cm.

indicated response to chemotherapy of the oesophageal lesion and the ablated metastasis in the periphery of the liver and no active hepatic disease. A diagnostic laparoscopy carried out on January 2007 demonstrated no contraindication to surgery.

The patient was operated on January 2007, undergoing oesophagectomy, liver resection of segment 5 extended into segment 8, cholecystectomy, retroperitoneal and mediastinal node dissection. The patient tolerated the operation well and no blood transfusion was required. The resected specimen was of Siewert type 2 gastro-oesophageal mucinous carcinoma with complete chemotherapeutic regression. The excision was complete and 3 out of 22 lymph nodes contained regressed tumour. The hepatic lesion, which was about 3cm and situated on the borders of segments 5, 8 and 4 represented an area of hepatic parenchymal infarction with evidence of thermal injury, which was consistent with previous RFA. Microscopically, it probably represented infarcted mucinous carcinoma. They were classified as pT2b N1M1.

The patient had an uneventful postoperative course. She was started adjuvant chemotherapy with Folfiri (irinotecan/5-fluorouracil/folinic acid) on 2nd March 2007, and completed nine cycles in June 2007. Repeat CT scans and follow-up have shown no evidence of recurrence until present date (Figure 3).

Discussion

Patients with distant metastasis of oesophageal cancer include liver metastasis and have a poor prognosis with a 5-year survival rate of 3-5%^{4,5}. Hepatic resection is a well established therapeutic strategy for colorectal metastatic disease with an overall 5-year survival rate of 35-58%⁶. However synchronous oesophageal cancer and hepatic metastasis is quite rare and simultaneous surgical resection of both tumours is not considered as the gold standard.

Hanazaki et al³ and Yamamoto et al⁴, both reported each of synchronous liver resection and oesophagectomy for metastatic oesophageal cancer, with a successful

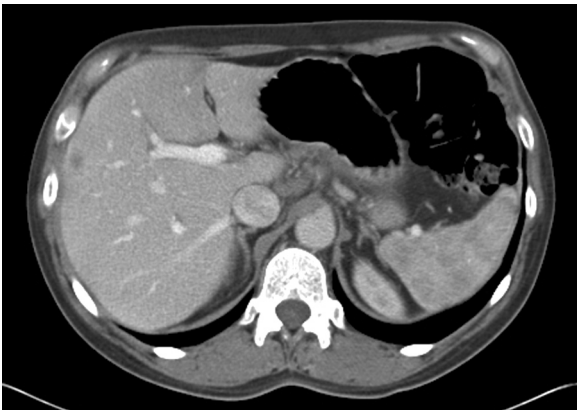


Figure 2: CT image 45 days approximately after initiation of chemotherapy, demonstrating almost a 50% reduction in size of liver metastasis, measuring 0.8 cm.



Figure 3: CT image almost 2 years after surgery showing no evidence of new or recurrent tumour.

post-operative outcome, however both patients developed multiple liver recurrence 6 and 7 months respectively following hepatectomy. This would raise question as to the therapeutic effect of liver resection.

Our patient received EOX chemotherapy prior to surgery and RFA ablation to the liver metastasis with improvement of symptoms and no progression of disease. Although unconventional, the synchronous trans-thoracic oesophagectomy combined with hepatic resection were successful.

Yamamoto et al⁴ report that preoperative chemotherapy to the patient with metastatic oesophageal squamous cell carcinoma included 5-FU and cisplatin, which was followed by radiation directed to the main tumour in the oesophagus. The same regime was given as arterial chemotherapy post-operatively. Hanazaki et al³, had previously reported the same regime of hepatic arterial infusion chemotherapy as effective for liver metastasis from oesophageal cancer.

Cunningham D et al⁷ conducted a study comparing capecitabine and oxaliplatin as alternatives to infused fluorouracil and cisplatin, respectively, for untreated advanced oesophagogastric cancer, resulting in the conclusion that both regimes are equally effective. Folfiri chemotherapy was administered post-operatively to our patient who remains disease free 29 months post operatively.

A study from France demonstrates promising results of Folfiri combined with cetuximab, in initially unresectable metastasis which became resectable in one-quarter of patients, resulting in a high number of complete resections⁸. Additionally Pinto et al reported that chemotherapy of FOLFIRI and cetuximab on advanced gastric and gastro-oesophageal cancer appeared to be effective⁹.

Yamamoto et al⁴ and Hanazaki et al³ reported a survival of 15 months and 18 months respectively, indicating an effective surgical and chemotherapeutic treatment comprised of oesophagectomy and hepatectomy along with arterial chemotherapy, for metastatic oesophageal cancer with liver metastasis. However both reported

liver recurrence after 6 and 7 months respectively. Our patient received EOX chemotherapy pre operatively and Folfiri postoperatively, with surgical treatment of oesophagectomy and liver resection of segment 5 extending into segment 8, and no recurrence for 29 months post operatively, indicating effective surgical and chemotherapeutic treatment. Since there is no possibility of randomized control trials or large cohort series there is no solid evidence on the outcome of such patients. Our patient had an excellent outcome so far probably due to the single hepatic metastasis and the response to chemotherapy but we should keep in mind that it is only a report of a case and it is difficult to generalize it for other similar cases.

References:

1. Kopetz S, Chang GJ, Overman MJ, Eng C, Sargent DJ, Larson DW, et al. Improved Survival in Metastatic Colorectal Cancer Is Associated With Adoption of Hepatic Resection and Improved Chemotherapy. *J Clin Oncol.* 2009; 27: 3677-3683.
2. Abdalla EK, Vauthey JN, Ellis LM, Ellis V, Pollock R, Broglio KR, et al. Recurrence and outcomes following hepatic resection, radiofrequency ablation, and combined resection/ablation for colorectal liver metastasis. *Ann Surg.* 2004; 239: 818-825.
3. Hanazaki K, Kuroda T, Wakabayashi M, Sodeyama H, Yokoyama S, Kusama J. Hepatic metastasis from esophageal cancer treated by surgical resection and hepatic arterial infusion chemotherapy. *Hepatogastroenterology.* 1998; 45: 201-205.
4. Yamamoto T, Tachibana M, Kinugasa S, Yoshimura H, Nagasue N. Esophagectomy and hepatic arterial chemotherapy following hepatic resection for esophageal cancer with liver metastasis. *J Gastroenterol.* 2001; 36: 560-563.
5. Nakajima Y, Nagai K, Kawano T, Inoue H, Nara S, Kumagai Y, et al. Therapeutic strategy for postoperative liver metastasis from esophageal squamous cell carcinoma; clinical efficacy of and problem with hepatic arterial infusion chemotherapy. *Hepatogastroenterology.* 2001; 48: 1652-1655.
6. Pawlik TM, Gleisner AL, Bauer TW, Adams RB, Reddy SK, Clary BM, et al. Liver-directed surgery for metastatic squamous cell carcinoma to the liver: results of a multi-center analysis. *Ann Surg Oncol.* 2007; 14: 2807-2816.
7. Cunningham D, Starling N, Rao S, Iveson T, Nicolson M, Coxon F, et al. Capecitabine and oxaliplatin for advanced esophagogastric cancer. Upper Gastrointestinal Clinical Studies Group of the National Cancer Research Institute of the United Kingdom. *N Engl J Med.* 2008; 358: 36-46.
8. Raoul JL, Van Laethem JL, Peeters M, Brezault C, Hussein F, Cals L, et al. Cetuximab in combination with irinotecan/5-fluorouracil/folinic acid (FOLFIRI) in the initial treatment of metastatic colorectal cancer: a multicentre two-part phase I/II study. *BMC Cancer.* 2009; 9:112.
9. Pinto C, Di Fabio F, Siena S, Cascinu S, Rojas Llimpe FL, et al. Phase II study of cetuximab in combination with FOLFIRI in patients with untreated advanced gastric or gastroesophageal junction adenocarcinoma (FOLCETUX study). *Ann Oncol.* 2007; 18: 510-517.