Unusual Case

Synchronous carcinoma of oesophageal and lung treated with laparoscopic-thoracoscopic cooperative surgery: A case report

Xin Li¹, Jiali Fu¹, Hua Zhang¹, Zhengu Zhai¹, Wei Wang¹

¹Department of Thoracic Surgery, Shandong Provincial Chest Hospital of Shandong University, Jinan, Shandong, China, ²Department of Cardiology, Intensive Care Unit, Peking University People’s Hospital, Beijing, China

Abstract

Traditional open surgery has been used and was regarded as suitable alternatives to synchronous carcinoma of oesophageal and lung. However, few previous reports described laparoscopic-thoracoscopic cooperative surgery for it. In this present case, we report synchronous carcinoma of oesophageal and lung with laparoscopic-thoracoscopic cooperative surgery, showing new successfully approach treated with minimally invasive laparoscopic-thoracoscopic surgery.

Keywords: Oesophageal cancer, lung cancer, minimally invasive laparoscopic-thoracoscopic surgery, synchronous carcinoma

INTRODUCTION

Synchronous carcinoma of oesophageal and lung accounts for 3.2%–7.5% of all malignant tumours in foreign reports, which is reported in China 0.3%–3.5%. Improvements in diagnostic approaches, detection of synchronous carcinoma of oesophageal and lung occur in a patient became more and more. Surgery treatment usually can obtain a good prognosis. However, most of them undergo the open surgery; we report the case for provide a new way of treatment by laparoscopic-thoracoscopic cooperative surgery. There were a lot of advantages compared with the traditional maneuvers.

CASE REPORT

A 58-year-old man was admitted to our hospital because of progressive dysphagia for >1 month. By oesophagogastrosopy, a ring uplift, 36–38 cm from the upper incisors was identified. Confirmed as high-grade oesophageal intraepithelial neoplasia by pathology. Chest and upper abdominal computed tomography showed wall thickening in the lower oesophagus, range about 56 mm, showed obvious enhancement. The density shadow of strip soft tissue in the right middle lobe of the lung could be seen enhancement; the bronchi of the lateral segment of the right middle lobe were partially cut off. By fibrobronchoscopy, in the lateral part of the right lung middle lobe, the bronchial opening in the subsegment of the lung shows the vegetative new organism, and the lumen is basically closed [Figure 1]. Confirmed as adenocarcinoma by pathology. To exclude N2 disease by positron emission tomography preoperative preparation, no distant metastases were detected in this patient before treatment.
To achieve a good prognosis, surgical treatment of the patient was indicated. An Ivor‑Lewis and lobectomy were performed through thoracoscopic surgical approach. After successful anaesthesia with two‑cavity endotracheal intubation, using a standard procedure with the patient in the supine position, as previously reported.[1] After that, we performed thoracoscopic lobectomy and thoracic oesophageal mobilisation in the right lateral position. Based on our prior experience, a 1 cm incision at the 7th intercostal space, along with the middle axillary line, was selected as the observation port. The principal operating port with a 5 cm access incision. Dissection of the middle lung lobe was completed first. The posterior mediastinum was exposed by adjusted operating tab. The thoracic oesophagus, along with the peri‑oesophageal tissue and mediastinal lymphonodus, is circumferentially mobilised from the diaphragm to the level of arch of the azygos vein. Mediastinal lymphadenectomy is performed in the patient. After the specimen is removed from the field, an anastomosis is performed by mechanical stapled [Figure 2].

The operation lasted about 350 min. The length of the postoperative hospital stay was 11d, the final pathological examination revealed a moderately differentiated squamous cell carcinoma invading the oesophageal adventitia (pT3) with no lymphatic metastasis (0/24, N0). The pulmonary nodule in the middle lobe was identified as an adenocarcinoma (pT1bN2M0). Besides, lung lesion was confirmed not a metastasis by haematoxylin and eosin staining. The patient was re‑examined after half a year without any obvious recurrence or metastasis.

DISCUSSION

Since synchronous carcinoma was first reported in 1889, more and more cases were reported. The traditional open resection was the principal method of curative treatment for synchronous multiple primary cancers involving oesophageal cancers as previous studies.[2]

To the best of our knowledge, few reports of a patient with synchronous oesophageal and lung cancers treated with minimally invasive resection through thoracoscopy and laparoscopy simultaneously. Minimally invasive resection compared traditional open resection had the advantages that less wound, quicker recovery and lower risk of post‑operative complications, with reduced estimate intraoperative blood loss, despite comparable short‑ and long‑term survival.[3] Furthermore, lymph nodes along the recurrent laryngeal nerves could be dissected and sampled using thoracoscopy,[4] In our patient, oesophageal lesions are located in the lower segment, Ivor‑Lewis was used. While the McKeown approach could be used in the patient with oesophageal lesions in the middle and upper segments, for this patient, the lung lesion located on the right; we take it through right‑sided thoracoscopy as normal minimally invasive oesophagectomy (MIE). However, when lung lesions occurred in left, application of MIE through left‑sided thoracoscopy could be used.[5] In our procedure, we first resected the middle lobe and mobilised the oesophagus through thoracoscopy. Then, a lymphadenectomy could also have been readily performed.

Our results showed that the approach is potentially the most appropriate way for some patients, who were diagnosed synchronous carcinoma of oesophageal and lung cancers if there is no contraindication.

Declaration of patient consent
The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest
There are no conflicts of interest.
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