TWO SYNCHRONOUS, HISTOLOGICALLY DISTINCT LUNG CANCERS IN ONE LOBE – A CASE REPORT

GRZEGORZ KACPRZAK, JERZY KOŁODZIEJ, JACEK KARAŚ

Wrocław Thoracic Surgery Centre: Department of Thoracic Surgery of Lower Silesian Centre.
Department of Thoracic Surgery Medical University in Wrocław
Kierownik: prof. dr hab. J. Kołodziej

A case of patient who was admitted to the unit because of lung tumor is presented in his report. After receiving the cytological diagnosis of the carcinoma non-microcellulare from biopsy taken during bronchoscopy patient was qualified for operative procedure. Upper left lobectomy was performed. During the histological investigation of postoperative specimen the diagnosis of adenocarcinoma GI was established. Furthermore in subsegmental bronchus small tumor which didn’t infiltrate the whole bronchial wall was noticed. The diagnosis of carcinoma planoeptihelial keratodes GII was established. For each cancer I stage of disease was established (pT1N0M0). Postoperative period was uncomplicated. In control X-ray after 3, 6, 9 months cancer recurrence wasn’t diagnosed. General condition of patient was very good (WHO 0). Patient return to the complete physical activity.

Key words: lung cancer, synchronous tumors, operative procedure

Neoplasm tumors diagnosed at the same time are called synchronous tumors. If the second tumor appears later, tumors are called metachronous. Synchronous multiple primary lung cancers occur in 1.6-3% of all lung cancers. Synchronous tumors occur much less frequently than metachronous ones, where Synchronous tumors constitute 11-30% of multiple tumors (1, 2). We describe the case of a patient with two synchronous malignant tumors, which were located in the upper left lobe.

CASE REPORT

A 66 year-old patient (case record number 1340/2007) was admitted to the hospital because of non-specific lesions in chest X-rays. On the day of admission, the patient did not complain of any respiratory ailment. In the chest X-ray, a non-uniform opaqueness in the subclavicular field was diagnosed. In the CT scans, an irregular and fascicular parenchymal density with micronodular lesions and a small area of decreased aerial lung suggesting specific lesions in the apex of the left lung were both described. There were no anatomical changes in the bronchofiberoscopy investigation. A brush biopsy taken from the subsegmental bronchi of upper left lobe during the bronchoscopy established the diagnosis of non-small cell lung cancer. Decreases of the values for haemoglobin and erythrocytes to 13.4 g/dl and 4.37 M/µl, respectively, were found. There were no deviations in spirometry and exercise tests. The patient was qualified to the surgical operative procedure of a left thoracotomy, which was performed under general anaesthesia. The pleural cavity was opened using an antero-lateral incision through the Vth intercostal spa-
During the operation, a 2.5 cm tumor was found in the upper lobe. In addition, multiple adhesions in the pleural cupula and hard, calcified pulmonary hilar and parabronchial lymph nodes were noticed. The lesion was resected and a histological investigation was performed. Non-small cell lung cancer, probably adenocarcinoma, was diagnosed. The upper lobectomy was performed. Because of rocky lymph nodes and adhesions, thickened subsegmental bronchies of the upper lobe upper bronchi were incised before the ligation of the pulmonary artery at A1, A2 and A3. The pleural cavity and chest were closed typically, and the postoperative period was uneventful.

During the postoperative examination of histological specimens, the diagnosis of adenocarcinoma GI was established. Furthermore, a small tumor which did not infiltrate the whole bronchial wall and adjacent tissue was noticed in the subsegmental bronchi. The diagnosis of carcinoma planoeptiheliale keratodes GII was established. For each cancer, stage I of disease was established (pT1N0M0). In the X-ray controls after 3, 6 and 9 months, cancer recurrence was not diagnosed and the general condition of the patient was very good (WHO 0). The patient returned to complete physical activity.

DISCUSSION

The diagnosis of synchronous lung cancer is based on the identification in chest X-rays of two tumors localized in different parts of the lungs. The second tumor is sometimes only noticed during the bronchoscopy, without being identifiable in radiological investigation. The diagnosis of synchronous tumors during surgery is very rare. A difference of tumors is easily accepted when they have different histological structures. In the case of similar histological structures, the tumors are accepted as different malignancies when they are localized in different segments, lobes or lungs, and the local stage of disease is assessed separately for each tumor. An operative procedure is performed for the I and II stages of disease. Squamous cell lung cancer is most commonly noted in the group of synchronous tumors (2/3 cases). In half of cases, both tumors have the same histological structure. Diagnosis of the malignancy of the second primary tumor or metastasis lesion has prognostic value, but has secondary significance in surgical practice.

In reference to the non-small cell lung cancer, a surgical approach is the treatment of choice in the case of localization of tumors in the same lobe. Prior to surgery, diagnosis of the mediastinal lymph nodes is necessary. Histological evaluation and classification of the local stages of disease is necessary when the tumors are localized in different lobes of the same lung or in different lungs. In the case of localization of synchronous tumors in the same lung but in the different lobes, pneumonectomy is performed. In the case of localization of tumors in different lungs, surgery is performed in two stages a few months apart, beginning with the side with the bigger degree of stage of disease. In one surgery, sternotomy is sometimes performed. This approach is especially favourable in the cases of stage I disease, when the surgery is limited to segmentectomy or marginal resection. We must be careful during the operation of tumors situated in the lower left lobe, when a lobectomy should be performed, because of technical difficulties. Some operations of synchronous tumors are performed using the VATS technique, especially in marginal resections. Decisive matter of bilateral operation has predictable respiratory efficiency after operation (1-11). Surgery is controversial in stage IIIA of disease, and requires neoadjuvant chemotherapy.

Results of treatment of patients with synchronous tumors are encouraging. Five-year survival depends mainly on the stage of disease of the individual tumors. Chang et al. described 5-year survival in 35.3% of cases. In patients without metastasis into the lymph nodes, 5-year survival occurs in 52.5%, and with metastasis into the lymph nodes in 15.5% of cases (3). Mun et al. described 3-year survival in 94.7% of cases, and 5-year survival in 75.8% (6). Nakata et al. described 3-year survival in synchronous cancer in 77.9% of cases (2). Ferguson et al. described a mean survival time of 27 months for stage I disease, and 16 months for stages II and III disease, for synchronous tumors (12). The patient operated in our Centre feels very well, and the recurrence of neoplasm disease has not been diagnosed.
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Received: 3.03.2008 r.
Adress correspondence: 53-439 Wrocław, ul. Grabiszynska 105