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Short communication

Metastases of lung cancer to such organs as the liver, bones or to the central nervous system appear to be a frequent complication of this disease. At the same time, metastases to the adrenal gland are found less frequently. Metastases of lung cancer to the spleen are a great rarity and they are described sporadically. Our report presents a unique case of left lung cancer with simultaneous metastases to the adrenal gland and to the spleen. All the presented lesions were diagnosed by ultrasound guided biopsy and confirmed by histopathological examination.
The patient received combined chemoradiotherapy. She was closely monitored over an 18-month observation period following treatment. No new metastases were reported.

Key words: lung cancer diagnosis, ultrasound guided fine-needle biopsy, metastasis to the adrenal gland, metastasis to the spleen.

Atypical dissemination of lung cancer to the adrenal gland and to the spleen

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Introduction

Metastases to organs such as the liver, bones or central nervous system appear to be a frequent complication of lung cancer, whereas metastases to the suprarenal glands are found less frequently [1]. Metastases of lung cancer to the spleen are a great rarity and they are described sporadically [2].

An adrenal gland tumor detected incidentally during imaging tests is described as an incidentaloma [3–7].

Splenic lesions are most often incidentally detected on imaging tests requested for other conditions. Primary spleen tumors are extremely rare [8]. Primary cysts acquiring enormous proportions and hemangiomas are classified as benign tumors [9, 10]. Metastatic lesions and inflammatory pseudotumors may also be seen, but only very rarely and usually as casuistry [11, 12]. Splenic lesions may be observed in the course of malignant lymphoma [13, 14]. Lesions characteristic of sclerosing angiomatoid nodular transformation (SANT) have also been described [15].

In most cases, the typical characteristics of splenic tumors are established on the basis of histopathological findings, which are obtained by the surgical removal of the tumor or by post-mortem examination [8, 10, 16–18].

Metastases to the adrenal gland are also rare. This work presents a case of simultaneous dissemination of lung cancer to the adrenal gland and to the spleen.

Material and methods

A female patient (age 74) was sent from a hospital in Zawiercie for further investigations and management of a left lung tumor lesion discovered during X-ray examination. Chest surgeons had rejected her from an invasive therapy. However, bronchoscopy was performed and revealed no evidence of pathological bronchial lesions. In this situation the patient was sent to our hospital for the purpose of making the histopathological diagnosis (History No. 16735/877/09).

Computed tomography (CT) scan showed chest infiltration situated peripherally in the left lung. After establishing the distance, place and depth of the puncture by using CT (Fig. 1), the parietal tumor was visualized by ultrasound and a biopsy was performed. We performed an ultrasound-guided (free hand technique) fine-needle biopsy of the lesion using a Hitachi EUS 515 sonographic machine (Fig. 2). The procedure was performed under local anesthesia; no complications were recorded.

The ultrasound examination of the abdomen revealed a pathological mass in the spleen and in the left adrenal gland (Fig. 3). We also performed in local anesthesia an ultrasound-guided (free hand technique) fine-needle biopsy of these lesions.

Results and discussion

In our case small cell lung cancer was detected in the percutaneous biopsy of the left lung. The same type of cancer as in the left lung was observed in both the adrenal gland and in the spleen (metastases of small cell cancer).

Imaging methods available to us showed no evidence of cancer metastases in other organs.

In the existing literature, we found only a few cases of lung cancer metastases to the spleen [2, 17, 18]. There are also some descriptions of metastases isolated in spleen from other organs [16]. Simultaneous metastases of lung cancer to the adrenal gland and the spleen have never been described.

The case presented above shows that the metastatic lesion can sometimes be an accessible place to collect tissue for diagnosing the cancer pattern of the primary cancer site. The case is exceptional because the spleen is an organ where lung cancer metastases are not frequently found, while metastases to the adrenal gland alone are common. More often, metastases are observed in the liver. The case is also unique because the adrenal gland and the spleen are organs where finding concurrent metastases of lung cancer is very rare.

The patient received combined chemoradiotherapy. She was closely monitored over an 18-month observation period following treatment. No new metastases were reported.

The authors declare no conflict of interest.

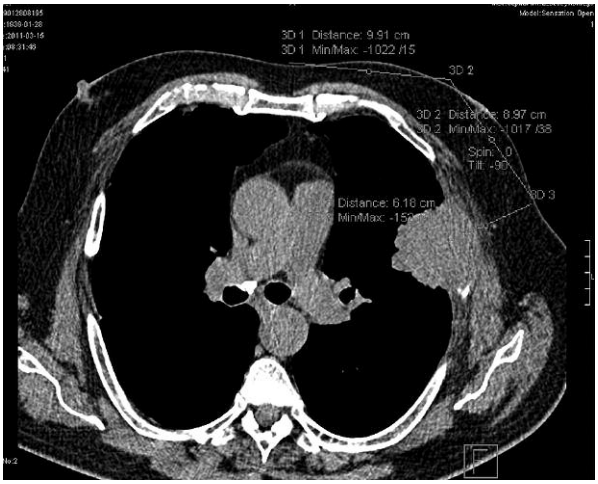

Fig. 1. Computed tomography imaging scan – establishing the distance, place and depth of the puncture

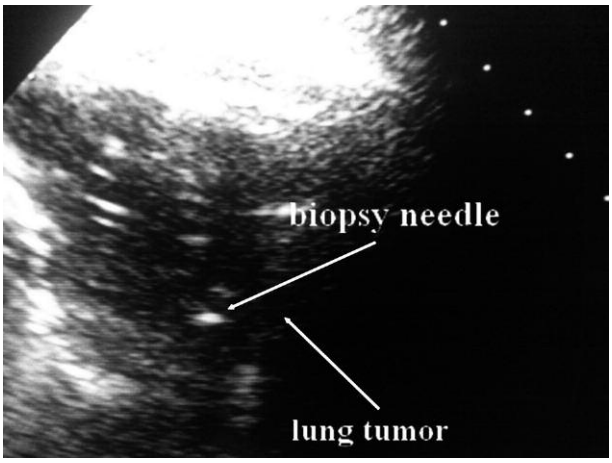

Fig. 2. Ultrasound imaging scan – wall located left lung tumor – biopsy needle

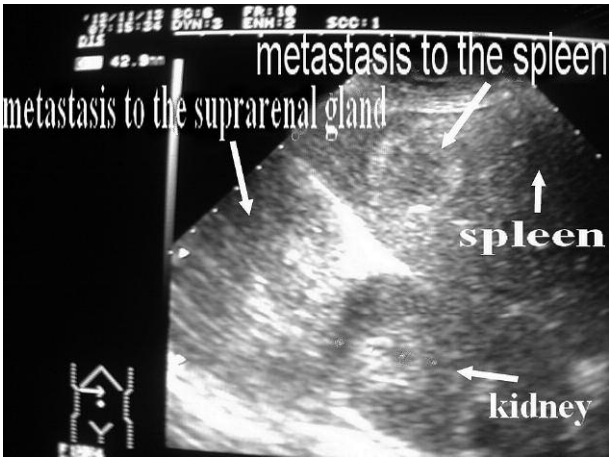

Fig. 3. Ultrasound imaging scan – small cell cancer metastasis to left adrenal gland and spleen

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