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## Caso Clínico *Clinical Case*

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### Massas pulmonares bilaterais. Mesma etiologia?

#### *Bilateral lung masses: The same aetiology?*

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#### Resumo

Os autores descrevem o caso de uma mulher de 50 anos, fumadora. Assintomática até Setembro de 2003, altura em que refere o aparecimento de tosse seca, cansaço e perda de peso. Na radiografia do tórax eram evidentes duas massas, uma no lobo superior direito e outra no lobo lingular. A doente foi submetida a biópsia aspirativa transtorácica e a citologia obtida foi compatível com carcinoma de pulmão do tipo pequenas células. No estadiamento da doença foram identificadas lesões hepáticas secundárias, motivo porque a doença foi considerada como disseminada, dada a existência de lesões hepáticas e pulmonares contra-laterais. Foi, nesta fase, iniciada quimioterapia com *carboplatinum* e etoposídeo. Seis meses mais tarde, a lesão direita inha diminuído, mas a lesão esquerda apresentava aumento das suas dimensões. A biópsia desta lesão mostrou uma citologia compatível com adenocarcinoma do

#### Abstract

The authors describe the case of a 50 year old woman, smoker, healthy until September 2003 when she presented persistent dry cough, fatigue and weight loss. Chest x-ray showed two lung masses, one in the superior right lobe and the other in the lingula lobe of the left lung.

The patient underwent TFNA (transthoracic fine needle aspiration) and the cytological result was compatible with small cell lung cancer. Staging procedures identified hepatic lesions, probably secondary. Presence of hepatic metastasis and contralateral lung lesions defined the stage of the disease as disseminate. Chemotherapy with carboplatin and etoposide was started. Six months later the right lesion had decreased but the left lesion had increased. TFNA of this lesion revealed adenocarci-

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pulmão, motivo porque inicia novo ciclo de quimioterapia com vinorelbina e gencitabina. Aos quatro ciclos e por não se evidenciar nenhuma resposta ao tratamento, foi realizada radioterapia da lesão esquerda. Durante este período (28 meses) mantém-se assintomática, mantendo a sua actividade diária habitual.

De acordo com o momento do diagnóstico as neoplasias do pulmão podem ser consideradas síncronas ou metácronas. Estas últimas são mais frequentes, representando cerca de 50-70% dos casos, sendo o padrão histológico mais frequente o adenocarcinoma.

No caso apresentado, a situação parecia ser uma doença disseminada, o que afastou a hipótese de tumores síncronos. Apesar de a doença se apresentar num estágio avançado aquando do diagnóstico e do mau prognóstico associado, a evolução dos dois tipos de tumor não pareceu comprometer a actividade diária da doente.

A new treatment was started with vinorelbine and gemcitabine. After four cycles of chemotherapy without any response patient underwent radiotherapy of the left lesion.

After 28 months of follow up the patient was asymptomatic and able to manage her normal daily routine. Multiple lung cancers can be considered as synchronous or metachronous, depending on the time of diagnosis. Metachronous lesions are the most frequent (50-70% of all cases) and adenocarcinoma the more frequent histological pattern.

In this case the disease was at a disseminate stage, which did not suggest a synchronous lung tumour. While the disease was at an advanced stage with poor prognosis at diagnosis, the evolution of the two different lung tumours did not seem to compromise patient's daily routine.

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**Palavras-chave:** Tumor primitivo do pulmão, tumores síncronos do pulmão, tumores metácronos do pulmão.

**Key-words:** Primitive lung tumor, synchronous lung tumor, metachronous lung tumour.

### Case report

The authors describe the case of a 50 year old Caucasian woman, smoker (20 packs-year), healthy until September 2003 when she presented with persistent dry cough, lost of appetite and weight (which she could not quantify).

In the initial evaluation she presented a normal physical exam. Chest x-ray was performed and showed two bilateral lung masses, one in the superior right lobe and the other in the inferior half of the left lung (Figs. 1 and 2).

A flexible bronchoscopy was performed with a normal result and there were no malignant cells in the bronchial lavage.

Diagnosis was obtained by TFNA (trans-thoracic fine needle aspiration) of the right lesion. The cytology of this lesion was compatible with small cell lung cancer. The disease was considered to be in the disseminate stage due to the existence of hepatic lesions (revealed by abdominal ultrasound) and the presence of a contra-lateral lung lesion. We started chemotherapy with carboplatin (300 mg/m<sup>2</sup>) and etoposide (120

## MASSAS PULMONARES BILATERAIS. MESMA ETIOLOGIA?

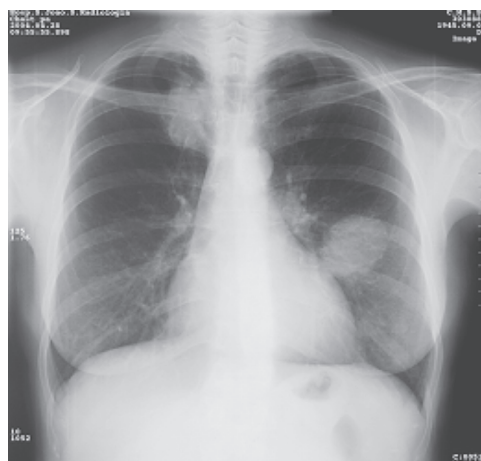
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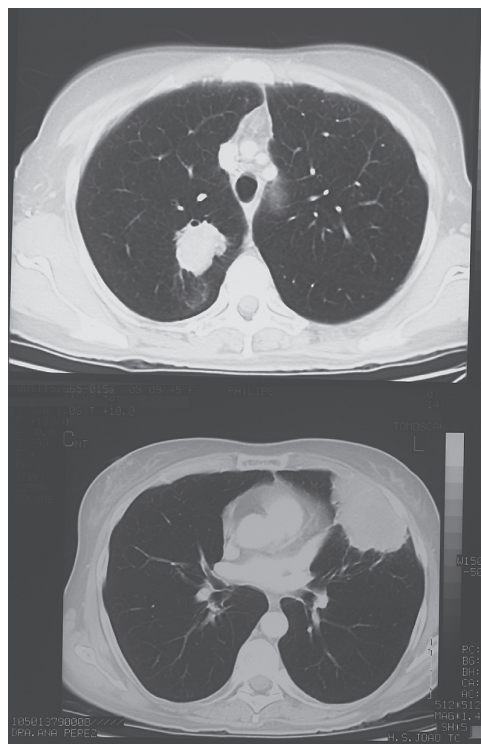
**Figs. 1 and 2 (11-2003)** – First radiological evaluation, at admission

mg/m<sup>2</sup>) every four weeks with a total of six treatments. Six months after beginning treatment, radiological evaluation revealed a reduction of the right lesion (Fig. 3) and the disappearance of the hepatic lesions. An enlargement of the left lesion was also seen (Figs. 3 and 4), with a total absence of response to treatment.

We decided to perform a further TFNA of the left lingula lobe lesion. The cytology of this lesion was compatible with adenocarcinoma. New chemotherapy treatment with vinorelbine (30 mg/m<sup>2</sup>) and gemcitabine (1250 mg/m<sup>2</sup>) every three weeks was initiated. After four treatments the lesion was



**Fig. 3 (04-2004)** – Radiological re-evaluation showing significant reduction of the right lesion



**Fig. 4 (06-2004)** – Radiological re-evaluation showing significant enlargement of the left lesion

unchanged and we decided to initiate radiotherapy of the left lesion. When this treatment was finished an enlargement of the right lesion (small cell type) was seen, and the decision was taken to irradiate this lesion (Figs. 5 and 6). Patient remained asymptomatic throughout (almost 28 months) with good performance status and maintenance of daily routine

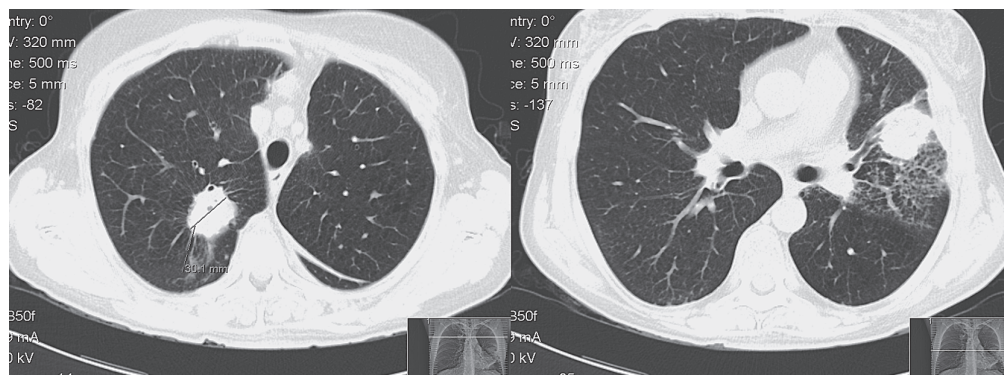


**Fig. 5** (11-2005) – This image shows the left lesion changes after treatment of the adenocarcinoma with radiotherapy

## Discussion

Primitive multiple lung neoplasms are malignant lesions that are histologically distinct or, if they have the same histology, are anatomically distinct with no metastatic lesions and a difference in the DNA sequence<sup>1</sup>. These lesions can be divided into synchronous and metachronous neoplasms, depending on the time of diagnosis. If the diagnosis of two or more neoplasms, histologically different or with the same histology but with different locations in the lung, is simultaneous with the absence of metastasis (at a distance or in lymph nodes), the tumours are synchronous. If the diagnoses are made over time (usually 2 years apart) the neoplasms are metachronous<sup>2,3</sup>. This second type of lesion is the most frequent in primitive multiple lung tumors (50%-70% of all the cases described)<sup>4</sup> with adenocarcinoma the more frequent histologic type at early or later stages (first or subsequent lesion)<sup>5</sup>.

In our case the disease was in an advanced stage and there was no suspicion of a synchronous lung neoplasm. Despite the dis-



**Fig. 6** (11-2005) – The left lesion changes after treatment of the adenocarcinoma with areas of radiotherapy-associated pneumonitis



seminate stage of the disease and the prognosis, the evolution of the two neoplasms did not determine a deterioration of the patient's general condition.

The cases described in the literature referred to situations in which the neoplasms were in an initial stage. The available data on staging, treatment and prognosis are related to metachronous lesions which were identified in a period of 2-5 years after surgery<sup>6</sup>. Initially a disseminated form of small cell lung cancer was suspected. Conversely, the delay in the diagnosis of the adenocarcinoma did not impact on the evolution of the disease. Surgery was not considered at diagnosis of the adenocarcinoma (left lesion); we considered that surgery did not improve patient survival and quality of life in the face of concomitant generalised small cell lung cancer and so opted for chemotherapy.

Another possible strategy was palliative radiotherapy; this decision was taken in order

to halt tumour growth in the absence of response after two chemotherapy courses.

This case raises some questions in diagnosis and treatment which still remain to be answered.

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