

Renal Metastases of a Lung Cancer

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Abstract

Renal metastasis secondary to lung tumor are quite rare and is typically associated with advanced disease.

We report the case of a 72 years old patient, with a history of lung cancer, in whom a CT-Scan was performed as part of the assessment of the extension of his disease, and showed the presence of right renal metastases.

Keywords: *Renal Metastases; Lung Tumor; Computed Tomography*

Introduction

Renal metastasis from a lung carcinoma is a rare entity and when it appears is usually asymptomatic with a dark prognosis.

Observation

Our case is reported in a 72 yr men, without no medical renal history, who consulted for deterioration of the general state and with a heavy weight loss number at 10 pounds in 2 mouths.

Our patient's symptoms were: anorexia and dyspnea during exercise and a chronic cough.

As antecedent, he smokes 2 packets a day since the age of 30 yr.

A chest CT-Scan was performed which showed a mass in the left lower lobe, roughly rounded, with heterogeneous density, a necrotic center, and containing air bubbles.

A right mid renal mass has been individualised too with the same density than the pulmonary mass initially described, with irregular outlines, and enhanced after injection of the contrast agent (Figure 1).

This mass has an intime contact with the lower pole of the liver and the right kidney excretory tract without endoluminal bourgeoning and no excretion anomaly.



Figure 1: Axial (a) and Coronal (b) section through the right kidney; b: A right mid renal mass tissue density with irregular outlines, and enhanced after injection of the contrast agent.

An ultrasound complement has been realised:

- A mid renal isoechogenic mass with irregular outlines, hypervascularised at the doppler color (Figure 2).
- A biopsy came back in favor of a pulmonary epidermoid carcinoma.

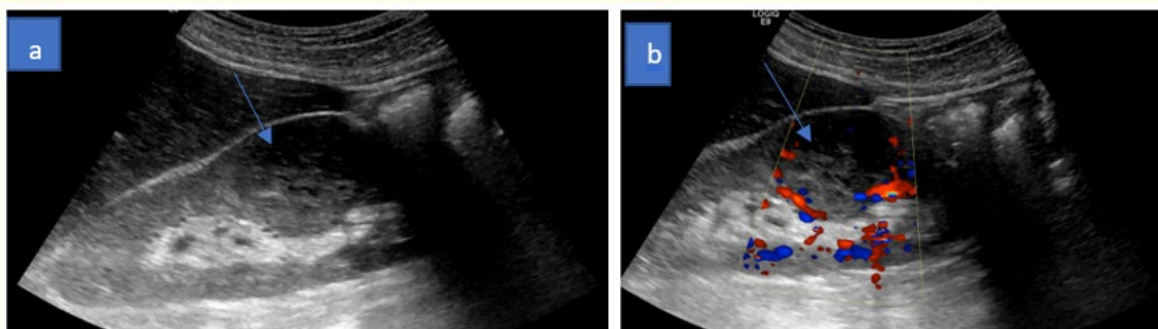


Figure 2: a-Longitudinal section of the right kidney on ultrasound: A mid renal isoechogenic mass with irregular outlines. b-Mass hypervascularised at the doppler color.

Discussion

Lung carcinoma is the first cause of death by cancer worldwide (AACR journal).

The prognosis of the lung cancer depends on the histological type and the tumor extension [1].

Next to adenocarcinoma, squamous cell carcinoma (SCC) of the lung is the most frequent histologic subtype in non-small cell lung cancer (AACR journal).

Imaging plays a critical role for screening, diagnosing, staging, and following patients [1].

The CT-Scan is the most sensitive modality for detecting renal metastases.

Metastases can be quite subtle on non-contrast enhanced scans but become more apparent after IV injection [2].

Tumor metastasis is a process that includes shedding, adhesion, penetration, migration and proliferation of primary tumor cells. A variety of cytokines, proteins, and genes are involved in the process. The tumor cells entering circulation do not spread to every organ randomly, but tend to seed in selected organs [3].

The kidney is the common site of metastasis from lung cancer after liver, adrenals and brain.

Renal metastases frequently do not present clinical symptoms.

Radiologically, metastatic lesions can appear similar to renal cell carcinomas.

Metastases are commonly small, multicentric and bilateral, but less than 2% of renal cell carcinomas may also display this pattern.

That's why it is important to distinguish between a primary tumor and a renal metastasis. In some cases, they are diagnosed simultaneously, but most metastases occur after the primary tumor has progressed as is the case in our study.

In our case only the right kidney is affected.

Conclusion

- Renal metastasis of lung cancer are rare.
- Most of renal metastasis are asymptomatic.
- Mostly detected by enhanced abdominal CT scanner.

Conflict of Interest Statement

No conflicts of interest to be declared.

Funding Support

None.

Ethical Approval

No ethical approval is required for de-identified single case reports based on our institutional policies.

Consent

Written informed consent was obtained from the patient's legally authorized representatives.

Guarantor

Dr. Majda Ankri is the guarantor for this publication.

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