

Palpable Breast Lesion As Initial Manifestation Of Disseminated Renal Cell Carcinoma

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Citation

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Abstract

A rare case of renal cell carcinoma presenting as a breast lump in a 72 years old woman without history of malignancy is detailed in this report. Excisional biopsy of the lesion revealed the presence of metastasis from a previous silent renal adenocarcinoma. An abdominal CT scan showed a right renal mass and a smaller omental mass and the histology performed after right nephrectomy and partial omentectomy confirmed the diagnosis of stage IV renal cell carcinoma. The patient was referred to an oncology department and she remains in good condition 5 months after the operation.

INTRODUCTION

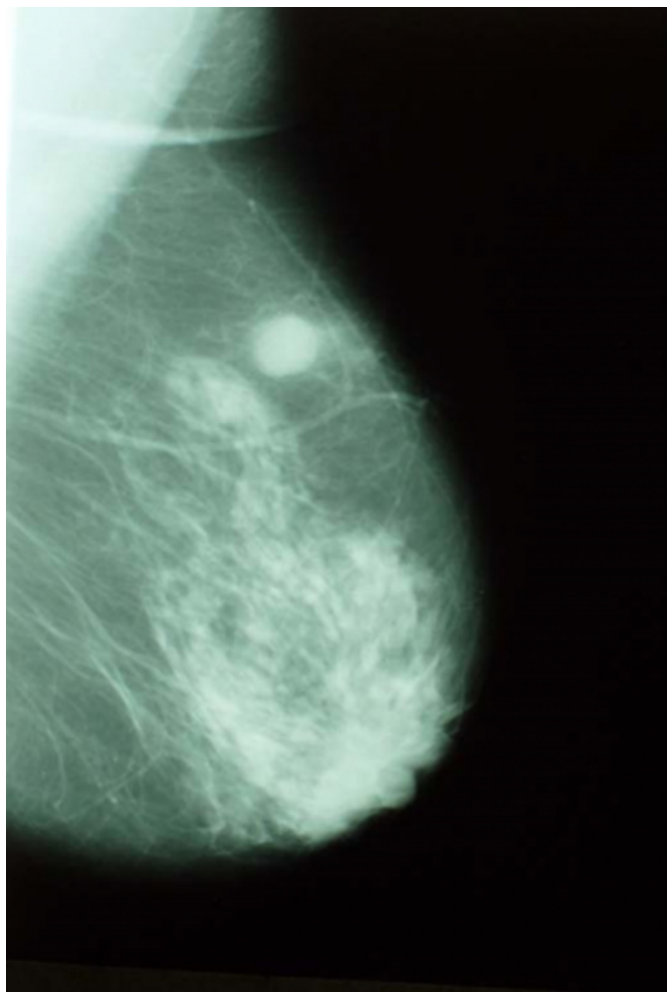
Breast is an unusual site for metastatic tumors and renal cell carcinoma is the fifth most common source after melanoma, lymphoma, lung and ovarian carcinoma¹. Medline search revealed only few cases of silent renal cell carcinoma presenting as a breast lesion^{2,3,4,5,6,7,8,9} whereas the majority of them appeared as metastasis from an already known renal adenocarcinoma. The appropriate treatment in these cases remains controversial.

A 72 year old woman presented at the outpatient breast clinic because of a nodule of the right breast discovered

during self-examination. The lesion was palpable at the upper outer quadrant of the right breast without any other breast or axillary lesions. Apart from mild obesity and a known history of hypertension treated with a diuretic and atrial fibrillation her physical examination was unremarkable for other comorbidities. She had a positive family history of malignancy. More specifically one of her brothers died at the age of 77 from renal adenocarcinoma but she was unaware of malignancies at the rest of her first degree relatives. Mammography showed a well-circumscribed tumor without microcalcifications (figure1).

Figure 1

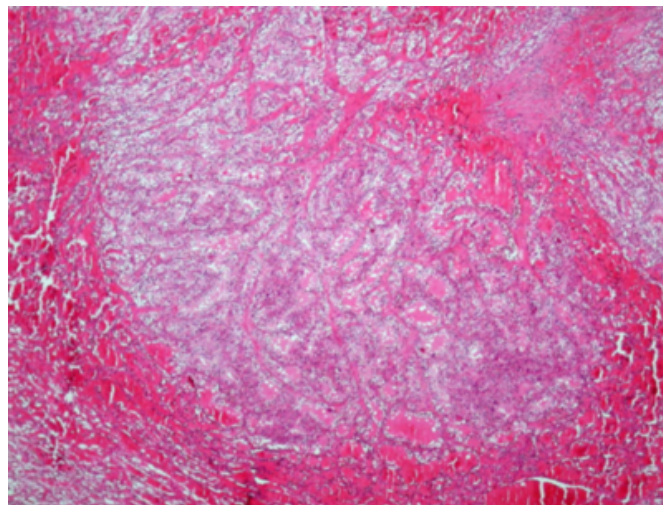
Figure 1: Mammography of the right breast. The relative well circumscribed lesion can easily be mistaken for a benign tumor.



An excisional biopsy was performed and a brown-gray well demarcated tumor with a diameter of approximately 2 cm was sent to the pathology revealing histochemical and immunoistochemical features more compatible to renal cell carcinoma (figure 2).

Figure 2

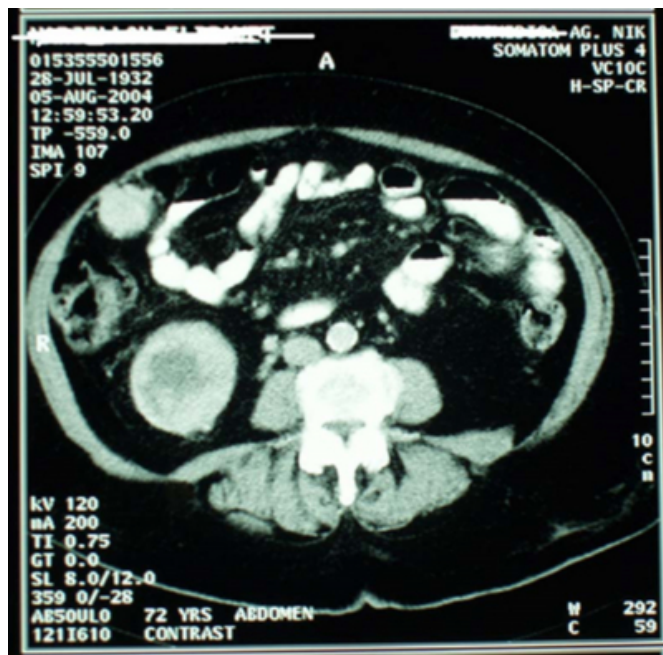
Figure 2: Microscopic image of breast lesion (140 H-E stain)



The tumor was diagnosed as a metastasis most likely from a primary renal cell carcinoma. U/S of the abdomen revealed a solid lesion of the lower part of the right kidney. Abdominal CT scan, performed later on demonstrated a round lesion at the lower part of the right kidney with soft tissues' density and diameter of approximately 6.5 cm. A second nodular lesion located at the omentum with a diameter of 3cm and soft tissues' density was also found (figure 3).

Figure 3

Figure 3: Abdominal CT scan with contrast medium showing the right renal and the omental mass



Few days later a laparotomy exploration revealed an increase of the size of the right kidney and an omental mass near by

the ascending colon which was probably the second lesion of the CT. Right nephrectomy (figure 4) and partial omentectomy (figure 5) were performed.

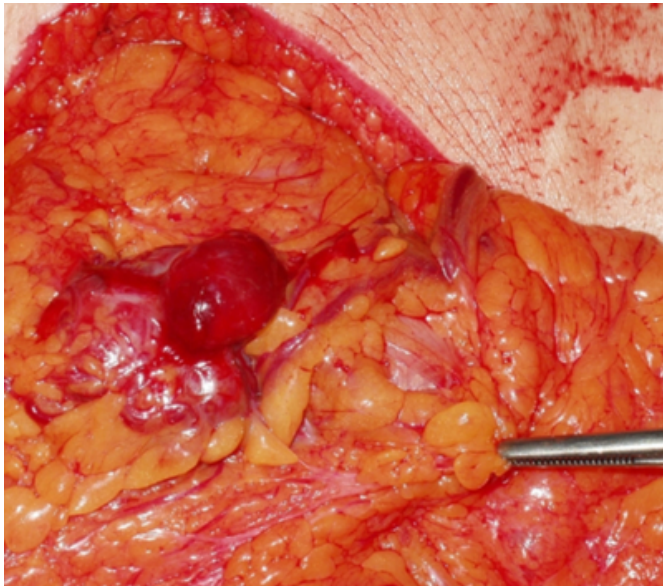
Figure 4

Figure 4: Infiltration by the tumor of right renal and perirenal adipose tissue is obvious



Figure 5

Figure 5: Metastatic omental brown-red mass (213 cm)



The pathology report confirmed the histopathological findings of the breast biopsy. During immediately post operative period the patient suffered from atrial fibrillation of a short duration and few days later she was discharged and referred to an oncological department for further evaluation and treatment. Ten months after the operation the patients remains in good condition.

DISCUSSION

Renal adenocarcinoma accounts for about 3-5% of all tumors in adults. Gross or microscopic hematuria is the most common manifestation. Other presentations is due to paraneoplastic syndromes like hypercalcemia, erythrocytosis, hypertension and fever of unknown origin or due to metastases e.g. bone pain, respiratory distress or skin nodules. Breast is an uncommon site of metastasis and only few cases have been reported in the literature especially as the first manifestation of the disease. Renal cell carcinoma can also be revealed as incidental mass in U/S or CT scan. CT scan, especially with the use of iodinated contrast medium, is the tool of choice for diagnosis and staging. Prognosis and treatment is relevant to the stage of the disease. Patients with stage IV renal cancer have five years survival rates of 0-5% and the treatment of choice remains controversial. Medroxyprogesterone, vinblastine and immunotherapy with interleukin-2 and interferon beta have shown up to 30% response rate. Surgical therapy although necessary at the early stages has not been associated with improved survival rates in patients with stage IV disease. Lately joint surgical removal of both the primary and the metastatic lesion in patients with pulmonary metastases has shown an improvement in survival₁₀. In our case lumpectomy, nephrectomy and omentectomy have certainly reduced the tumor size but it is unknown if is going to add in survival.

Surgeons who perform excisional biopsies of breast lesions should suspect the possibility of metastasis especially in cases of well-circumscribed tumors without microcalcifications in mammography and report their finding to the pathologists. Clinical information is useful and sometimes vital for the pathologists to differentiate clear cell tumors of the breast. The differential diagnosis includes glycogen rich clear cell breast carcinoma, metastatic clear cell carcinoma particularly of renal origin, lipid rich carcinoma, histiocytoid carcinoma and others rare tumors₁. Immunohistochemistry is a useful tool in the differential diagnosis₁₁. Finally oncologists should have in mind the possibility of breast metastases while staging renal adenocarcinoma.

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