CASE REPORT

Isolated renal metastasis after colon cancer

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Renal infiltration of colon adenocarcinoma is a rare event. The authors present the case report of a 52-year-old female who had a high carcinoembryonic antigen level 18 months after right hemicolectomy and a chemotherapy regimen to treat transverse colon adenocarcinoma. The patient presented with cancer reccurrence after 12 months, and underwent a paraaortic lymphadenoctomy and a second adjuvant chemotherapy with the folfox regimen. Abdomen computerized tomography revealed two solid masses in the right kidney, without evidence of any other metastatic sites. A nephrectomy was performed in the right kidney followed by adjuvant chemotherapy.

Key Words: renal metastasis, renal neoplasia, colon adenocarcinoma, nephrectomy, retro-peritoneal space

Introduction

Metastatic kidney tumors are among the most common malignant kidney neoplasia, outdoing the incidence of primary tumors. Necropsy studies have revealed that 12% of the patients who eventually die of cancer present kidney metastases. This makes the organ a common site of metastatic infiltration, with the hematogenous route the most common dissemination route.[1]

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Among solid tumors, lung cancer is the most frequent tumor associated to kidney metastasis, the majority of which with multiple metastatic deposits, and is also associated to infiltration to other sites.[1] Yet, renal metastases after colonic carcinoma are rare, representing only 2.8% of secondary renal neoplasia,[2] with few investigations published in the literature.

Case report

A 52-year-old female suffering from transverse colon carcinoma, with tumor stage T3 N2 M0 underwent right hemicolectomy and six chemotherapy sessions with five-fluoracil and leucovorin regimen. The patient presented a paraaortic lymph node metastasis 1 year after primary

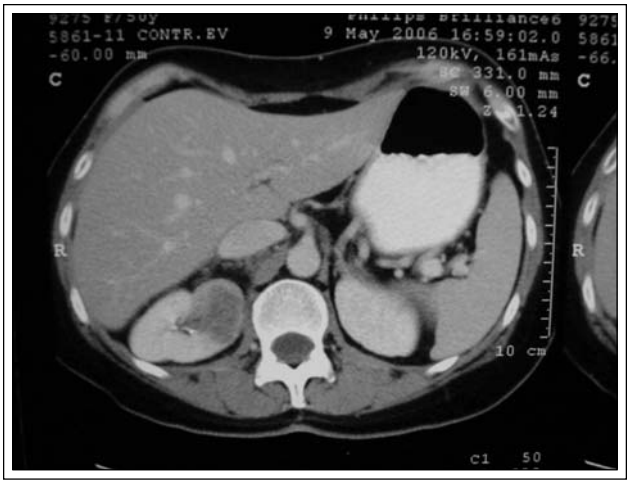

Figure 1. Abdominal CT showing lesion in the right kidney.

cancer treatment. A paraaortic lymphadenectomy was carried out, followed by a six-session Folfox chemotherapy. Six months after the second intervention, the patient presented high level of carcinoembryonic antigen (CEA), with 14 ng/dl. An abdomen CT scan was then performed and showed two lesions, in the upper and lower poles of the right kidney. The lesions were 2 cm large in diameter, without any evidence of other metastatic invasions, Figure 1. A new laparotomy was carried out, which confirmed the neoplastic lesion in the right kidney. A nephrectomy, Figure 2, ensued. The anatomopathologic exam confirmed the presence of adenocarcinoma metastatic to colorectal tumor. The patient is now under a new chemotherapy treatment (with Folfix), in a 2-month survival, and without any evidence of cancer recurrence.

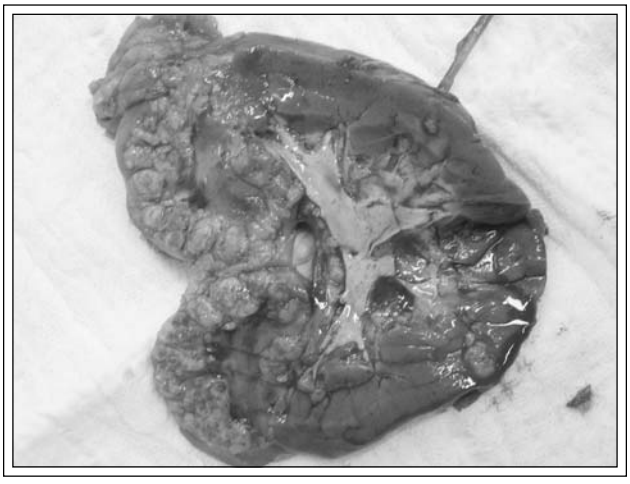

Figure 2. Image of a right kidney nephrectomy.

Comments

Metastases after colorectal neoplasia in the kidney parenchyma are extremely rare,[3,4] and so far only one case described in the literature of intralumen kidney metastasis.[1] Kidney metastases of solid tumors have gained little attention in the medical literature, as these metastases usually occur in the presence of severe systemic disease, and the involvement of the kidney is but immaterially symptomatic.[5] In the light of the dense vascularization as observed in the kidney,[3] which promotes the hematogenic dissemination of neoplastic cells, the worst prognosis is to be considered for a patient suffering from the disease. Kidney metastases occurring as the first manifestation of a primary tumor is a rare event, and the neoplasia that most commonly affects the organ in such mechanism is the bronchogenic carcinoma, coming first to breast cancer and gastrointestinal neoplasia.[5] Neoplastic cells found in the renal pelvis have shown strong immunoreactivity for CEA and Ca 19-9. Such findings suggest that this tumor site is formed by intraluminal infiltration of colonic neoplastic cells.[6]

The treatment consists of nephrectomy and systemic adjuvant chemotherapy. The nephrectomy is carried out fundamentally to confirm the first diagnosis, as the procedure by itself does not influence survival and the effects produced in terms of quality of life are minimal. In spite of this, nephrectomy may influence the choice of chemotherapeutic drugs to be used, which depends on kidney clearance values. The evaluation of renal function is therefore necessary, if nephrectomy is performed.[5] □

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