

Synchronous Primary Malignancies of the Kidney and Primary Biliary Cholangiocarcinoma: A Rare Case

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Abstract: The synchronous malignancy of kidney and biliary origin is rare. Here we report a 63-year-old male patient with a history of pain in the abdomen in the left lumbar region, who was admitted for evaluation. Ultrasound examination revealed a well-defined heterogeneous predominantly hypoechoic lesion with few cystic areas within measuring 5.7 * 5.8 cm noted in the lower pole of the left kidney. Multiple well-defined heterogeneous predominantly hyperechoic lesions were noted in the left lobe of the liver (1.7*1.3 cm). Repeated FNAC of the liver lesion was inconclusive. The histopathology report showed clear cell renal cell carcinoma of the kidney. The biopsy from the liver lesion taken intraoperatively came as metastatic mucin-secreting adenocarcinoma. In summary, the existence of both kidney and metastasis to the liver from another source occurs more in elderly patients.

Key words: renal cell carcinoma, primary biliary cholangiocarcinoma

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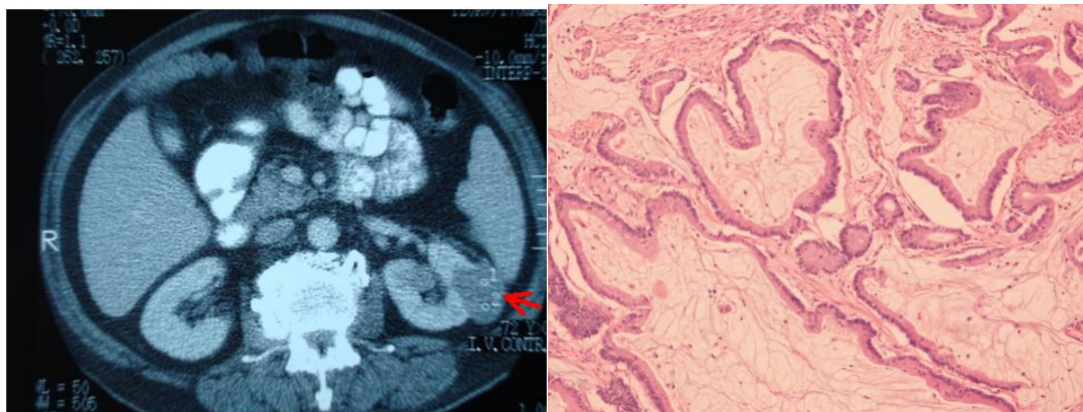
I. Introduction:

Multiple primary malignancies in a single patient were first reported by Billroth in 1879. Multiple primary malignancies are uncommon (1-3% of all cancer). Synchronous primary tumors involving the kidney and biliary tree, pancreas are exceptional and poorly documented. He hypothesized that for multiple primary malignancies each tumor must have a different histological appearance, must arise in a different location, and must produce its own metastasis.⁽¹⁾

Smoking-related cancers such as prostate cancer and renal cell carcinoma (RCC) more often occur as more than one primary carcinoma. Head and neck cancer survivors are at an increased risk for another cancer of the respiratory or digestive tract.⁽¹⁾

II. Case Report

A 65-year-old male patient with a history of left flank pain since 20 days. H/o weight loss. There was h/o haematuria. H/o smoking and alcoholism for 20 years, quits 3 months back. No other co-morbidities. Ultrasound examination revealed a well-defined heterogeneous predominantly hyperechoic lesion with few cystic areas with measuring 5.7*5.8 cm noted in the lower pole of the left kidney. The lesion shows significant vascularity. Well-defined heterogeneous hyperechoic lesion noted in the left lobe of the liver. The CT-scan on revealed a fairly well-defined lobulated heterogeneously enhancing mass lesion in the left kidney (malignant neoplastic lesion). Ill-defined mildly enhancing hypo-dense lesions in segment 2,3&7. USG-guided FNAC of the liver lesion was inconclusive, further investigation was not carried out due to economic constraint. Cytoreductive nephrectomy was done and biopsy from the liver lesion taken separately sent for HPE. The pathology report of the left renal mass showed as clear cell RCC with histologic grade (Fuhrman nuclear grade)-G2. Histopathology of the liver lesion shows metastatic mucin-secreting adenocarcinoma (kindly exclude primary in GIT). Upper GI endoscopy and colonoscopy is normal. Tumour cells (liver sample) express ck-7, ck-19, ca19-9 (focal) & cea. Suggestive of pancreatic biliary origin.



Ct image showing lesion in left kidney

histopathology of liver lesion

III. Discussion

The concomitant presence of RCC with other primary malignancies including cancers of bladder, prostate, colorectal, lung, malignant melanoma of skin and non-Hodgkin's lymphoma has been reported. Multiple primary cancers (MPC) in the same patient are rare, but synchronous MPC are exceptional^[2,3]. Most synchronous tumors involve both the gastrointestinal and the genitourinary tract, followed by the breast and gastrointestinal tract or the breast and genitourinary tract^[4]. The frequency of pancreatic-biliary cancer in association with another cancer is estimated to be between 1 and 20%, with malignancies predominately of the stomach, colon, genitourinary tract, and thyroid^[4,5]. However, there has been only infrequent reporting of synchronous or metachronous tumors of the kidney and the pancreatic-biliary^[2-5]. Most papers reporting an association between pancreatic-biliary and renal cancer were based on a small cohort of patients, and few of them provided clinical details^[2, 4-7]. Although possible causes for such an association of Multiple primary cancers are not fully understood, several factors have been suspected. Indeed, environmental risk factors (cigarette smoking, alcohol abuse, and pollution), previous medical treatment (radiotherapy and/or chemotherapy), genetic predisposition, and hormonal factors seem to be implicated^[10]. Studies examining genetic factors found that microsatellite instability was more frequently observed in Multiple primary cancers than in sporadic cancer^[4]. Another study reported a mutation in codon 12 of the K-ras gene in a patient with synchronous tumors of the kidney and pancreatic-biliary^[3]. In our case, molecular investigations were not considered because of the absence of known familial genetic syndromes, but genetic analysis of synchronous tumors in different organs may provide information about the aetiology of genetic changes that occur during carcinogenesis^[2-4, 10].

IV. Conclusion

Concomitant presence of Rcc and primary biliary – pancreatic cancer is rare. Occurs in elderly age people. This rare tumor association needs more epidemiological details and molecular investigation. Indeed, there may be a genetic predisposition for this situation.

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