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Oncology

A case of sarcomatoid renal collecting duct carcinoma with paraneoplastic syndrome and peripheral adhesions

Xiang He [a], Ke Yang [b,*], Guiheng Chen [b], Jue Zheng [b]

[a] Department of Urology, The First Affiliated Hospital of Hunan Normal University (Hunan Provincial People's Hospital), China
[b] Department of Urology, Hunan Provincial People's Hospital, China

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ABSTRACT

Renal sarcoma-like collecting duct cancer is a rare tumor. A 68-year-old man was admitted to the hospital due to chest tightness and back swelling. Computed tomography showed solid occupying of the superior cyst of the left kidney. He underwent radical resection of left kidney cancer. The pathological result is collecting duct carcinoma with sarcoma-like changes. This report helps to understand the clinical manifestations and treatment of the disease.

Introduction

Kidney collecting duct cancer is a malignant tumor that occurs in collecting duct epithelial cells. A rare kidney tumor, less than 1% of kidney malignant tumors, has a very high degree of malignancy. Sarcoma-like collecting duct cancer is even rarer. Amin et al.[1] reported that only 1 of 405 adult renal epithelial tumor histological types (accounting for 0.24%) showed renal collecting duct carcinoma with sarcomatoid differentiation. Here, we present a new case of renal sarcoma-like collecting duct cancer.

Case presentation

A 68-year-old man was admitted to the hospital due to chest tightness and back swelling. In the past 2 months, she lost about 10kg. No history of gross hematuria or microscopic hematuria. After admission, repeated low fever and lower abdominal pain. Physical examination showed no positive signs. The blood picture is slightly elevated, moderate anemia, albumin 27.7g/l. Computed tomography revealed a solid occupancy of the superior cyst of the left kidney (Fig. 1), which was prediscussed to be diagnosed as cystic kidney cancer. We performed a radical resection of left kidney cancer for him. During the operation, there were adhesions between the kidney tumor and the pancreatic tail, spleen, adrenal gland, and colon. One week after the operation, the patient's left lower abdominal pain disappeared and his temperature was normal. After a month of follow-up, the patient developed lymph node metastasis, liver metastasis, ascites, and cachexia. Further follow-up is ongoing. Histopathology revealed that the left renal tumor was a highly malignant tumor with poor differentiation, accompanied by massive bleeding, necrosis, and cystic changes. In some areas, glandular ducts and papillary structures were seen, and most areas showed undifferentiated sarcoma-like morphology. Tumor carcinoma with sarcoma (sarcoma area accounts for 95% of the tumor) (Figs. 2 and 3) Immunohistochemistry: 2006574-A09#: S-100 (-), Syn (-), Ki67 (+, hot spot 50%), TFE-3 (Stove+), Vimentin(+), Pax-8(Partial+), CD56(-), CgA (-), CK(pan)(-), CK7(-), CK34(-), p63 (-), p504s (-), ALK (-), CA IX (-), CD30 (-), CD43 (-), CD45 (-), INI-1 (+), Inhibin-a (-), Melan -A (-), SDHB (+), Oct-3/4 (-), CD10 (+); 2006574-A07#: Pax-8 (weak+), CDX-2 (-), Syn (-), CK(pan) (-), Vimentin (-).

Discussion

Renal sarcoma-like collecting duct cancer is a rare tumor, and there are very few reports.[2,3] Even if there is less sarcoma tissue, it will lead to rapid disease progression, and some patients die without diagnosis. The composition and proportion of sarcoma and nuclear grade are highly correlated with death.[4] Renal sarcoma-like collecting duct carcinoma lacks specific clinical manifestations and imaging features and is difficult to distinguish from other renal tumors. Histologically, the epithelial components of sarcomatoid renal collecting duct carcinoma and renal collecting duct carcinoma are the same, and they can all appear in the renal medulla. The needle-like and stellate growth of spindle cells can be seen in the sarcoma area. Sarcoma cells have smaller, less obvious nucleoli.[3] At present, there are few genetic studies on renal sarcoma-like

* Corresponding author. Department of Urology, Hunan Provincial People's Hospital, China.
E-mail address: yk780218@163.com (K. Yang).

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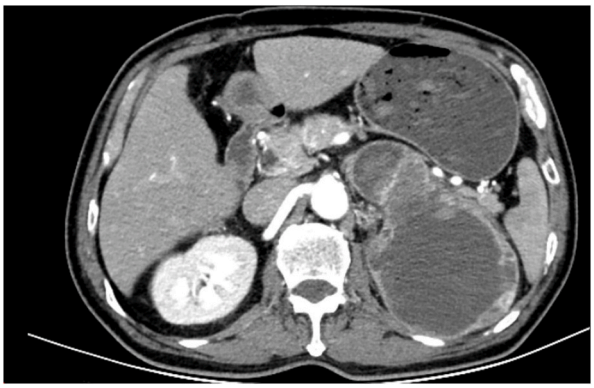

Fig. 1. Computed tomography shows Cystic changes in the left superior pole.

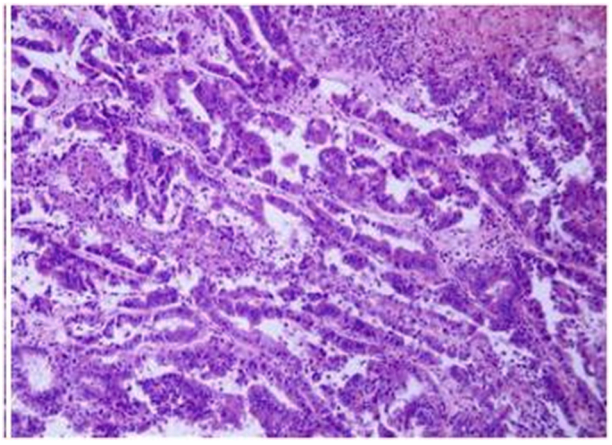

Fig. 2. The result of the pathological test.

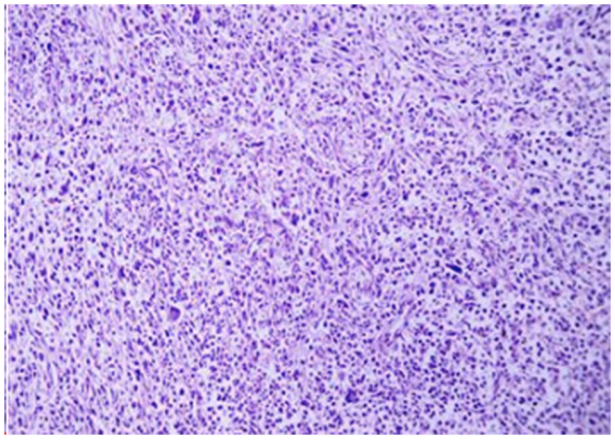

Fig. 3. The result of the pathological test.

collecting duct cancer. Exon sequencing found that the deletion of CDKN2A/p16 is more common in renal collecting duct cancer, and it is related to the upregulation of SLC family genes.[5] In depth, I believe that there will be a further understanding of the genetics of renal sarcoma-like collecting duct cancer. Sarcoma-like collecting duct cancer tumors are not sensitive to radiotherapy and chemotherapy, and the main treatment is radical resection of kidney cancer.

Conclusion

Renal collecting duct sarcoma is an extremely rare malignant tumor with high invasiveness and no specific clinical manifestations. Preoperative diagnosis is difficult, and paraneoplastic syndrome should be highly valued, which is of great significance for the early diagnosis of malignant tumors. Therefore, early detection, early diagnosis, and early surgery may be the only way to delay the patient's possible survival.

Source of support

None.

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