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Oncology

Dedifferentiated liposarcoma of the left kidney: A rare case report

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Introduction

Incidental renal mass affects half of people older than 50 years. The mass is detected by image when evaluating non-renal complaints. Liposarcoma is one of the common soft tissue sarcoma (STS) in adults and the most common lesion is observed in the retroperitoneum. In our case, the liposarcoma originates from the left kidney, not from the retroperitoneum.

Case presentation

A 67-year-old man had a history of hypertension for 20 years. The patient experienced intermittent fever for 1 month, but no obvious source was found. The laboratory data were within normal range, including normal urine analysis. Initially, abdominal ultrasonography was arranged to evaluate the possible source. A heterogeneously, hypoechoic mass about 92 mm in diameter was revealed over the left kidney (Fig. 1A). Subsequently, computed tomography (CT) (Fig. 1B) of the abdomen was performed; a hypointense mass without downward displacement of the left kidney was observed. Hence, a tumor was considered from the kidney parenchyma because it was analogous to an atypical enhanced renal tumor in the arterial phase of CT, not from retroperitoneum. Further management, such as magnetic resonance imaging (MRI) (Fig. 1C) of the kidney, was arranged to evaluate in details. A 1.5 T superconducting magnet and phase-arrayed body coil were used. The tumor was huge (size: 10.3 cm × 9.3 cm × 8 cm) (Fig. 1D) and had an ambiguous border over the upper pole of the kidney. It extended into the perinephric tissues but not into the ipsilateral adrenal gland. Trans-arterial embolization (TAE) of the tumor (Fig. 2A) was planned to prophylactically reduce blood loss before surgery.

A left subcostal incision was made for radical nephrectomy. The solid renal tumor with yellow fat component was disclosed (Fig. 2B). The pathologic findings (Fig. 3, A-D) showed hypercellular spindle tumor cells with rhabdomyoblastic differentiation. In nuclear immunohistochemical staining, murine double minute 2 (MDM2) and P16 for tumor cells were positive. The renal capsule and perirenal fat indicated tumor invasion. Finally, dedifferentiated liposarcoma of the left kidney, stage pT3 was diagnosed based on pathologic and imaging findings. No metastasis was observed during the 1-year follow-up.

Discussion

Renal parenchyma cancer in 2014 is the fourteenth most common cancer in male Taiwanese, sixth most common in male Americans, and fourth most common in male British individuals.1–2 The risk factors of renal cancer include family history, hypertension, smoking, obesity, or hereditary kidney disease. Hematuria, lower back pain, palpable lump, and fever are the symptoms of renal cancer. Our patient has hypertension and no smoking habit, no palpable lump, and fever are the symptoms of renal cancer. Our patient has hypertension and no smoking habit, no palpable lump, and fever are the symptoms of renal cancer. Our patient has hypertension and no smoking habit, no palpable lump, and fever are the symptoms of renal cancer. Our patient has hypertension and no smoking habit, no palpable lump, and fever are the symptoms of renal cancer. Our patient has hypertension and no smoking habit, no palpable lump, and fever are the symptoms of renal cancer. Our patient has hypertension and no smoking habit, no palpable lump, and fever are the symptoms of renal cancer. Finally, dedifferentiated liposarcoma of the left kidney, stage pT3 was diagnosed based on pathologic and imaging findings. No metastasis was observed during the 1-year follow-up.

There are several types of RCC, including clear cell (75–80% in RCC), papillary (10%), chromophobe (5%), collecting duct, and medullary type. Renal sarcoma is rare type and develops in genitourinary...
system about 1–2% of cases. It is difficult to distinguish from other types of RCC by image, except the typical clear cell RCC. Our patient has a heterogeneously hypoechoic renal mass via ultrasonography. Furthermore, there is poor enhancement during the corticomedullary phase (25–70 seconds after the administration of contrast). MRI is arranged for further evaluation according to T2-weighted differences. Intermittent signal intensity of the renal tumor with fluid accumulation is presented on axial and coronal views of MRI. Yet, it remains difficult to differentiate which type of RCC before surgery.

The renal tumor is supplied by the inferior suprarenal artery in our patient. Gelform is instilled from the left renal artery to impede the distal vascularity supplement of the renal tumor.

Clear cell RCC has clear cytoplasm and arranged in nests with intervening blood vessels on a microscopic image. The pathologist uses various stains to make a differential diagnosis. The specimen is stained negative for the epithelial membrane antigen. This means that the tumor does not originate from the epithelium. However, the specimen is stained positive for vimentin, actin, and desmin, indicating that the tumor has rhabdomyoblast-like cells. Additionally, the specimen is stained positive for MDM2 and P16, hypercellular tumor cells with pleomorphic are found. Therefore, dedifferentiated liposarcoma is diagnosed.

A poor prognosis of sarcoma has been reported; the 5-year survival rate is 39%. Surgical resection is the main treatment. Chemotherapy is used for tumors that cannot be resected completely, and recurrent and distant metastases. Radiotherapy is used when the tumor cannot be resected completely, and adjuvant therapy is provided if tumor recurrence or inadequate surgical margins are presented postoperatively. Target therapy and immunotherapy are controversial. The most important prognostic factors for survival are the histologic subtype or grade and completeness of resection. In the report by Wang et al., the overall 1-year, 3-year, and 5-year survival rates were 86%, 41%, and
15%, respectively. The median survival was 28 months. The median survival with metastases or after recurrence was 8–10 months. There was no local recurrence in our patient during the 1-year follow-up.

Conclusion

Renal liposarcoma is rare in the literature and is difficult to make diagnosis under a series of examination. The main treatment for liposarcoma is surgical resection, whereas chemotherapy or radiotherapy is used for unresectable tumors. Because the median survival with metastases or after recurrence is 8–10 months, physicians should be more cautious during the follow-up.

Consent

The patient provided written informed consent for the information presented here to be shared.

Conflicts of interest

None.

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Appendix A. Supplementary data

Supplementary data related to this article can be found at https://doi.org/10.1016/j.eucr.2018.07.016.

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