

CASE REPORT

RENAL CELL CARCINOMA OF THE KIDNEY PRESENTING AS A RENAL ABSCESS: A RARE CASE REPORT

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Abstract:

We report a case of renal tumor presented to us as a case of renal abscess extending to subcutaneous space and finally she was diagnosed as a case of renal cell carcinoma with metastatic para-caval lymphadenopathy. Renal cell carcinoma rarely present with renal and perinephric abscess. The association of renal tumor with renal and subcutaneous abscess can lead to misinterpretation on standard imaging procedures and subsequently mislead to select optimum treatment option. Malignancy may be considered as an underlying cause for the formation of a renal abscess, especially if no other predisposing factors such as diabetes or urinary stones are present.

Key words: *Perinephric abscess, Renal abscess, Renal tumor, Renal cell carcinoma.*

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Introduction:

The association of renal and perinephric abscess with renal cell carcinoma is uncommon. While the diagnosis of pyonephrosis, renal & perinephric abscess is fairly easy, the source of obstruction and infection is an important guide for treatment. Two decades ago *Staphylococcus aureus* antecedent skin lesion may have been the most common cause of renal abscess in children and adults, but now gram-negative organism (*E. coli*) are now the most common cause, and these are more likely associated with retrograde extension of ascending infection and genitourinary abnormalities.^{1,2} Anaerobic bacteria may cause perinephric or renal abscesses in patient with history of previous abdominal surgery, renal transplant, malignancy, and oral or dental infection.³ The association of infective lesion and kidney tumor has not been established adequately in literature. We present a case of renal and perinephric abscess with renal cell carcinoma.

Case Report

A case of 71 years old woman presented to us with fever and swelling in the right loin and lumbar area for 2 weeks. She had been suffering from hypertension for more than 20 years. She has a history of

emphysematous pyelonephritis, acute renal failure (sr. creatinine-7.4 mg/dl) 6 years back, which was cured with intravenous antibiotic & double “J” stent placement. She had no haematuria and dysuria, her urinalysis showed numerous pus cell, 2-4 red blood cells per high power field, creatinine was 1.9 mg/dl, urine cultures grew *Escherichia coli* (ELBS). Ultrasonography scan revealed of SOL(space occupying lesion) in right renal region suggestive of abscess with subcutaneous abscess in right loin. Computed tomography revealed hypervascular right renal mass showing large area of necrosis suspicious of renal cell carcinoma, xanthogranulomatous pyelonephritis; with dilated pelvicalyceal system of the right kidney and renal abscess formation extending to perinephric and subcutaneous tissue plane, retroperitoneal lymphadenopathy.

Because of fever and renal abscess extending up to subcutaneous tissue percutaneous drainage was done but patient didn't respond well. Pus culture revealed *Escherichia coli* (ELBS). Nephrectomy was performed. Peroperatively kidney was not very adherent with surrounding structure, tissue plane maintained well, which was against the infectious pathology. Cut surface of the specimen showed a golden yellow tumor with extensive areas of hemorrhage and necrosis. Histologic examination revealed papillary renal cell carcinoma with para-caval lymph node metastasis. At the time of

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discharge her sr. creatinine was 1.2 mg/dl. She was advised for radiotherapy to renal bed but refused, however, one year since surgery she is alright now.

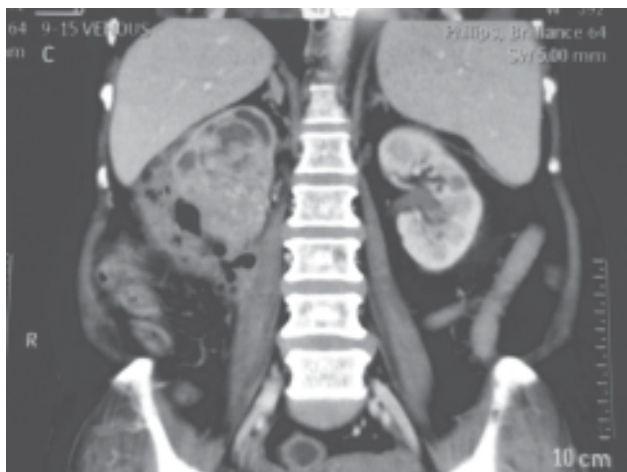


Fig.-1: Computed tomography revealed hypervascular right renal mass showing large area of necrosis suspicious of renal cell carcinoma, xanthogranulomatous pyelonephritis; with dilated pelvicalyceal system of the right kidney and renal abscess formation extending to perinephric and subcutaneous tissue plane.

Discussion:

The association of renal cell carcinoma with a renal or perinephric abscess established in published report, its very difficult to diagnose renal tumor when it is present as renal and perinephric abscess.⁴ Lo RK et al published a case of perinephric abscess in an adolescent, initially mistaken for renal tumor, was managed conservatively with antibiotic therapy alone, computed tomography revealed that resolution was complete.⁵

Coexistence of renal tumor and renal abscess is a rare entity, which can lead to misinterpretation on standard diagnostic procedures. It is important to obtain the correct diagnosis, because treatment options for malignant tumor differ from that for abscess.

In our case, absence of gross haematuria and drainage of purulent fluid by puncture misled the differential diagnosis so that cytologic analysis was not obtain, however, retroperitoneal lymphadenopathy was suggestive of some malignant pathology. So, from this case we have learn that, renal abscess treated conservatively with antibiotic & percutaneous drainage need close follow-up after complete remission to exclude any other pathology like malignancy.

Conclusion:

Coexistence of renal tumor and renal abscess is a rare entity, which can lead to misinterpretation on standard diagnostic procedures. It is important to obtain the correct diagnosis, because treatment options for malignant tumor differ from that for abscess. Malignancy may be considered as an underlying cause for the formation of a renal abscess, especially if no other predisposing factors such as diabetes or urinary stones are present.

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