

**Katelyn E. Gill**

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LSU Health Sciences Center, New Orleans, LA

Dr. Hector Ferral

LSUHSC, Department of Radiology; University Medical Center

**“Misdiagnosis of Renal Pseudoaneurysm Following Left Partial Nephrectomy”**

**Introduction:** Pseudoaneurysms are injuries to the arterial vasculature in which blood collects between the media and adventitia layer of the arterial wall. Pseudoaneurysms are often asymptomatic and discovered as incidental findings on surveillance or diagnostic imaging. Undetected, and consequently untreated, pseudoaneurysms are at risk for rupture and may cause significant morbidity and mortality due to massive hemorrhage.

**Case Presentation:** We present a 57-year-old female with a past medical history of a left partial nephrectomy for the removal of a renal cell carcinoma (RCC) from the upper pole of the left kidney. Three months status post partial nephrectomy, a new left interpolar lesion was identified by a follow-up computed tomography (CT) scan. The scan was initially interpreted as recurrent RCC. The patient was referred to the department of interventional radiology for a left renal biopsy to confirm the recurrence of RCC with plans to subsequently proceed with a radical left nephrectomy. Further review of the follow-up CT determined that the lesion followed arterial blood contrast enhancement, indicating an arterial vascular injury rather than RCC recurrence. The patient was then evaluated by renal ultrasound which confirmed the presence of a left renal pseudoaneurysm using both grayscale and color Doppler images. The previously scheduled renal biopsy and radical left nephrectomy were cancelled. The patient was referred to the department of interventional radiology for treatment of the pseudoaneurysm and underwent selective coil embolization of the left renal pseudoaneurysm. Post-embolization left renal angiogram demonstrated complete cessation of bloodflow to the left renal pseudoaneurysm. There were no reported signs of post-embolization complication or recurrent RCC at follow-up.

**Discussion:** Known risk factors for pseudoaneurysm formation include inflammation, trauma, and iatrogenic causes such as percutaneous biopsy or surgery. Pseudoaneurysms can be identified using multiple imaging modalities including ultrasound, computed tomography, magnetic resonance imaging, and angiography. The ability to accurately diagnose pseudoaneurysms in all imaging modalities is imperative for improving patient outcomes by allowing timely treatment intervention to decrease the morbidity and mortality associated with pseudoaneurysm rupture. In the presented case, a left renal pseudoaneurysm was misdiagnosed as recurrent renal cell carcinoma; a diagnosis initially planned to be confirmed by renal biopsy. Biopsy of this lesion would have led to significant bleeding.

**Conclusion:** The presented case emphasizes the importance of accurate pseudoaneurysm diagnosis to allow for proper treatment and reduction of the morbidity and mortality associated with pseudoaneurysm rupture.