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Short Report

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Incidental pseudoaneurysm - Post-partial nephrectomy, in an asymptomatic patient

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Abstract

A 52-year-old women who had a partial removal of her left kidney a year ago for a renal tumor was asymptomatic and under routine follow-up. During her recent check-up, a contrast –enhanced CT scan of her abdomen showed a large pseudoaneurysm in the left renal artery, measuring approximately 79 mm x 67 mm x 78 mm. Because of its size, the medical team performed a safe angioembolization procedure, which went smoothly without any complications.

Introduction

Partial nephrectomy is the treatment of choice for small renal tumors, however, it may result in iatrogenic renal vascular injury which might lead to the formation of life-threatening complications like renal artery pseudoaneurysm [1]. Renal artery pseudoaneurysm may also form after percutaneous renal procedures and renal trauma [2]. The incidence is slightly higher in laparoscopic compared to the open partial nephrectomy [3]. The most common presentation is hemorrhage. We present a case of large asymptomatic renal artery pseudoaneurysm in a 52 year old female detected incidentally 1 year after partial nephrectomy performed for renal tumor.

Case report

A 52 year old female underwent left open partial nephrectomy one year ago for a 2 cm left renal mass. Histopathology confirmed clear cell renal cell carcinoma (p T_1 Nx Mx). The patient remained asymptomatic during the postoperative period. During a routine follow up, a contrast-enhanced Computed Tomography (CT) of the abdomen revealed a large pseudoaneurysm measuring 79 mm × 67 mm × 78 mm. Renal CT angiography showed a large pseudoaneuysm, measuring 8.5 cm × 7.1 cm × 6.7 cm, located at the upper pole of the left kidney and supplied by the anterior superior segmental artery (Figure 1a-f). Due to the large size of the pseudoaneurysm, therapeutic andioembolization was performed (Figure 2a &2b). A follow-up CT angiography obtained one week after the embolization demonstrated sequelae of the pseudoaneurysm without any evidence of active bleeding (Figure 2c & 2d).

Discussion

Renal artery pseudoaneurysm is rare and potentially life-threatening complication following partial nephrectomy. Most patients present with hematuria or abdominal pain, whereas asymptomatic pseudoaneurysms are uncommon. CT angiography is the investigation of choice for diagnosis. Treatment options include observation, aneurysmectomy with surgical repair, endovascular procedures, and partial or total nephrectomy. Observation is indicated in hemodynamically stable patients with asymptomatic aneurysms and has emerged as a simple, useful, and effective modality for managing pseudoaneurysms [4].

Conclusion

Large renal artery pseudoaneurysms can be asymptomatic. When detected, they can be effectively managed with endovascular procedures.

Declaration of patient consent: The authors certify that they have obtained all appropriate patient consent forms. In these forms, the patient(s) have given consent for their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published, and every effort will be made to conceal their identities; however, complete anonymity cannot be guaranteed.

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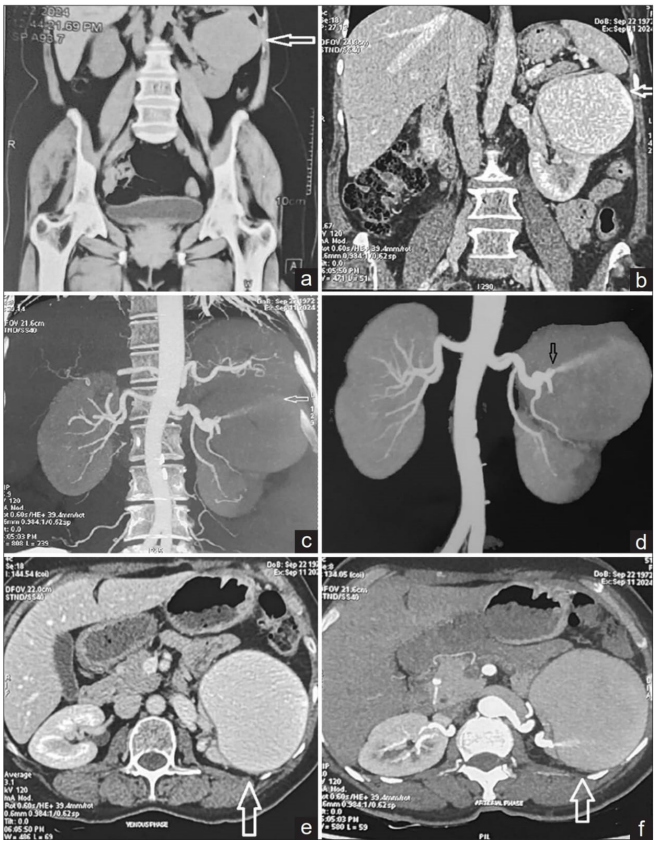

Figure 1: Pseudoaneurysm in renal computed tomography angiography.
(a) Coronal non –contrast CT image of the abdomen demonstrating a left renal arterial pseudoaneurysm (whit arrow). **(b)** Renal arterial pseudoaneurysm observed in the corticomedullary phase. **(c)** Image showing the pseudoaneurysm with an arterial blush. **(d)** Image illustrating the pseudoaneurysm with an arterial blush. **(e)** Axial CT image of the abdomen in the nephrogenic phase displaying the left renal pseudoaneurysm. **(f)** Axial plane image showing the left renal arterial pseudoaneurysm with arterial blush.

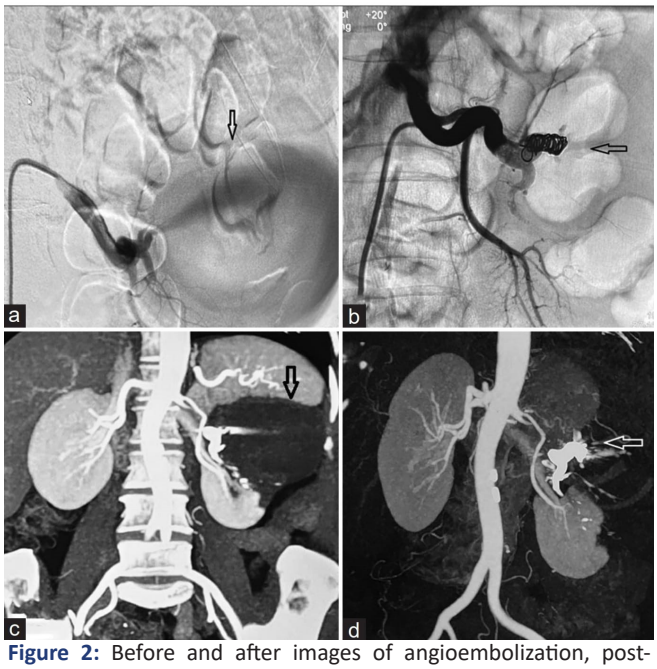

Figure 2: Before and after images of angioembolization, post-embolization computed tomography angiography.
(a) Intraoperative fluoroscopy image showing the left renal arterial pseudoaneurysm with active arterial blush. **(b)** Fluroscopic image after embolization demonstrating the absence of active arterial blush in the left renal artery. **(c)** Post –embolization CT image showing the left renal arterial pseudoaneurysm without any active bleeding. **(d)** Post –embolization CT image highlighting post-procedure sequelae.

References

1. Swana HS, Cohn SM, Burns GA, Egglin TK. Renal artery pseudoaneurysm after blunt abdominal trauma: Case report and literature review. J Trauma. 1996; 40: 459-61.

2. Kessaris DN, Bellman GC, Pardalidis NP, Smith AG. Management of hemorrhage after percutaneous renal surgery. J Urol. 1995; 153: 604-8.

3. Gill IS, Kavoussi LR, Lane BR, Blute ML, Babineau D, Colombo JR Jr, et al. Comparison of 1,800 laparoscopic and open partial nephrectomies for single renal tumors. J Urol. 2007; 178: 41-6.

4. Singh D, Gill IS. Renal artery pseudoaneurysm following laparoscopic partial nephrectomy. J Urol. 2005; 174: 2256-9.