



A RARE CAUSE OF ACUTE ABDOMEN- CONTAINED RUPTURE OF SPONTANEOUS RENAL ARTERY PSEUDOANEURYSM SUCCESSFULLY TREATED BY ENDOVASCULAR COIL EMBOLIZATION.

Dr Lalit Garg*

DMRD, DNB, PDCC, MNAMS, Consultant, Department of Interventional Radiology, Santokba Durlabhji Memorial Hospital cum Medical Research Institute, Jaipur, Rajasthan. *Corresponding Author

Dr Sanjay Mittal

MS, DNB, Consultant, Department of Urology, Santokba Durlabhji Memorial Hospital cum Medical Research Institute, Jaipur, Rajasthan.

Dr Sunita Purohit

MD, Consultant and Head of Department, Department of Radiology, Santokba Durlabhji Memorial Hospital cum Medical Research Institute, Jaipur, Rajasthan.

ABSTRACT

Spontaneous formation of renal artery pseudoaneurysm is very rare. Its rupture can present as acute abdomen. Endovascular coil embolization is the procedure of choice for management of renal artery pseudoaneurysm due to its minimally invasive and selective nature and the maximal preservation of renal parenchyma.

KEYWORDS : Renal artery pseudoaneurysm Acute abdomen Embolization

INTRODUCTION

Renal artery pseudoaneurysm (RAP) are generally secondary to urological interventional procedures. Spontaneous formation of renal artery pseudoaneurysm is a very rare phenomenon. Only few cases have been described in literature. Rupture of these aneurysms can present as acute abdomen and other catastrophic complications. Endovascular coil embolization is minimally invasive and highly effective method for treatment in such cases.

Case Report

A 35 year old female presented to emergency department with sudden onset of severe colicky pain at right renal angle. There was no significant past medical or surgical history. On search of previous records, patient had undergone USG abdomen as a part of routine check up. It showed right renal parapelvic cyst with mild hydronephrosis. There was no evidence of hematuria.

CT abdomen was performed for further evaluation. To our surprise, it revealed large bilobed pseudoaneurysm (contained rupture) arising from segmental branch of right renal artery. It was causing compression over right pelvi-ureteric junction with mild hydronephrosis.

Decision of angioembolization was taken. Right renal angiogram revealed large bilobed pseudoaneurysm arising from proximal part of inferior segmental branch (close to bifurcation).

Superselective cannulation of above vessel was performed and embolization was performed with coils. Post coiling angiogram revealed complete obliteration of pseudoaneurysm with normal perfusion in rest of renal parenchyma. As it was arising from proximal part of segmental artery, coiling was challenging in this case (as there was high risk of occluding the bifurcation).

Follow up USG showed complete thrombosis of pseudoaneurysm sac. Patient is asymptomatic till date. By doing early treatment in this case we could prevent catastrophic complications.

DISCUSSION-

RAP is rare and generally occur after percutaneous renal interventions (renal biopsy, PCNL), renal surgery or trauma. Spontaneous RAP is rare entity. Contained rupture of spontaneous RAP presenting as acute abdomen is even rarer.

RAP can be asymptomatic or can present as abdominal pain, abdominal mass, hematuria, hypertension and shock. Hematuria is most common symptom and results from erosion of pseudoaneurysm into adjacent collecting system.^[1] Sometimes it may cause compression over pelvi-ureteric junction and resultant hydronephrosis.^[2]

Asymptomatic one is incidentally found and difficult to diagnose without a high index of suspicion. On ultrasound, RAP can mimic cystic mass or hemorrhagic cysts and can be missed if colour doppler is not used. CT angiography can accurately diagnose pseudoaneurysm and its complications. Aneurysms greater than 2 cms in diameter have a high risk of rupture.

Treatment options include conservative, minimally invasive endovascular and open surgical options. Well defined renal arterial aneurysms that are asymptomatic or < 2 cm can be managed conservatively with serial imaging to ensure no change in size. In cases, where conservative management fails, percutaneous endovascular embolization is recommended followed by repeat intervention if required. Endovascular interventions options include balloon occlusion, vascular stenting or embolization with coils. Surgical methods are open repair, by- pass of the aneurysm and nephrectomy.^[3] Angiographic coil embolization is the procedure of choice for management of RAP due to its minimally invasive and selective nature and the maximal preservation of renal parenchyma.

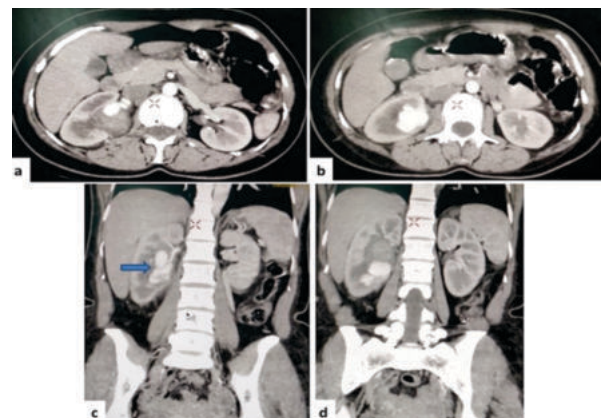


Figure 1 CT angiography images showing large bilobed pseudoaneurysm arising from segmental branch of right renal artery with surrounding hematoma.

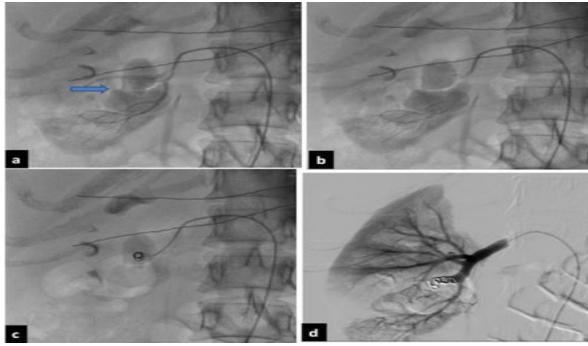


Figure 2 (a,b) Angiography images showing bilobed pseudoaneurysm from inferior segmental branch of right renal artery. (c) Superselective catheterization of feeding vessel with metallic coils in situ. (d) Post coiling angiogram showing complete obliteration of pseudoaneurysm with preserved perfusion in rest of renal parenchyma.

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