

Long Term Outcomes Following Endovascular Repair of Complex Aortocaval Fistula After Nephrectomy

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Case Introduction

- 65 year old male with hypertension and 50 pack year smoking history
- History of GSW to abdomen at age 8 necessitating a **right nephrectomy**
- Referred to Vascular Surgery following identification of bruit over right renal fossa
 - Right ventricular hypertrophy
 - Tricuspid regurgitation
 - Did not have reduced EF



Case Introduction



Imaging was concerning for an ACF with multiple communications to the IVC.

Given the substantial flow through the fistula, the patient was deemed high risk for development of high-output heart failure without intervention.



Case Presentation



Case Presentation Summary

65 M with hypertension and significant smoking history

Complex aortocaval fistula with R renal artery stump to IVC and additional aortic branch feeding into the arteriovenous fistula

At risk for development of high output heart failure with no intervention



Case Discussion



Discussion

- Open versus endovascular repair
- Considerations when determining approach
 - Anatomical characteristics
 - Complexity of communication
 - Age of fistula
 - Patient comorbidities



Right Renal Artery Stump



Cannulated right renal artery stump feeding into the cavernous malformation

Coil-embolized with large caliber coils and occluded inflow



Aortocaval Fistula



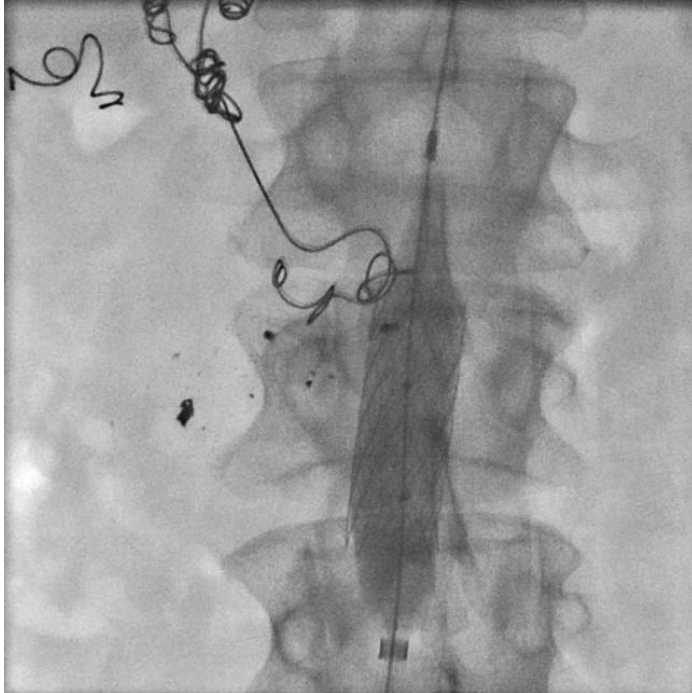
Wire access from R common femoral artery through fistula into IVC and out the R common femoral vein

Concern for inability to occlude flow with coil embolization and risk of embolizing into pulmonary circulation

18 mm Amplatzer plug across fistula and occluded outflow with 8 mm balloon



Aortocaval Fistula



Buttressed Amplatzer plug against aortic wall with a Palmaz stent to 22 mm in the infrarenal aorta



Left Renal Artery



Selective cannulation of the left renal artery ensured no disruption of flow following stent deployment.

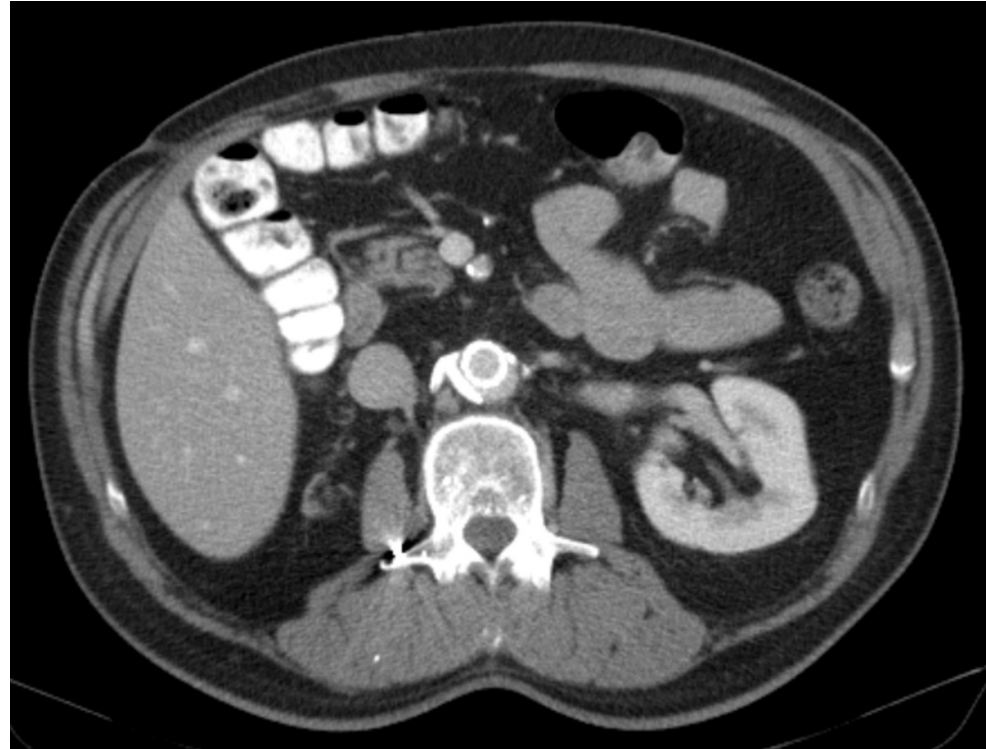


Completion angiography confirmed exclusion of the ACF and all major collaterals.



Follow Up

- No immediate post-operative complications
- Surveillance imaging for 9 years with continued exclusion of fistula
- Expired prior to 10 year follow up due to a stroke



Conclusions

- In this report, we demonstrate that an endovascular approach can be a durable repair with nearly a decade of follow up in a complex case
- Hope that this report can help others in surgical decision making for similar cases

