1:30 P.M. – 2:00 P.M.

RAPID FIRE SESSION I - Wellington Ballroom

PRESIDING: M. Ashraf Mansour, MD
Thomas C. Bower, MD

RF1. Endovascular Therapy for Complex Renal Arteriovenous Fistulae

Murtuza Habeeb, MD, Raghunandan L. Motaganahalli, MD, Brian G. Peterson, MD, Catherine M. Wittgen, MD, Gary J. Peterson, MD and Donald L. Jacobs, MD

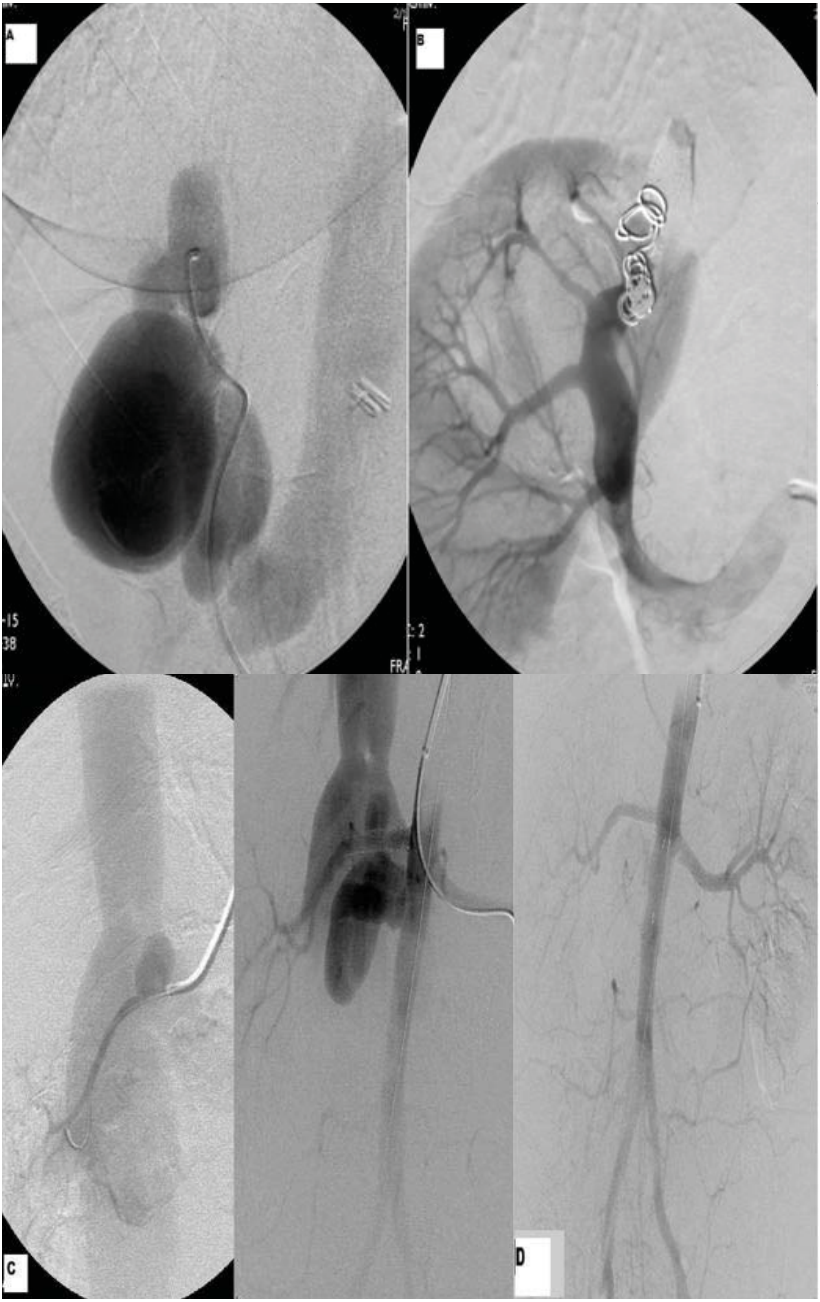
From: Vascular Surgery, St Louis University Medical Center, St Louis, Mo

OBJECTIVES: Renal arteriovenous fistulas (RAVF) are abnormal communications between the renal artery and veins. They are usually either congenital or post traumatic in nature. Patients with RAVF may manifest with varied symptoms, which include hypertension, congestive heart failure, hematuria, or more remain asymptomatic.Though rare every RAVF needs a case based approach. There are no previous reports in the literature for management of RAVF utilizing these unique approaches.

METHODS & RESULTS: Case1:A 47-year-old patient was seen by us for an incidentally detected RAVF arising from the superior polar artery of the right kidney measuring approximately 5.5 cm.Selective Angiographic evaluation revealed a RAVF arising from the superior pole artery with a brisk flow to the venous system and difficulty identifying cortical perfusion(fig A). Due to anatomical and flow characteristics of the AVF we did not use the coils initially as we felt the coils would embolize into pulmonary circulation. We used a tapered stent to be placed into the aneurismal portion of the RAVF to work as a scaffold into which we placed coils measuring 4-9 mm. We were able to obtain obliteration of flow across the fistula. Completion angiograms showed a well perfused kidney without sacrificing any arcuate branches(fig B).Since the procedure about 4 years ago she had a follow up CT-angiographic evaluation, which showed shrinkage of the aneurysm with no flow across the RAVF

Case2: A 29 year old man presented with cardiac failure, hematuria , renal insufficiency .Four months earlier he had sustained gunshot wound to the abdomen resulting in lapartomy and repair of liver and IVC laceration.Angiography revealed a massively dilated IVC and a large juxtarenal aorto-caval fistula(fig C). Endovascular repair was accomplished by placement of covered stents in the right renal artery for exclusion of the reno-caval fistula. An aortic extension cuff was placed across the aorto-caval fistula.Completion aortogram revealed complete resolution of the reno-caval and aorto-caval fistulae(fig D). The patient recovered fully and was no longer in heart failure. His renal function also normalized.

CONCLUSIONS: Complex RAVF's can be treated with individualized case based approach using endovascular techniques.


A
B
C
D