

#24 - DETACHABLE COILS FOR REPAIR OF EXTRA-PARENCHYMAL RENAL ARTERY ANEURYSMS: AN ALTERNATIVE TO SURGICAL THERAPY.

Nitin Garg, MD, Iraklis I Pipinos, MD, G. Matthew Longo, MD, William E Thorell, MD, Thomas G Lynch, MD, Jason M Johanning, MD

University of Nebraska Medical Center, Omaha, NE

Objective:Extraparenchymal renal artery aneurysms (eRAA) are an uncommon entity previously treated with surgical resection. Endovascular treatment of eRAA now includes coil embolization and covered stenting. We report our experience of selective embolization of bifurcation eRAA in high risk patients using detachable coils.

Methods and Results: Case 1: 78 year old female with positive DSE presented with painful embolization to renal parenchyma from a bifurcation eRAA. Case 2: 34 year old female with Marfan's syndrome had an incidental saccular bifurcation left eRAA. Selective embolization was completed using detachable coils in both cases with preservation of all renal artery branches. The patients were discharged without complication within 24 hours. Follow-up US and CT documented aneurysm thrombosis.

A systematic review of endovascular treatment of eRAA yielded only 37 patients in the literature. This included 30 female/7 male patients(17-79 years). Endovascular treatment included coil embolization (N=21 patients), covered stent placement (N=12) and combination therapy(N=4). All procedures were technically successful with no major procedural complications. Worsening renal function was seen in one patient with ruptured eRAA. Co-existent hypertension improved in 95% of patients. Repeat embolization was required in two patients. Long term follow up data is lacking.

Conclusion:We present successful application of detachable coil embolization for challenging eRAA's. Systematic review confirms the ability to treat eRAA with both coil embolization and covered stent placement. Therapeutic advantages of endovascular treatment likely include decreased length of hospital stay and major complications. Endovascular treatment is a viable alternative to open surgery and will likely become the treatment of choice for eRAA.