

**#11 OPTIMAL OPERATIVE STRATEGIES IN REPAIR OF  
JUXTARENAL ABDOMINAL AORTIC ANEURYSMS**

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**Objective:** Previous studies at this and other institutions offer conflicting evidence regarding the optimal operative management of juxtarenal abdominal aortic aneurysm (JRAAA), including choice of incision and proximal clamp placement.

**Methods:** Records of all patients undergoing JRAAA repair over the past 10 years were reviewed, and analysis of preoperative CT scans was done with specific attention to calcification, diameter, and intraluminal thrombus. The 87 men and 25 women had a mean age of 72, and a mean maximal aortic diameter of 6.2cm. Renal artery stenosis (RAS) was present in 13 patients (11%), and iliac disease (aneurysmal or occlusive) in 40 patients (35%). Associated comorbidities included CAD (n=49,44%), COPD (n=28,25%), DM (n=10,9%), renal insufficiency (PRI, Cr>1.4mg/dl; n=14,12%). No relationship between PRI and gender, age, or RAS was found. A midline incision was used in the majority of patients (n=98,88%), and retroperitoneal in the remaining 14 patients (12%). The proximal aortic clamp was placed in the supraceliac (SC) position in 92 (82%) patients, above one renal artery in 7 (6%) patients, and directly above both renals in 13 (12%) patients.

**Results:** Overall mortality was 5% (n=6). Cardiac complications occurred in 26 patients (23%), pulmonary in 22 (20%), renal in 14 (12%), and gastrointestinal in 10 (9%). There were no instances of mesenteric ischemia. The mean postoperative change in creatinine was greater in patients with PRI (1.8mg/dl vs. 0.13mg/dl, P=0.04). Mean blood loss (EBL) was 2701+/-189cc, and mean LOS was 16.1+/-1.7 days. Age >70 was associated with increased LOS (12.1d vs 18.6d, P=.05); otherwise there were no significant relationships between pre- and perioperative parameters and any of the measured outcomes including death, postoperative RI, and LOS.

**Conclusion:** Operative repair of JRAAA remains safe and effective. Our study suggests that preferential SC clamping may substantially reduce complications, such as mesenteric and renal ischemia, that are related to disease at the proximal cuff, but cannot overcome the deleterious affect of advanced age and PRI.