

#1 **ENDOVASCULAR STENT GRAFT REPAIR OF ABDOMINAL
AORTIC ANEURYSM: IS IT A BETTER ALTERNATIVE?**

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Objective: To compare multiple variables among patients undergoing open repair (OR) and those receiving an endovascular stent graft (EVSG) for the treatment of abdominal aortic aneurysms (AAA).

Methods: At a single institution, comparison was made between 226 EVSG patients and 114 OR patients from 1998 – 2003. The vascular section database was queried and a retrospective chart review was performed to collect data. Comparative results were analyzed using the Mann – Whitney u test for continuous parameters and the student t – test. A Kaplan – Meier curve was constructed for post-operative mortality. Statistical significance was defined as a $P < 0.05$

Results: Operative mortality between both groups within 120 days post-procedure, showed no statistical difference (OR = 5.31% vs. EVSG = 3.12%). There were significant differences in estimated blood loss, hospital length of stay, ICU length of stay, units of blood transfused, hours on the ventilator, re-intubation rates, and post-operative renal insufficiency in favor of the EVSG technique. Early re-admissions (< 120 days) for the EVSG group was 15.9% vs. 18.4% in the OR group ($P < .08$). Late re-admissions (>120 days) was 7.1% in the EVSG patients and 1.8% in the OR patients. ($P < .005$). 88% of re-admissions for the EVSG group were secondary to endoleak management. Type I and Type III endoleaks were treated aggressively. Selective management was used for Type II endoleaks. On follow up, 19% of EVSG patients had endoleaks. There was a 9.73% re-intervention rate. 2.2% of the patients required multiple interventions.

Conclusion: EVSG repair of AAA has less short-term morbidity with comparative mortality when compared with OR. However, this comes with a significant cost due to a significant re-intervention rate in mid-term follow up. Continued efforts should be made to identify those patients at risk of endoleak and technological advances made to decrease their occurrence determined.