

**#14 INFLAMMATORY CYTOKINE GENE EXPRESSION DURING  
ABDOMINAL AORTIC ANEURYSM SURGERY: A DIRECT  
COMPARISON OF OPEN VS ENDOVASCULAR REPAIR.**

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**Objectives:** The inflammatory response associated with aortic cross clamping may contribute to the morbidity of infrarenal aortic aneurysm repair (AAA). Endovascular aortic aneurysm repair (EVAR) is a less invasive alternative to conventional surgery. The purpose of the study is to determine whether EVAR is associated with a decrease in inflammatory cytokine gene expression.

**Methods:** Twenty-one patients undergoing open repair (n=14) or EVAR (n=7) of AAA were enrolled in this prospective, nonrandomized study. Venous blood was drawn prior to and during aortic cross clamping or device deployment, and at 30 and 120 minutes after reperfusion or deployment. Total RNA extracted from peripheral mononuclear cells was analyzed by semiquantitative RT-PCR for the expression of cytokines IL-1, IL-6, TNF and MCP-1 after normalization for G3PDH.

**Results:** Cytokine expression increased in both groups during cross clamping or device deployment ( $p < 0.05$ ). At 30 and 120 minutes following reperfusion or deployment cytokine expression was significantly greater in patients undergoing open repair ( $p < 0.05$ ). At 120 minutes, cytokine levels in EVAR were closer to baseline than in the open repair group.

**Conclusions:** EVAR is associated with a diminished cytokine response when compared to open AAA repair. The lower morbidity seen in patients following EVAR may be attributable to the decreased systemic inflammatory response.