

#7 **THE SELECTIVE APPLICATION OF ENDOVASCULAR
TECHNIQUES FOR ABDOMINAL AORTIC ANEURYSM (AAA)
REPAIR**

Timothy M. Sullivan, M.D., Eugene M. Langan, M.D.,
Bruce H. Gray, M.D., Dawn Blackhurst, Joseph Miskulin,
Christopher Carsten, M.D., Spence M. Taylor, M.D.,
David L. Cull, M.D., Bruce A. Snyder, M.D., Jerry Youkey, MD

Greenville Hospital System, Greenville, SC

Purpose: To evaluate the results of contemporary aneurysm treatment, utilizing a highly selective approach to endovascular repair (EVAR).

Methods: The records of all patients having elective AAA repair from February 1999 through February 2001 were reviewed from a prospective database.

Results: 209 patients underwent elective repair of AAA. Patients were selected for EVAR based on appropriate anatomy (per manufacturers' recommendations) and severity of medical comorbidities. Eighty-two patients (39%) had EVAR (Medtronic/AneuRx or Gore Excluder), while the majority (127/209, 61%) had open repair. Mean number of comorbidities was actually greater for the open group (3.3 vs 3.9, $p < 0.01$). Intravascular ultrasound was employed for all EVAR procedures. There was one conversion to open repair. Mean length of stay (2.0 vs 11.8 days, $p < 0.001$), mean blood loss (283 vs 1876cc, $p < 0.001$), major complications ($p < 0.001$) and 30-day mortality (0 vs 5.5%, $p = 0.044$) all favored the endovascular group. At 17.6 months mean follow-up there has been one Type I endoleak, no ruptures, and no graft limb thromboses; mean aneurysm size has decreased from 5.73 to 4.85 cm. Despite shorter mean follow-up, greater aneurysm shrinkage was seen with AneuRx grafts ($p = 0.035$). At first follow-up, there were 7 Type II endoleaks; one required coil embolization. At last follow-up, 5 remain, all in stable or shrinking aneurysms. By life-table analysis, freedom from endoleak is 88.3% at 22.7 months.

Conclusions: EVAR offers significant advantages over conventional repair; highly selective application can result in durable prevention of rupture. With appropriate selection, however, the majority of patients will still undergo open repair.