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# Evaluation of endovascular abdominal aortic aneurysm repair in nonagenarians

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**ABSTRACT.** The aim of this study was to investigate the safety and efficacy of endovascular abdominal aortic aneurysm repair (EVAR) in nonagenarians. From May 2003 to March 2011, 12 nonagenarian abdominal aortic aneurysm patients were treated with endovascular repair including two emergencies. The mean age of patients was 92.5 ± 1.6 years (range: 90-95 years), and 11 of the patients (91.7%) were men. Technical success, perioperative complications, and mortality were evaluated. The follow-up protocol consisted of computed tomography angiograms or ultrasounds performed at 3, 6, 9, and 12 months, and annually thereafter. Seven patients were operated under general anesthesia and five under local anesthesia. There was 100% technical success with no need for open conversion. The endografts used included two Endurant endografts, four Talent endografts, and six Zenith endografts. The mean operative time was 3.4 ± 1.3 h, mean procedural blood loss was 150.5 ± 60.5 mL, and mean postoperative length of stay was 8.4 ± 2.3 days. Mortality rates were 8.3% at 30 days, 16.7% at 1 year, 41.7% at 3 years, and 75% at 5 years. The mean survival of the 11 patients who expired beyond the first 30 days was 28.5 months (range: 9-73 months). Overall, EVAR in nonagenarians

 

was associated with acceptable procedural success and perioperative morbidity and mortality. The medium and long-term results suggested that EVAR may be of limited benefit in some patients who are aged >90 years. Therefore, individual patient selection is very important.

**Key words:** Abdominal aorta; Aneurysm; Stent; Endovascular repair; Nonagenarian

 