

Update on Endovascular Repair of Ruptured Abdominal Aortic and Thoracic Aneurysms: The Collected World Experience

NOTES

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Background

Case and single center reports have documented the feasibility and suggested the effectiveness of endovascular graft (EVG) treatment of ruptured abdominal and thoracic aortic aneurysms (RAAAs and RTAAs). Accordingly, we collected the world experience.

Methods

Rupture was defined as blood outside the aneurysm sac. Information was received from 48 centers on 442 RAAAs and 221 RTAAs treated with an EVG. Many patients were hypotensive, some had free intraperitoneal or intrapleural ruptures, and many were prohibitive risks for open repair. Local, epidural, or general anesthesia was used. Fluid resuscitation was often restricted. Supraceliac aortic balloon control was required in a few RAAA patients. For the RAAAs a variety of bifurcated and tubular EVGs were used including modular and unibody construction. For the RTAAs single or multiple tubular EVGs were used.

Results

Except for three centers, EVGs were used for RTAAs only after a computed tomography scan was obtained. EVGs were employed in 18 to 76% of all patients seen at each center with RAAAs or RTAAs. Of the 442 patients receiving an EVG for a RAAA, 364 survived > 30 days, a procedural mortality of 18%. Of the 221 patients undergoing EVG treatment for a RTAA, 182 survived > 30 days, a procedural mortality of 18%.

Conclusions

This world experience reflects selective usage of EVGs for RAAAs and RTAAs. Nevertheless, the mortality of 18% and the successful treatment of patients inoperable by standard surgical techniques suggest that EVGs, when feasible, may provide better treatment outcomes than open surgery. Expanded use of EVGs in the ruptured aneurysm setting is supported.