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[MSB-28]

Treatment of Ruptured Abdominal Aortic Aneurysm: Long-Term Results of Endovascular Aortic Aneurysm Repair Versus Open Surgery

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Objective: This study aimed to investigate whether endovascular aortic aneurysm repair (EVAR) had a long-term survival benefit compared to open repair in ruptured abdominal aortic aneurysms (rAAAs).

Methods: This retrospective study involved 58 patients (mean age: 69.6±10 years) who underwent either open surgery or EVAR for rAAA between January 2015 and June 2024.

Results: Open surgery and EVAR groups were similar in terms of age. There were more male patients in the open surgery group. Intensive care unit and hospital stays were similar in both groups. The mean follow-up time was 41.2±40 months. The estimated cumulative survival rate in Kaplan-Meier analysis was %87.9 for the EVAR group and %40 for the open surgery group. Most of the deaths occurred in the first 30 days postoperatively. The reason for high mortality in open surgery was due to the hemodynamic status at arrival to the emergency service. Hemodynamically unstable patients usually had no time to wait for stent graft availability, and direct open surgery was required in these patients. A secondary factor that was important for successful treatment was the patient's anatomic convenience with EVAR treatment. Conversion to open surgery was approximately 40% due to the anatomy of the hostile neck and iliac vessels.

Conclusion: An experienced team and a hybrid operation room with adequate equipment for optimal imaging and conversion to open surgery are essential for reducing mortality in rAAA. Mortality and morbidity with EVAR appear to be low compared to open surgical treatment in patients with rAAA.

Keywords: Abdominal aortic aneurysms, complications, endovascular aneurysm repair, open surgery, mortality.

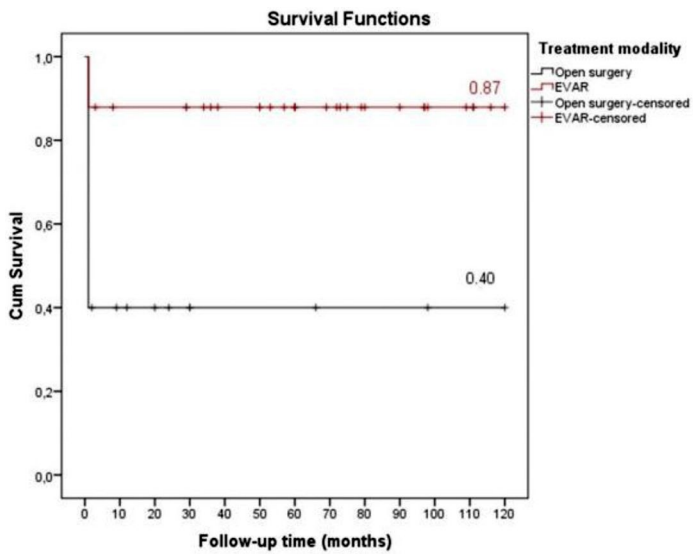

Figure 1. Cumulative survival rates in open surgical treatment and EVAR according to Kaplan-Meier analysis.

References

1. Böckler D, Holden A, Krievins D, de Vries JP, Peters AS, Geisbüsch P, Reijnen M. Extended use of endovascular aneurysm sealing for ruptured abdominal aortic aneurysms. Semin Vasc Surg 2016;29:106-113. doi: 10.1053/j.semvascsurg.2016.09.002.
2. Patel R, Sweeting MJ, Powell JT, Greenhalgh RM; EVAR trial investigators. Endovascular versus open repair of abdominal aortic aneurysm in 15-years' follow-up of the UK Endovascular Aneurysm Repair trial 1 (EVAR trial 1): A randomised controlled trial. Lancet 2016;388:2366-74. doi: 10.1016/S0140-6736(16)31135-7.
3. Desgranges P, Kobeiter H, Katsahian S, Bouffi M, Gouny P, Favre JP, et al. Editor's Choice - ECAR (Endovasculaire ou Chirurgie dans les Anévrysmes aorto-iliaques Rompus): A French randomized controlled trial of endovascular versus open surgical repair of ruptured aorto-iliac aneurysms. Eur J Vasc Endovasc Surg 2015;50:303-10. doi: 10.1016/j.ejvs.2015.03.028.
4. IMPROVE Trial Investigators. Comparative clinical effectiveness and cost effectiveness of endovascular strategy v open repair for ruptured abdominal aortic aneurysm: Three year results of the IMPROVE randomised trial. BMJ 2017;359:j4859. doi: 10.1136/bmj.j4859.