

# Paradigm shift in surgical treatment of mycotic abdominal aortic aneurysms

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A new study from researchers at Uppsala University and the Uppsala University Hospital shows a paradigm shift in the surgical treatment of mycotic abdominal aortic aneurysms. The study shows that since 2001 a majority of repairs are being performed with endovascular aortic repair, an alternative surgical approach in which the aorta is repaired through small incisions in the groins.

A recent study performed by the Uppsala vascular research group has investigated all patients treated for the rare condition of mycotic [abdominal aortic aneurysms](#) (MAAAs) in Sweden, between 1994-2014.

MAAAs are caused by bacterial infection in the aortic wall with subsequent aneurysm development. These aneurysms have a high risk of rupture with risk of fatal bleeding. The patients are old and have severe co-existing diseases. The prognosis is very poor.

Successful management relates to early diagnosis and immediate [treatment](#) comprising surgery and antibiotics. Traditionally, MAAAs have been surgically treated with open repair (OR) in which the disease is resected in its entirety and a new prosthesis is implanted to replace the resected aorta. However, most patients are too sick to cope a traditional operation, and the survival numbers have been disappointing. Endovascular aortic repair (EVAR) is an alternative surgical approach, in which the aorta is repaired through a minimal-invasive surgical approach through small incisions in the groins, which is particularly appealing in these old, weak patients. Because the disease is very rare, no

reliable comparison between OR and EVAR has been possible for MAAAs.

By using the national Swedish vascular registry (Swedvasc), the investigators have analysed all MAAA repairs performed in Sweden over a 21-year period. The aim was to assess survival after MAAA repair with OR and EVAR, and rate of complications and reoperations, as well as time-trends in [surgical treatment](#).

The present study encompasses the largest cohort of the disease ever, and is unique because for the first time a reliable comparison is possible between OR and EVAR.

The study shows a [paradigm shift](#) in treatment of MAAAs in Sweden, with a majority of repairs being performed with EVAR since 2001. It demonstrates that EVAR has superior survival compared with open repair on short-term, without disadvantages such as higher rate of complications or reoperations.

The authors conclude that EVAR is a durable surgical option for treatment of MAAA, and is an acceptable alternative to open repair. With access to a minimally invasive technique for treatment of this fatal disease, more elderly patients can potentially be offered surgical intervention, and may thus save more lives.

**More information:** Karl Sörelius et al. Nationwide Study of the Treatment of Mycotic Abdominal Aortic Aneurysms Comparing Open and Endovascular Repair, *Circulation* (2016). [DOI: 10.1161/CIRCULATIONAHA.116.024021](https://doi.org/10.1161/CIRCULATIONAHA.116.024021)

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