

# Endoluminal Repair of Mycotic Aneurysms: Can It Work Long-Term, and When Should It Be the Treatment of Choice?

NOTES

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Mycotic aneurysms are dangerous as they are associated with a high risk of rupture, and are rare occurring in 1.3% of aortic aneurysms from a single unit.<sup>1</sup> Traditional surgical techniques include the débridement of all infected tissue with the use of muscle flaps or omentum to fill the defect. This is followed by revascularization with either extra-anatomic or in situ grafts including prosthetics soaked in antibiotics, homografts and autologous grafts, using deep veins from the leg. Open surgery is associated with a mortality of 27 to 33%,<sup>1,2</sup> and up to 20% require further surgery because of infection of the in situ graft.<sup>3</sup>

Endoluminal treatment of mycotic aneurysms is an attractive alternative and has an in-hospital mortality ranging from 0 to 40%.<sup>4,5</sup> However, the follow-up in these studies is relatively short, so the crucial question of durability remains unanswered. Endoluminal treatment may be the only option in very sick patients who are not fit enough to withstand the onslaught of extensive surgery. It may also temporize a difficult clinical situation so that definitive surgery can be undertaken at a later date if the patient's condition improves sufficiently.

Why should endovascular treatment work? The infection that caused the aneurysm may have been eliminated by antibiotics given empirically to a patient with a high fever and leucocytosis. One study showed that no microbes could be isolated in 6 of 15 patients presenting with mycotic aneurysms despite the finding of gas in the aortic wall on computed tomography scan and purulent periaortic collections at surgical exploration.<sup>2</sup> Implantation of foreign material in such patients should have a good outcome, as the chances of the endograft becoming infected are very low.

The optimum length of antibiotic therapy is unknown. Some suggest that the antibiotics should be continued for life. Others until the inflammatory markers such as the erythrocyte sedimentation rate, and C-reactive protein return to normal.

Techniques to make the device resistant to microbes will be developed in the future, perhaps using a hybrid prosthesis comprising the patient's own tissue. Better endoprostheses with increased long-term durability are essential, particularly if the patients are young with a relatively long life expectancy.

## References

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