

■ ENGLISH SUMMARY

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## Sutureless valve replacement for aortic valve stenosis

### Background

Aortic valve stenosis is the most common valvular heart disease in the Western world. The number of patients will increase in the future due to the ageing of the population. The elderly also have more concomitant diseases. New minimally invasive techniques have been developed in order to decrease the complication risk and improve clinical outcomes.

### Methods

In this MUMM (Managed Uptake of Medical Methods) review, the safety and effectiveness of sutureless valve replacement in high-risk patients was evaluated.

Thirteen studies were included in the analysis. The included studies were mainly case series and some small matched comparative studies. There were no randomised controlled trials comparing different surgical approaches in aortic valve replacement.

### Results

No conclusions could be drawn on survival due to lack of randomised trials. Sutureless aortic valve replacement did not increase early adverse events or complications when compared with traditional open-heart surgery aortic valve replacement or transcatheter aortic valve implantation (TAVI). Cardiopulmonary bypass and aortic cross-clamping times were shorter than when using open-heart surgery. According to one study, paravalvular leak/regurgitation was significantly less common with sutureless aortic valve replacement than in transcatheter aortic valve implantation. The procedure is also clearly less expensive than TAVI.

### Conclusions

Based on scant research evidence sutureless aortic replacement can be an alternative to traditional valve implantation in the treatment of patients with high-risk aortic valve stenosis using a minimally invasive surgical approach. Randomised trials and long-term results are, however, lacking.