

# Percutaneous transcatheter edge-to-edge repair of severe tricuspid regurgitation with off-label use of the MitraClip-system after failed surgical tricuspid repair – a case report

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## Background

Percutaneous transcatheter edge-to-edge repair of severe tricuspid regurgitation (TR) with off-label use of the MitraClip-system has shown promising results. We herewith report a case with early-recurrent severe functional TR after surgical tricuspid valve repair and aortocoronary bypass graft surgery.

## Case summary

We present a 65-year-old man who underwent aortocoronary bypass graft surgery and surgical tricuspid valve repair with a Cosgrove band (36 mm) annuloplasty because of coronary artery disease with ischaemic cardiomyopathy (left ventricular ejection fraction 35%) and severe secondary TR due to annular dilatation.

After the operation the patient was haemodynamically unstable and continually dependent on vasopressors. Echocardiographic evaluation revealed recurrent severe functional TR. Due to the inability to wean the patient from inotropic support over four weeks and the high risk of repeat open heart surgery the heart team decision was to go for a minimally invasive interventional approach using the MitraClip-system to treat the severe TR.

The procedure was performed in the cathlab under general anaesthesia with transoesophageal echocardiography and fluoroscopic guidance. The Cosgrove band complicated the echocardiographic guidance as well as the placement of the clip. Finally, 1 XTR-Clip was placed between the septal and the anterior leaflet.

Tricuspid regurgitation improved from massive to mild with a mean pressure gradient of 2 mmHg. Three days after the procedure the patient could be transferred from the intensive care unit to the general ward and was released from hospital 24 days later in good physical condition.

A follow-up echocardiography 4 months later still showed only mild TR.

## Conclusions

This is a case report of the use of the MitraClip system in tricuspid position in a patient after tricuspid surgical repair with a good technical result and favorable clinical outcome, suggesting that this technique might offer a treatment option to highly selected patients with recurrent severe secondary TR after failed surgical repair.

