Functional prolapse in Barlow´s syndrome:
Endoscopic mitral valve repair

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Background

Mitral valve repair is the gold standard for mitral valve regurgitation

Barlow valve is considered difficult to repair due to complex pathology

Simple repair strategy in a subgroup of patients:

presenting with a functional prolapse
due to a left ventricular wall motion abnormality
and paradox movement of papillary muscles,
together with a disjunction of the mitral valve annulus

Patients and Methods

n=430
Fully endoscopic repair (2015 to 5/2021) using 3D video system
33 Barlow´s syndrome patients with a functional prolapse

gender: 19 female, 14 male
mean age: 53 years

Diagnosis

Echo prolapse of both leaflets
abnormal wall motion:
systolic movement of papillary muscles towards the mitral annular plane
distance between tip of papillary muscle and free edge remains the same in diastole and systole

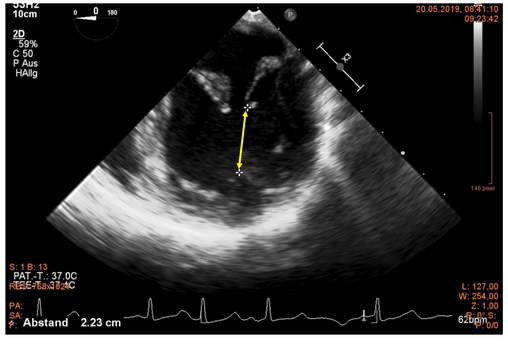
MRI shows disjunction of the mitral valve annulus

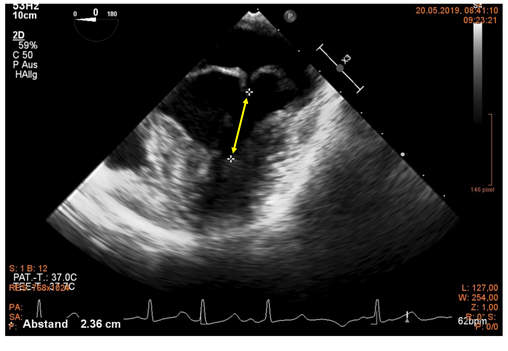
Water test before repair (arrested heart!) demonstrates valve competence

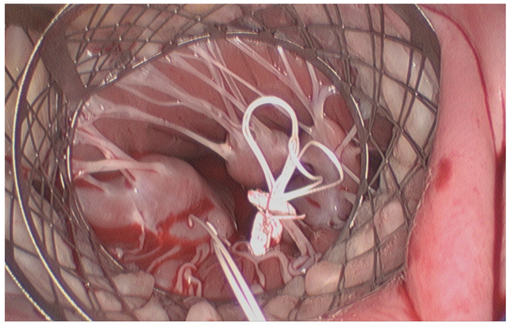
The repair strategy:

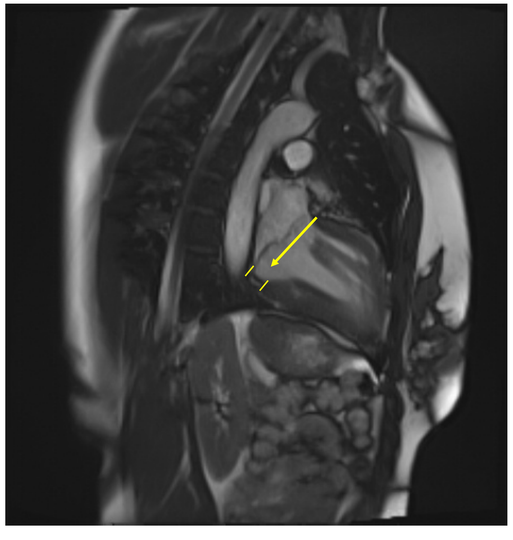
- implantation of a large annuloplasty ring
- height reduction of the posterior leaflet
- prolapsing anterior leaflet was not treated at all











Results

Repair rate	100%, no conversion to sternotomy
Concomitant tricuspid repair	21%
Concomitant cryo ablation	3%
Aortic X-clamp time (mean)	117 minutes
ECC time (mean)	197 minutes
Perioperative mortality	0%
vv ECMO respiratory failure	3%
Revision for bleeding	0%
No/trace of regurgitation at discharge	100%
FU mean 32 months	100% success rate

Conclusions

Barlow´s syndrome patients with a functional prolapse can be treated successfully with a **simple repair strategy**

The results of this technique are **promising** according to the literature

own early and mid-term **outcomes** in endoscopically treated patients are excellent

