

Mitral Valve Leaflet Augmentation for Ischemic Mitral Insufficiency

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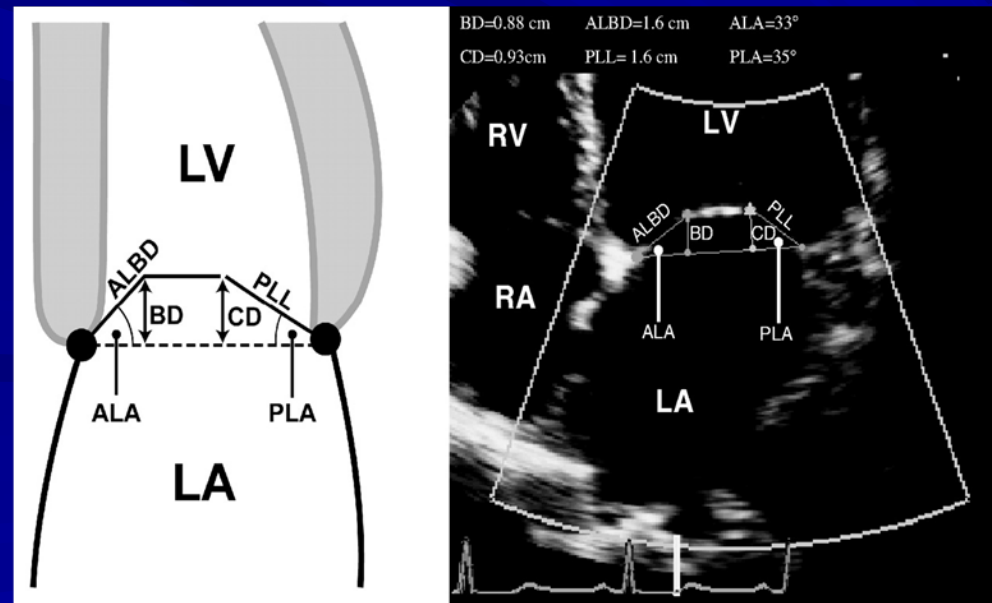
Conflict of interest

We declare absence of any potential conflict of
intrest

Ischemic Mitral Insufficiency

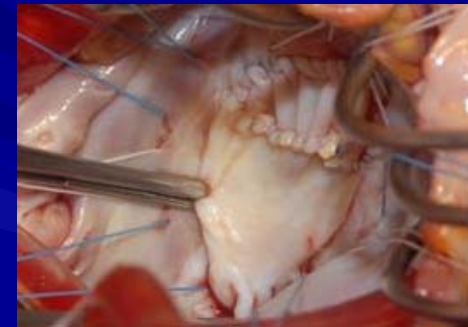
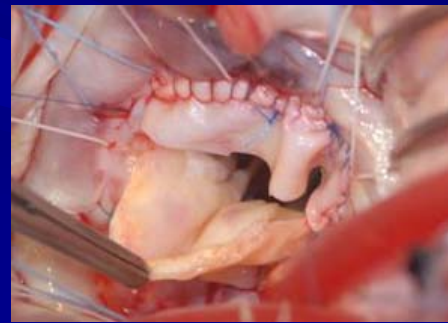
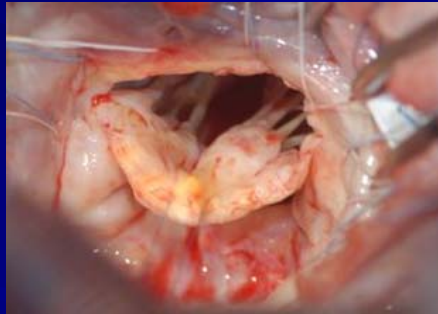
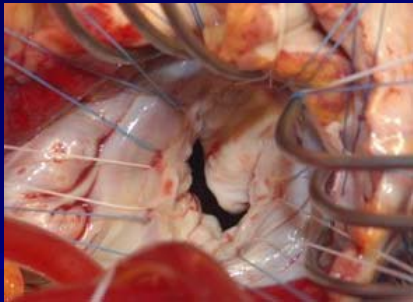
- Chronic Ischemic mitral regurgitation (IMR) is a common complex clinical entity, associated with poor long-term survival
- In many cases mitral valve (MV) annuloplasty is not enough and is associated with 25-40% recurrent MR
- Leaflet augmentation relates to advanced repairing technique and allows excellent leaflet coaptation and relief of leaflet tethering in patients that are poor candidates for conventional Undersized Annuloplasty

- Posterior leaflet angle $\geq 45^\circ$
- Tenting area $\geq 2.5 \text{ cm}^2$
- Coaptation distance $\geq 1 \text{ cm}$

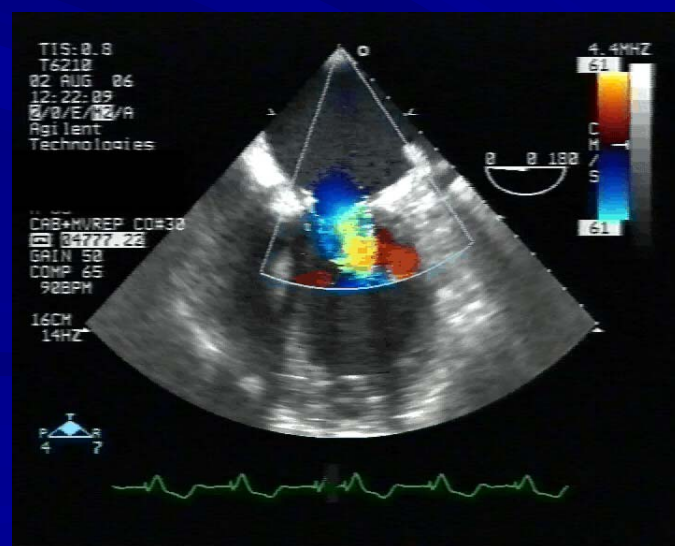
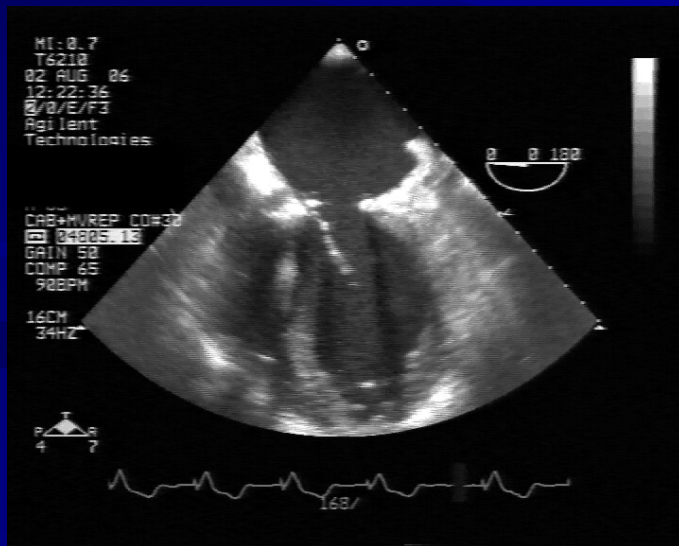
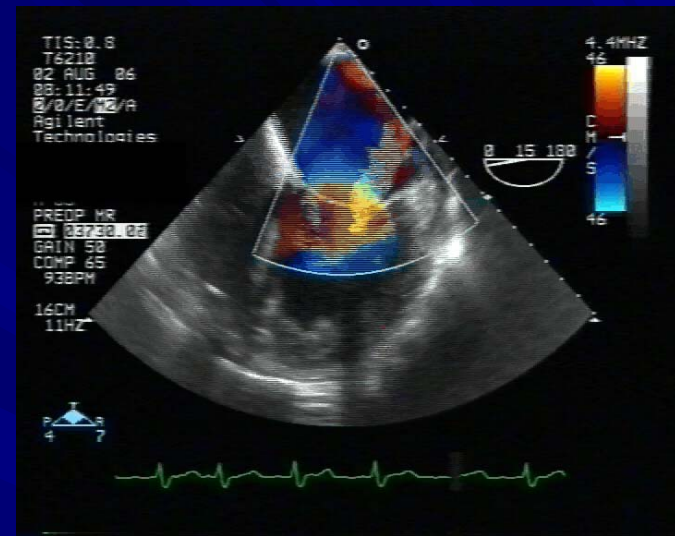
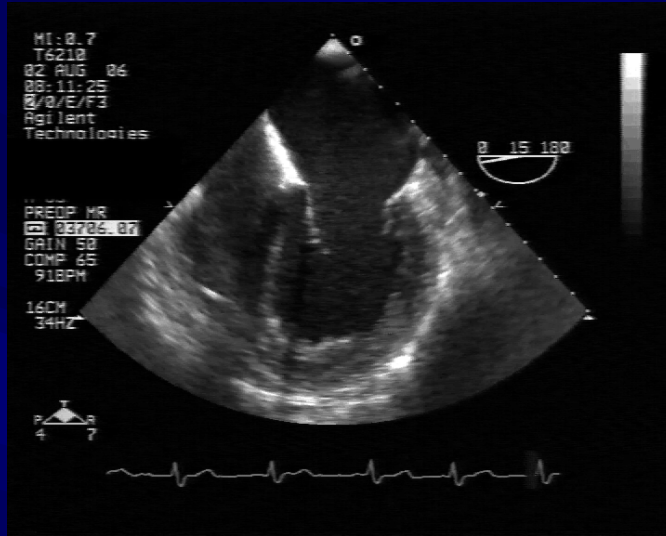


MV Leaflet Augmentation

- The technique consists of pericardial patch enlargement of the mitral leaflet and placement of a flexible non-undersized complete semi rigid ring
- Candidates for the repair were patients with advanced Ischemic MR that required an advanced MV Repair



Anterior Leaflet Augmentation



Patients data & results

- March 2006 till August 2012
- 30 patients
- 22 Male
- Mean EF $34 \pm 9\%$
- Mean FC 2.6 ± 0.9

Pre-Operative Echo	
MR grade 0/1	4 (13%)
MR grade 2	7 (23%)
MR grade 3	14 (47%)
MR grade 4	5 (17%)
Mean MR	2.7 ± 0.9

Patients data & results

Concomitant procedure	
Any Procedure	27 (97%)
CABG	25 (85%)
TVR / TVr	7 (23%)
AVR	3 (10%)

Patients data & results

early results

- No early mortality.
- 4 late mortalities 2 cardiac.
- One reoperation due to severe MR.
- Post op echo showed trivial to mild residual MR in 29 patients.

Patients data & results

late results

- Follow up duration 6.6 ± 16.2 mon.
- Mean functional class 2.8 ± 0.5
- EF $39 \pm 11\%$

Mean MR	1.6 ± 0.9
MR grade 0/1	15 (63%)
MR grade 2	6 (25%)
MR grade 3	1 (4%)
MR grade 4	2 (8%)
MR 2+ free	15 (63%)
MR 3+ free	21 (88%)

MV Leaflet Augmentation

Conclusions

- Mid-Long term clinical and echo results among patients undergoing MV leaflet augmentation surgery for IMR are encouraging with 88% freedom from severe MR.
- Surgery remains the mainstay of therapy for this condition.
- Restrictive annuloplasty is not a perfect therapy, thus further investigation is needed to seek an alternative and adjunctive approaches
- MV Leaflet Augmentation, that **directly addresses tethering** may provide a more efficacious treatment for patients with advanced Ischemic MR

Advanced surgical approaches for Advanced Ischemic MR



Thank You