Anterior Leaflet Augmentation for Chronic Ischemic Mitral Regurgitation

Boris Orlov, Yury Peisakhovich, Avinoam Shiran, Ofer Amir, Dan Aravot.
Lady Davis Carmel Medical Center, Haifa, Israel

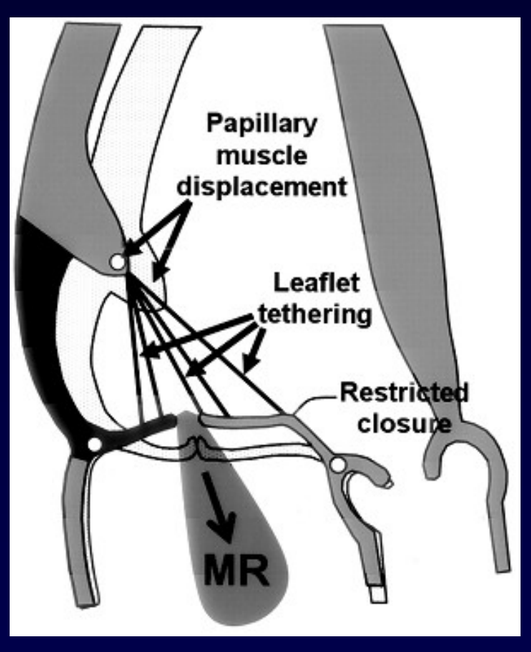
Purpose: Current surgical techniques for ischemic mitral regurgitation repair are unsatisfactory. We report our experience with mitral valve repair using the anterior leaflet augmentation technique.

Methods

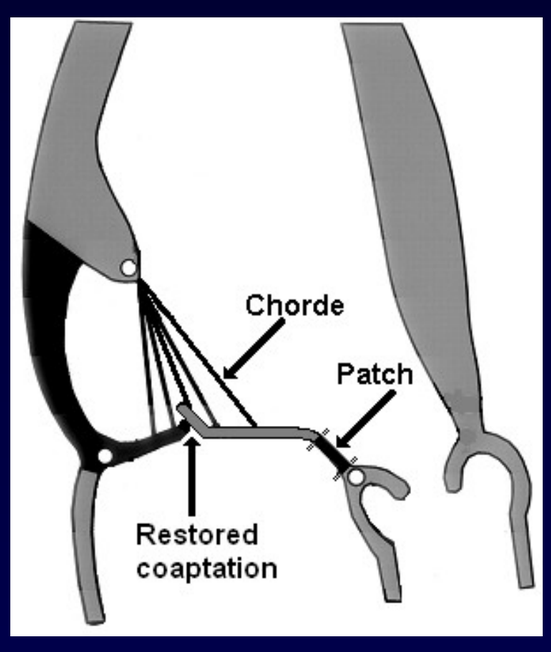
Between March 2006 and March 2007 we used anterior leaflet augmentation technique for ischemic mitral regurgitation in 7 patients

Age (y)	62.5 ± 9.1 (50-78)
Sex (% male)	71.4
Preoperative LVEF (%)	33.5 ± 6.2 (25-40)
Preoperative NYHA class	3.4 ± 0.5
Preoperative MR	
Severe	71%
Moderate	29%
Annuloplasty ring size (mm) (Semirigid Physio ring)	1.6 ± 30.9
No. of grafts	0.9 ± 3.1

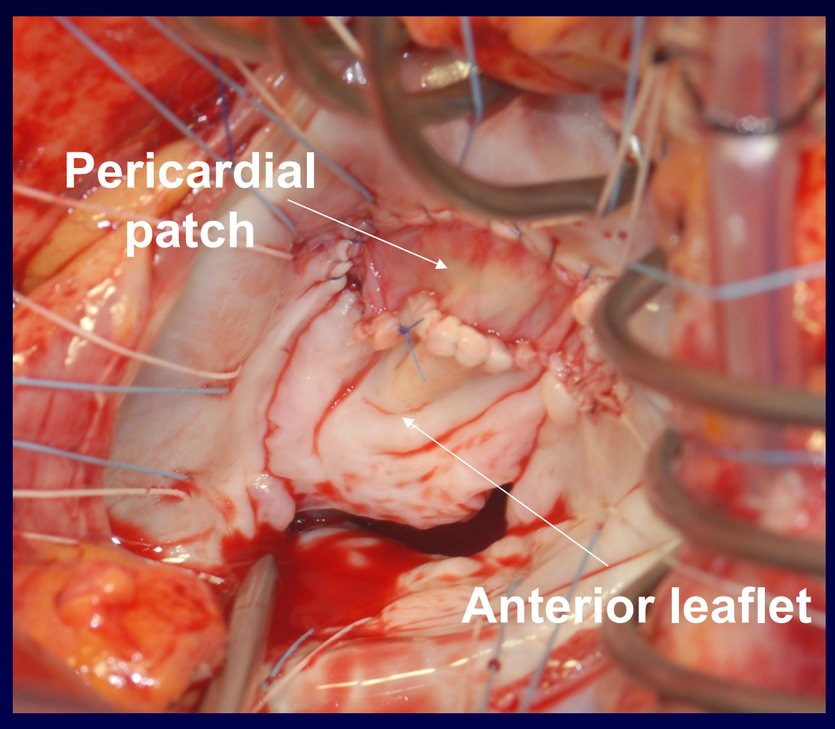
Mechanism of Chronic Ischemic MR



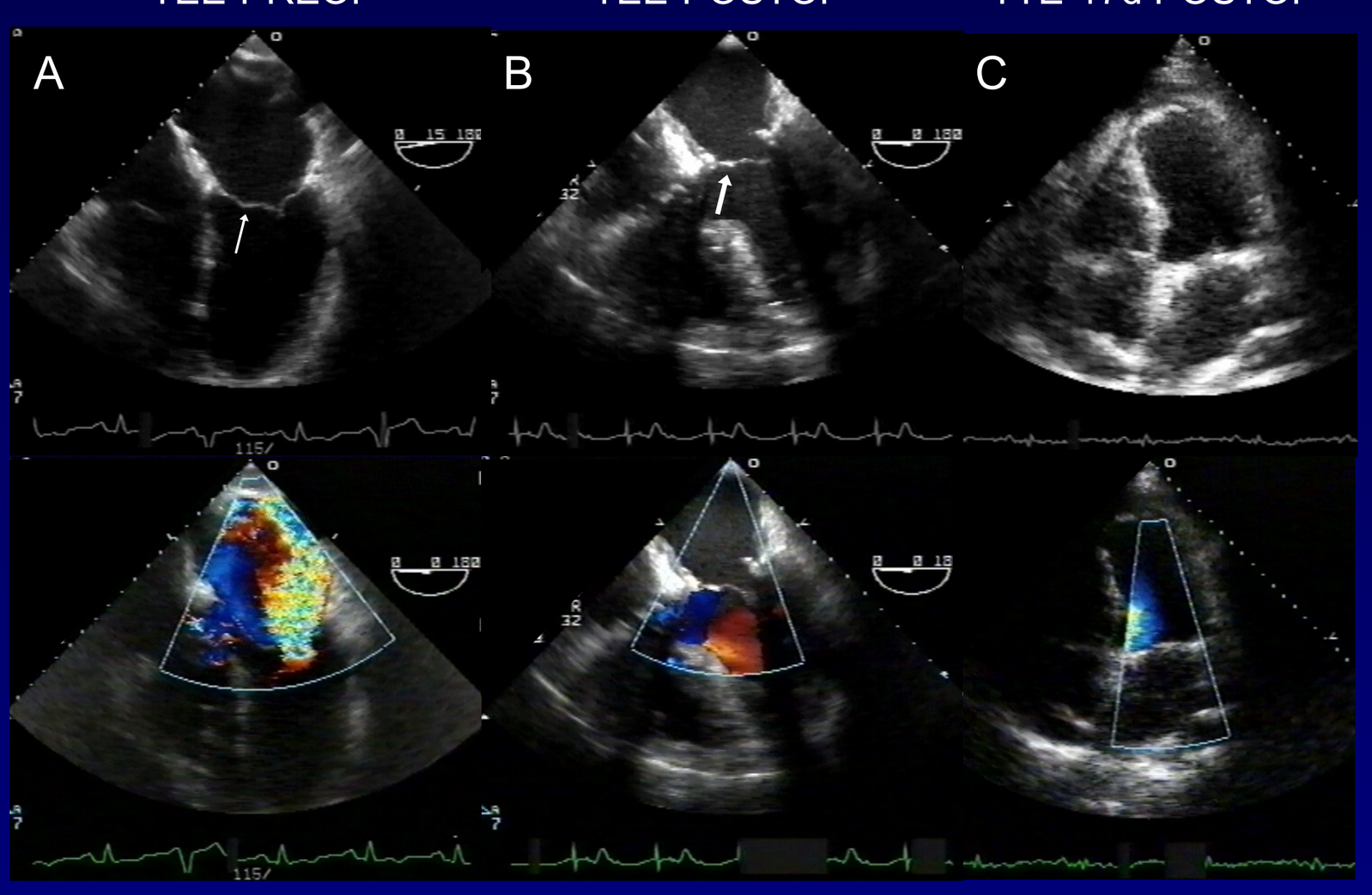
Anterior Leaflet Augmentation



Augmented Anterior Leaflet



Echocardiography before and after MV repair with anterior leaflet augmentation



A) Preop TEE showing malcoaptation and leaflet tethering (arrow) with severe MR. **B)** Postop TEE showing good coaptation, no tethering and the suture line of the anterior leaflet patch (double arrow) with no MR. **C)** TTE on the 17th postoperative day showing no MR

Results

- There was no operative mortality
- One patient died after 48d from non-cardiac complications; One patient with poor LVF died suddenly after 4 m
- Six patients had no or trivial MR postop; One patient had +2 MR by postop TEE and trivial MR by TTE 5 days later

Conclusion

Anterior leaflet augmentation improve coaptation and allow safe and effective repair for ischemic mitral regurgitation. Further study is needed to assess Long term results and outcome