

MitraClip™

Techincal Difficulties and Early or Late Complications



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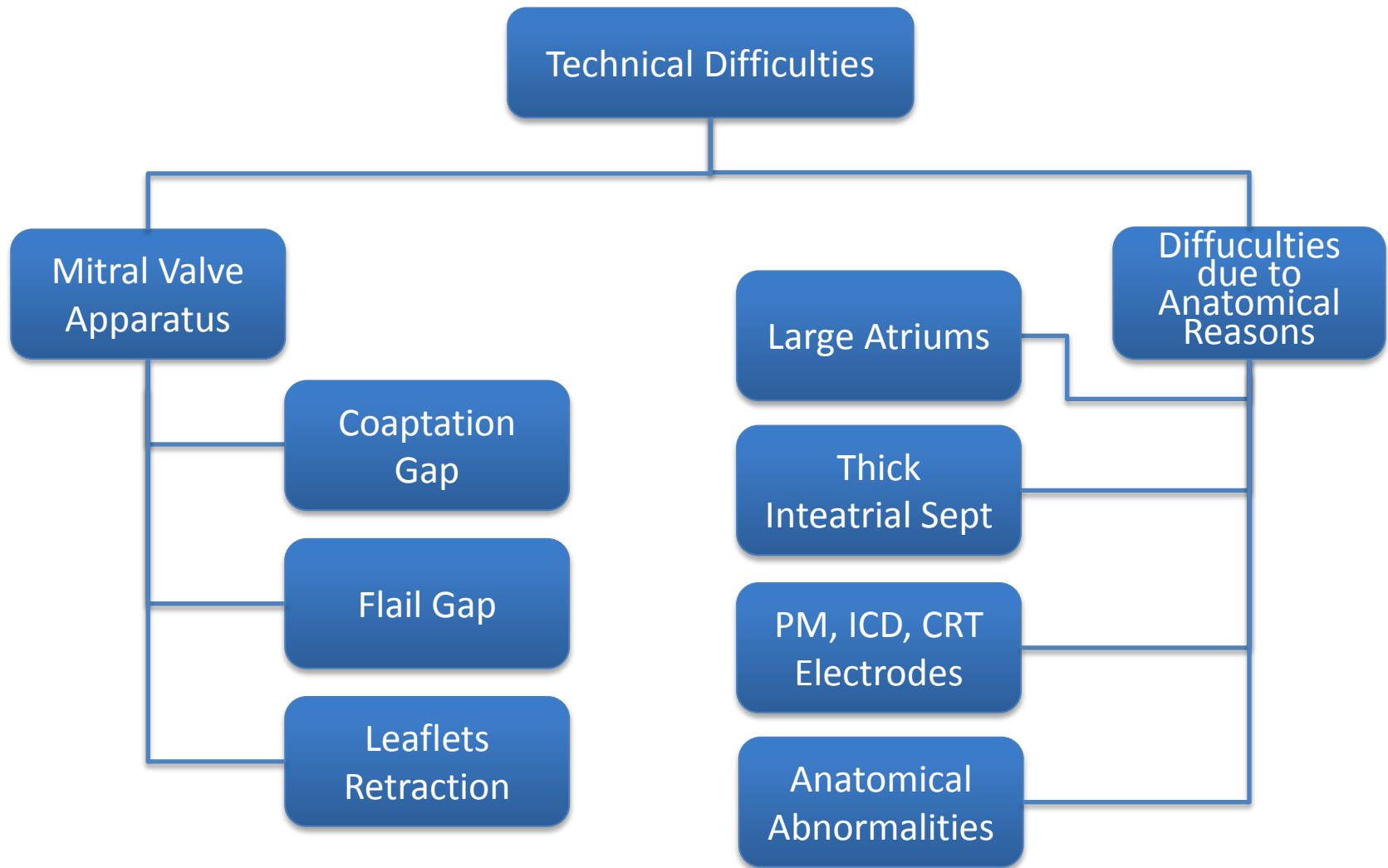
University of Catania, Italy



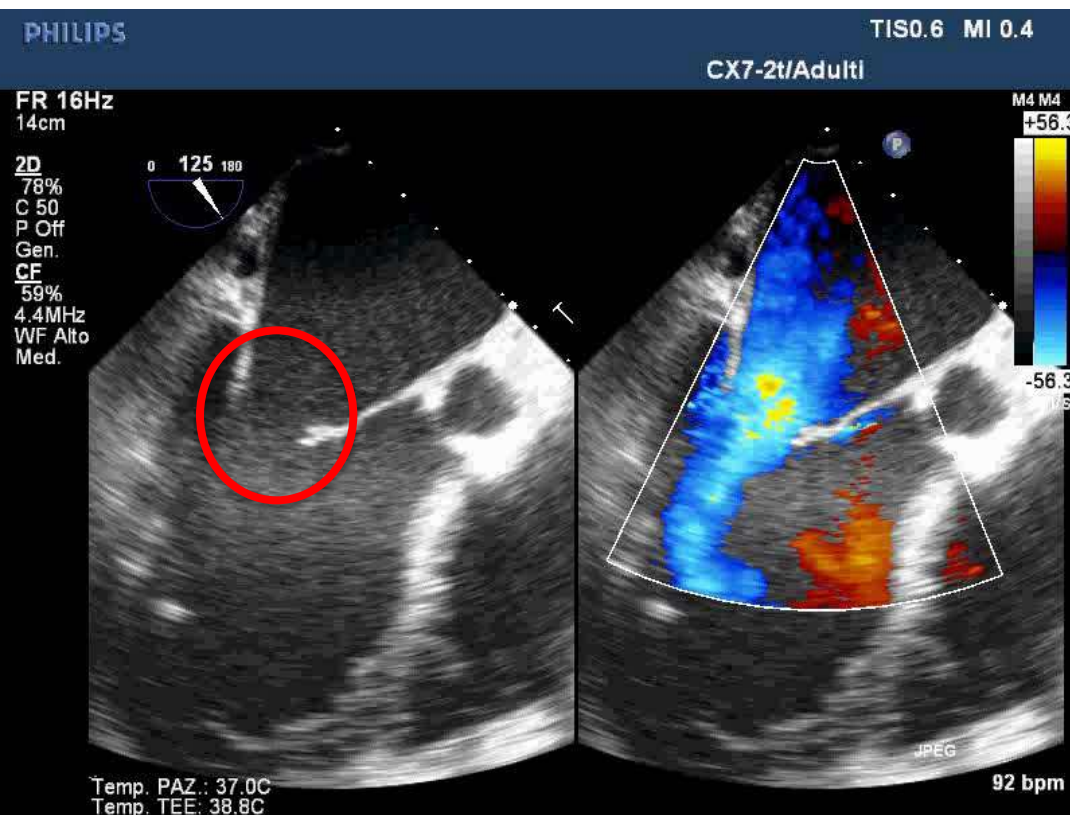
Ferrarotto Hospital
University of Catania



Technical Difficulties



Mitral Valve Apparatus Coaptation Gap

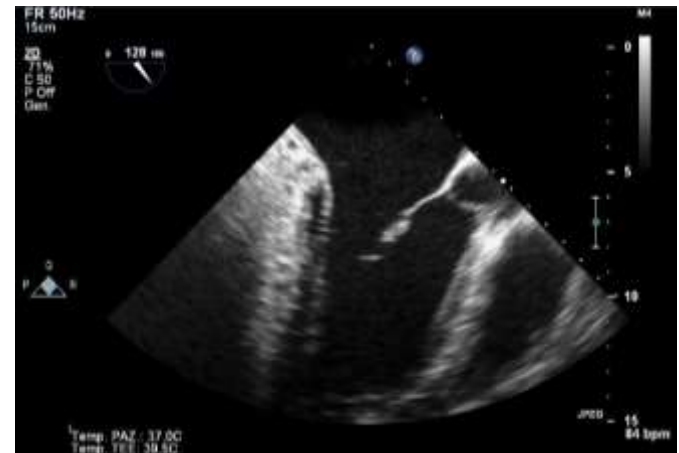
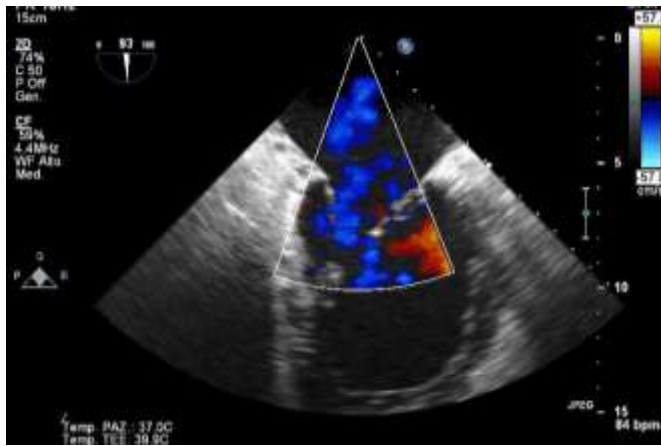


Mitral Valve Apparatus Coaptation Gap (Potential Solutions)

- ✓ *Use of Adenosin in order to reduce the leaflets movements*
- ✓ *Use of balloon inside IVC to reduce venous return*
- ✓ *Rapid Pacing 200 bpm*
- ✓ *Anti-Trendelenbourg position*
- ✓ *Use of diuretics*
- ✓ *Use more than one clip in order to approximate the leaflets before grasping the gap spot*

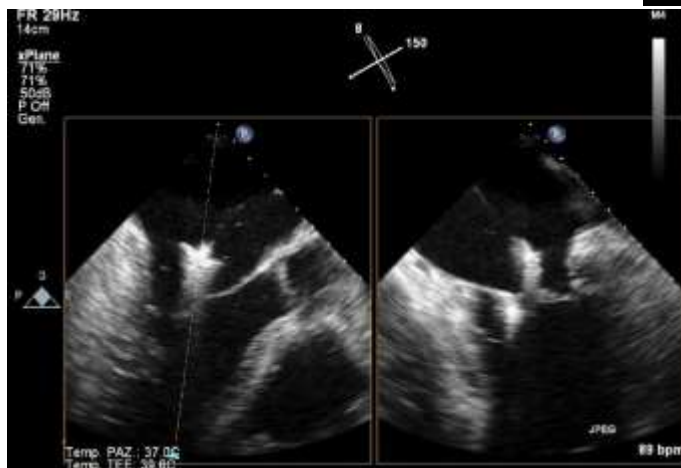
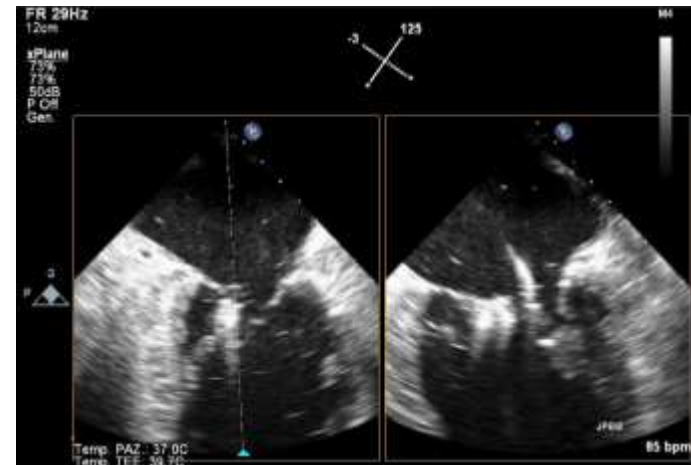


Mitral Valve Apparatus Severe Flail Gap

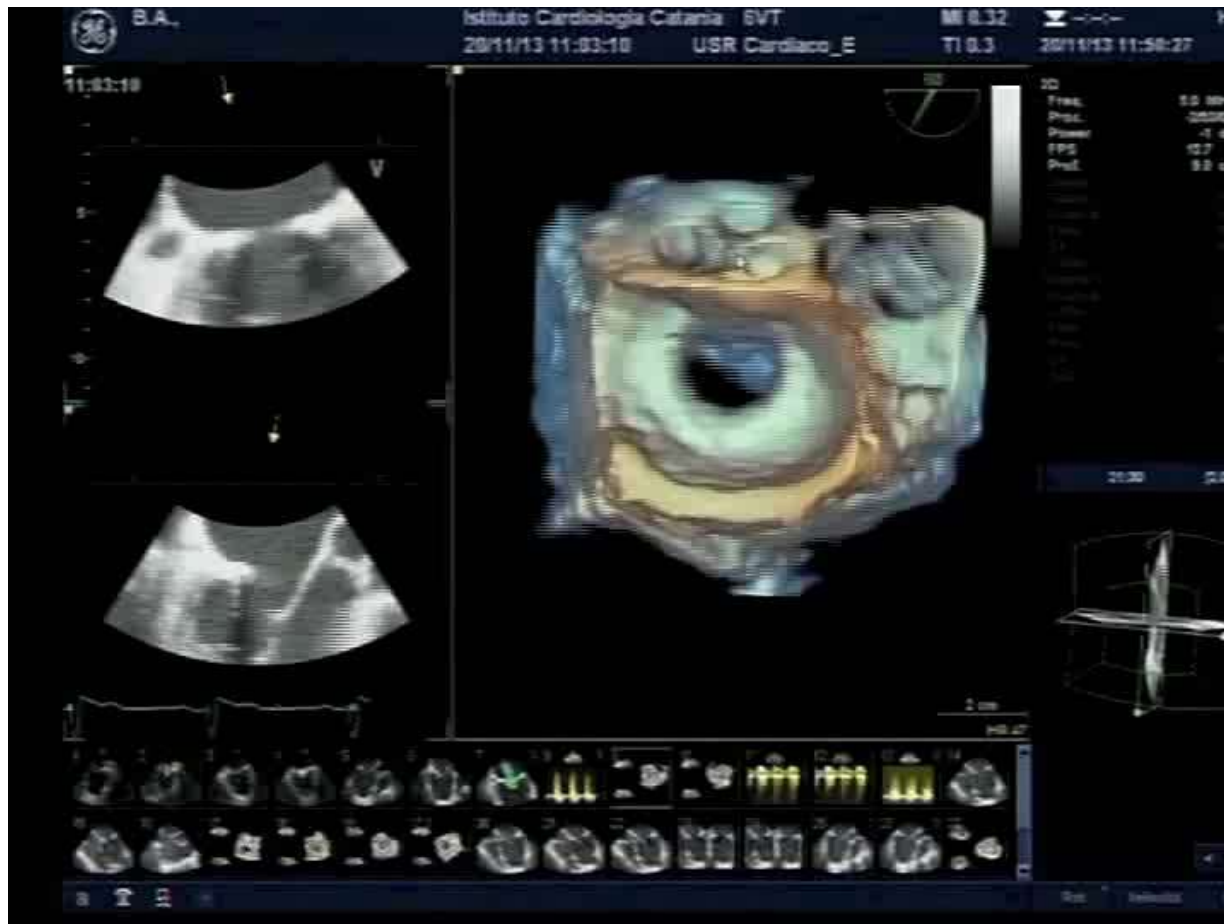


Mitral Valve Apparatus

Severe Flail Gap (medial-lateral clipping)



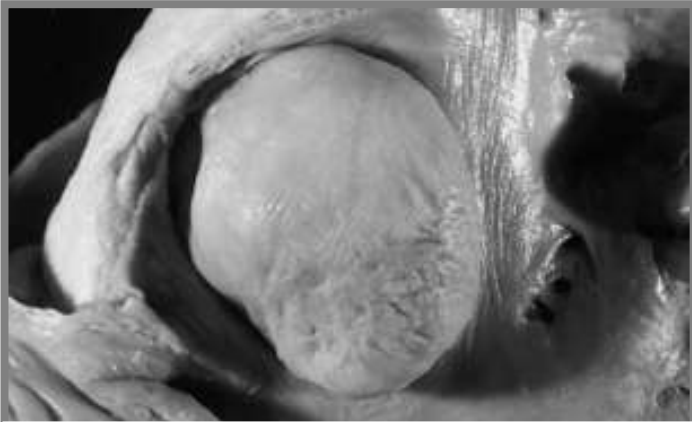
Mitral Valve Apparatus Severe Leaflets Retraction



Mitral Valve Apparatus Severe Leaflets Retraction

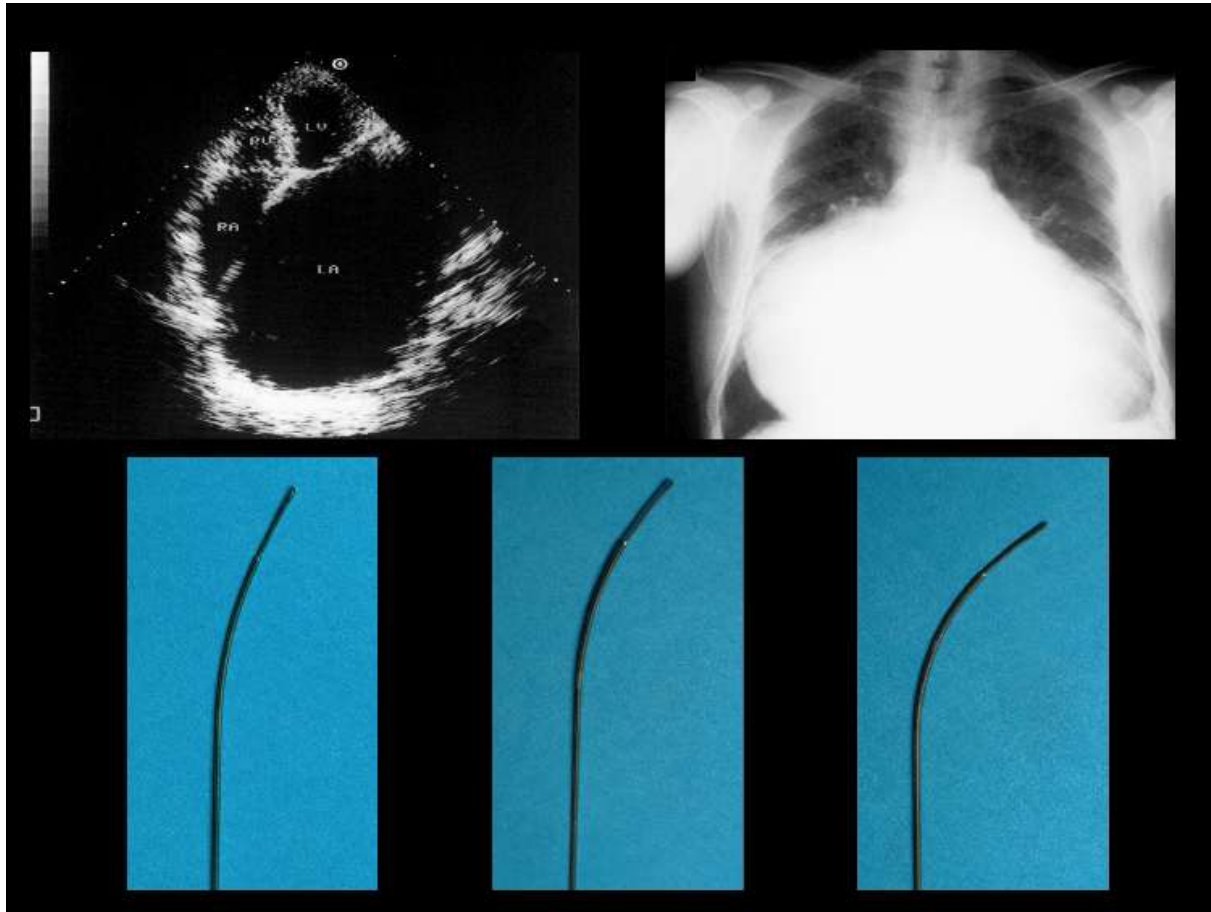


Anatomical Difficulties Atrial Septal Aneurysm

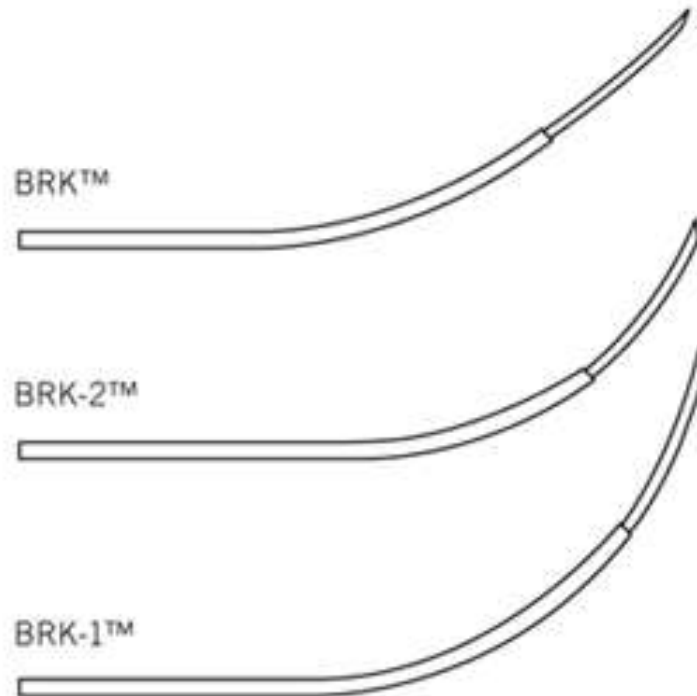


Anatomical Difficulties

Dilated Atrium



Anatomical Difficulties Dilated Atrium



Anatomical Difficulties Dilated Atrium



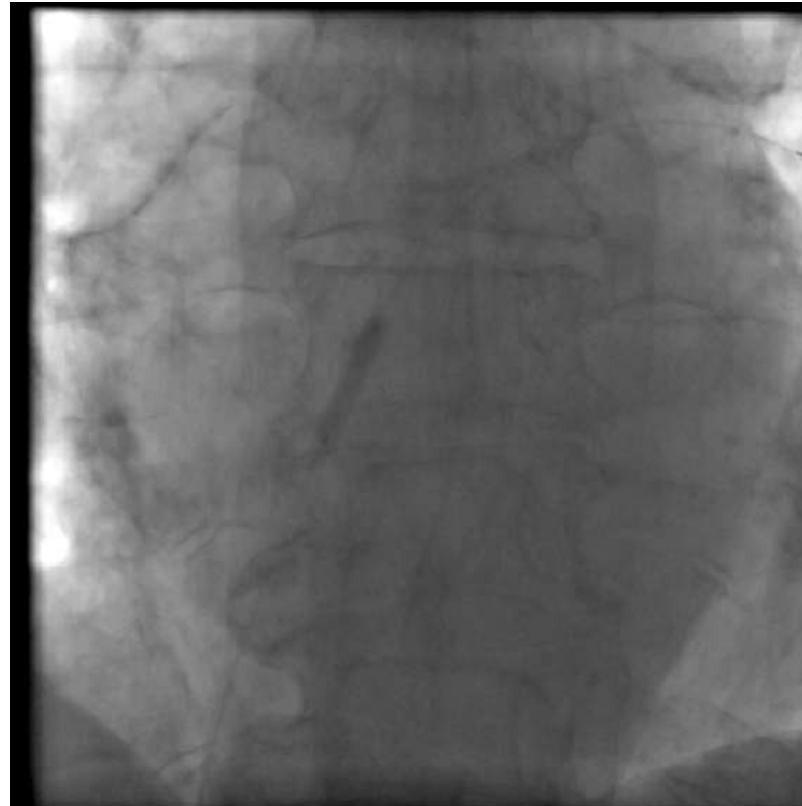
Anatomical Difficulties

Thick Septum



Anatomical Difficulties

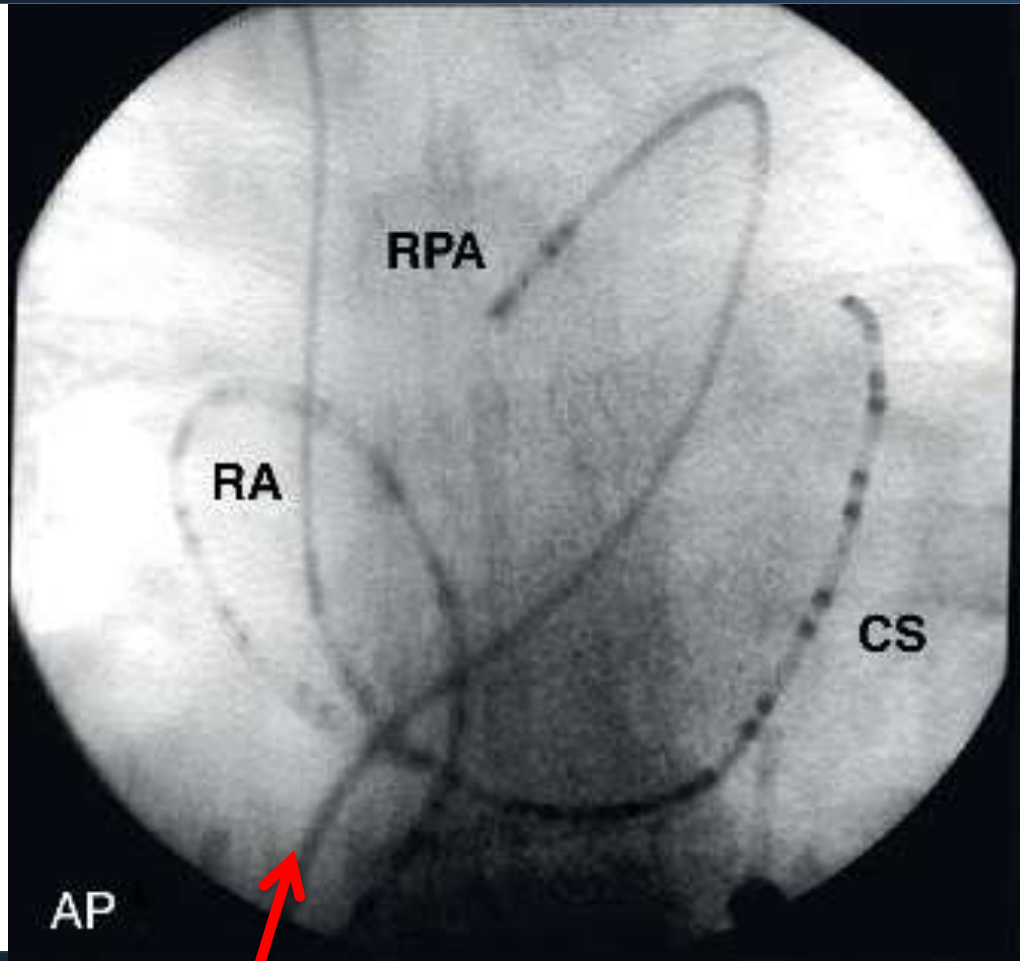
Thick Septum (ballooning)



Anatomical Difficulties Thick Septum (Radiofrequency)



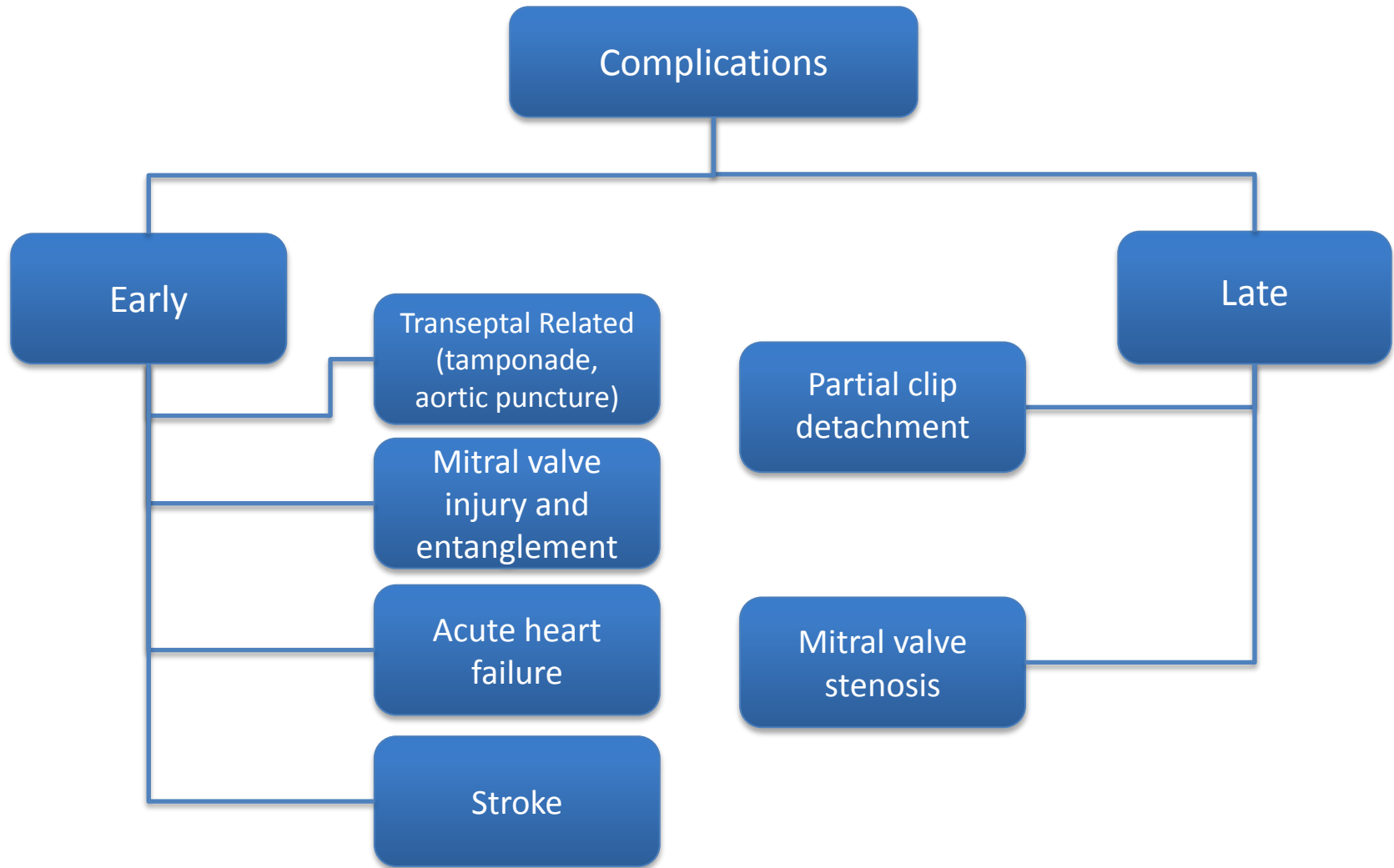
Anatomical Difficulties CRT ICD Electrodes



Anatomical Tragedy



Early and Late Complications



Early and Late Complications

ACCESS EU data

Reported by Site	FMR Patients N=393	DMR Patients N=117
MitraClip Device Embolization	0	0
Single Leaflet Device Attachment (SLDA)	2.8% (11/393)	9.4% (11/117)
Mitral Valve Surgery Within 12 Months Post-Index Implant Procedure	3.6% (14/393)	5.1% (6/117)
Second Intervention to Place an Additional MitraClip Device	2.5% (10/393)	3.4% (4/117)



Pericardial Effusion

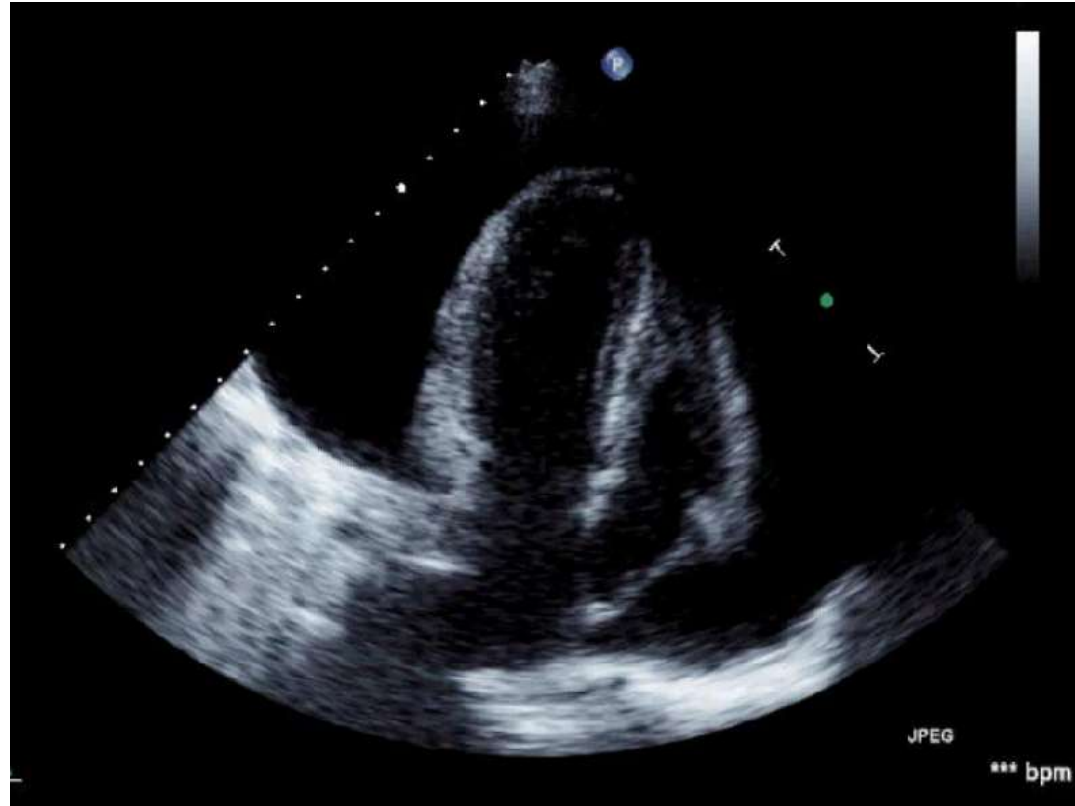
Hypotension



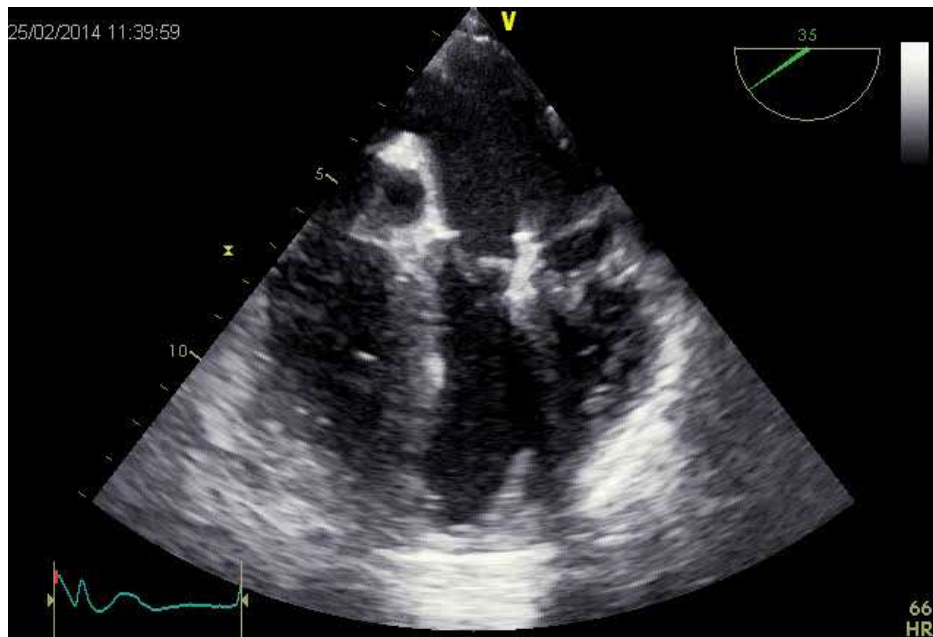
Consider the possibility of haemopericardium



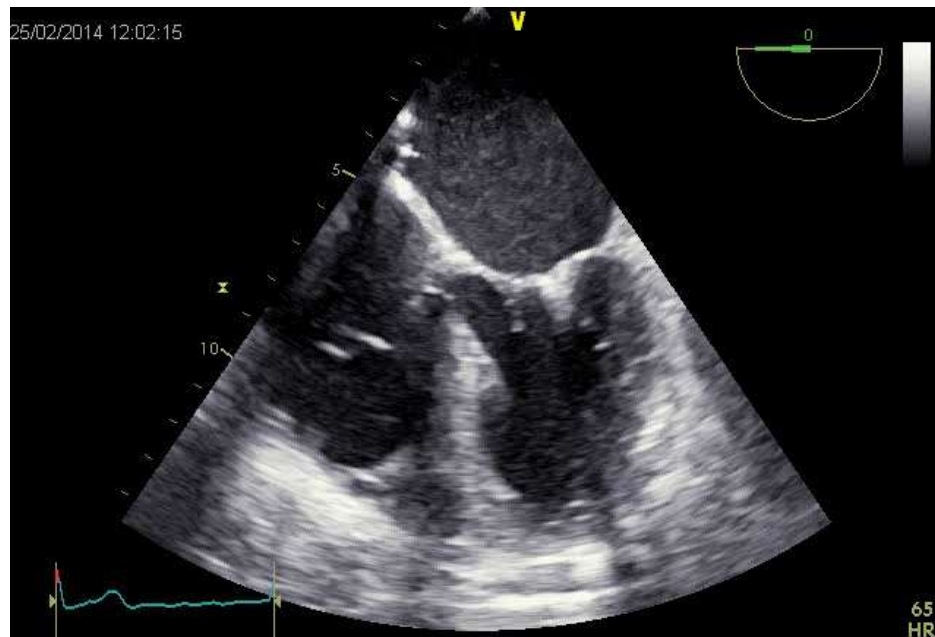
TEE Identification



Stroke and Acute Heart Failure



Post 1st Clip

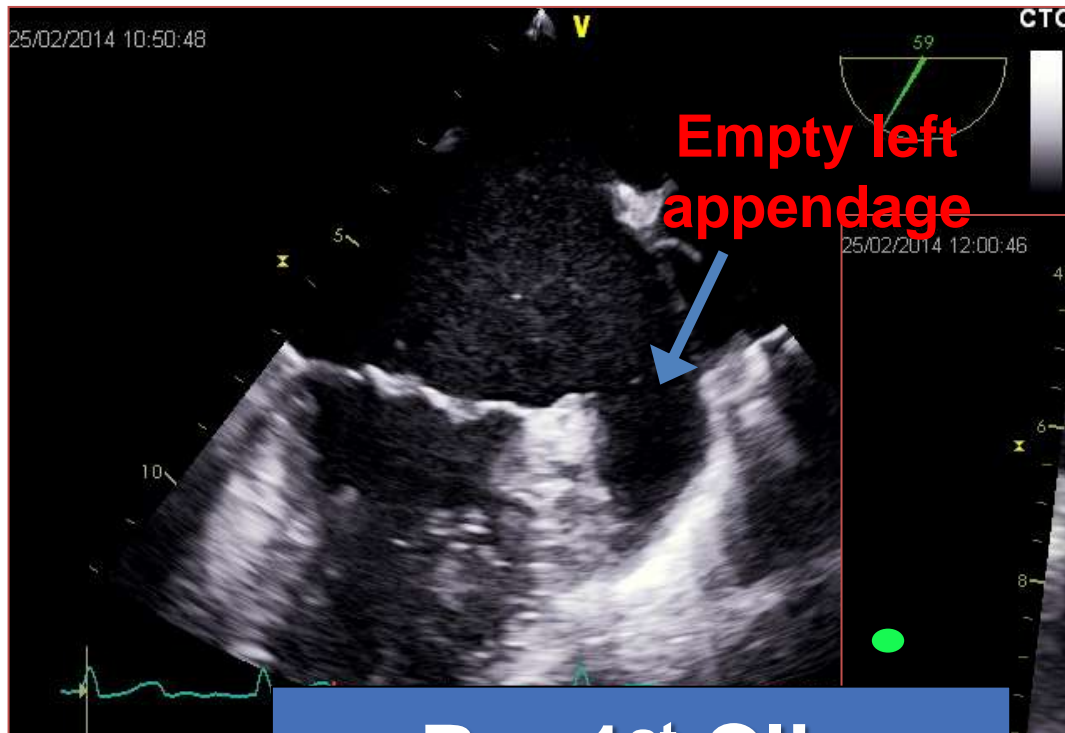


Post 2nd Clip

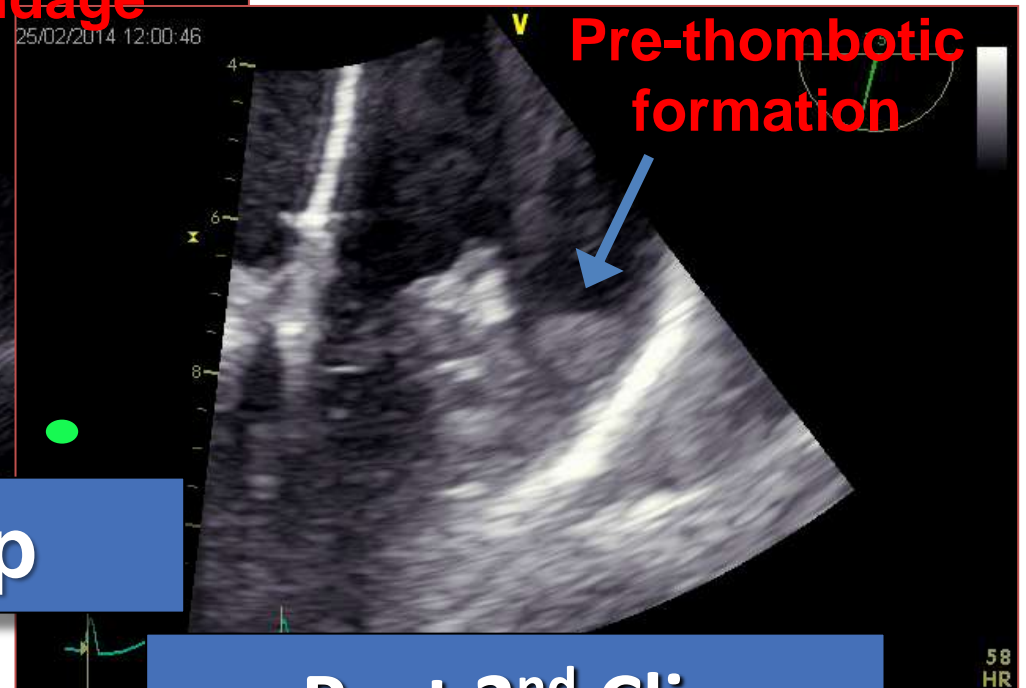


Stroke and Acute Heart Failure

Zoom on left appendage



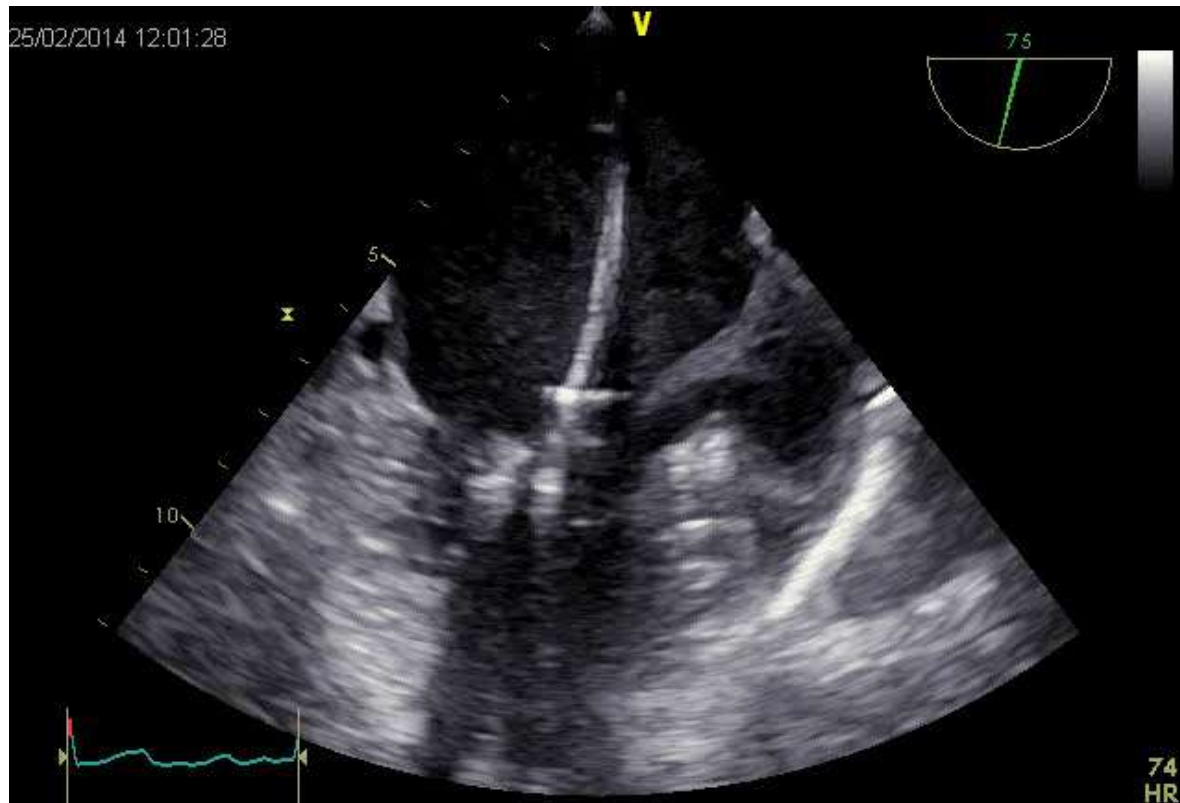
Pre 1st Clip



Post 2nd Clip



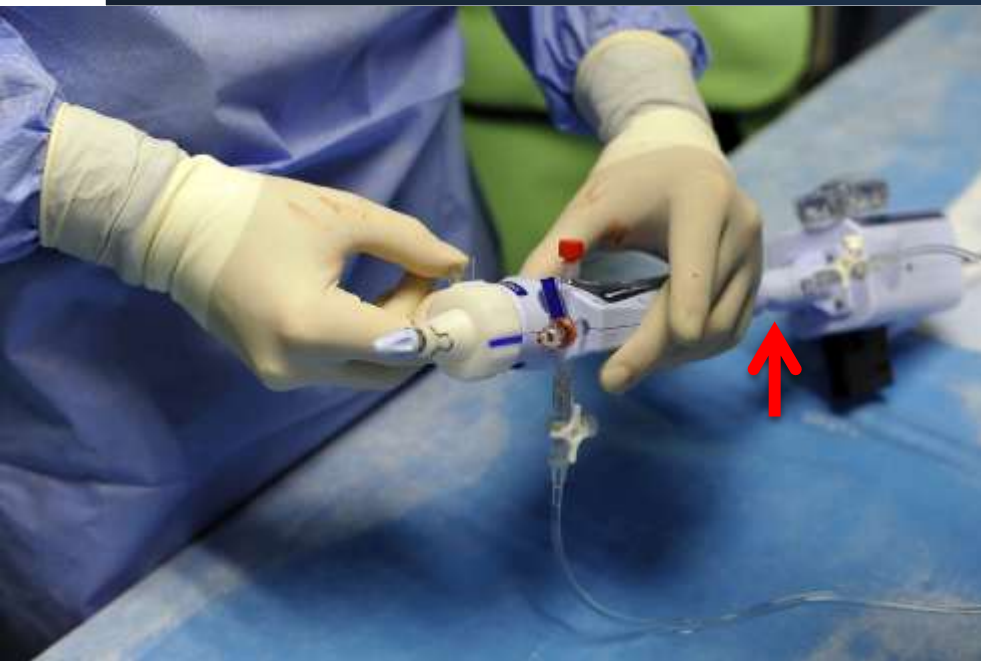
Stroke and Acute Heart Failure



Progression of thrombus



Mitral valve injury and entanglement



When clip dive in Ventricle Absolutely
AVOID “spaghetti” Effect

Chordae Entanglements

Potential solutions

- ✓ *Invert clip arms*
- ✓ *Try to perform the movements in inverted sequence (ie different from the movements performed previously)*
- ✓ *Last chance: leave the clip in the position where it is entagled*



1/13.000 clip

- ✓ *Unability to perform final release for mandrin rupture
= Surgery*

