Edwards Cardioband Mitral System

Echo Guidance: anatomy and physiology

EuroPCR 2017

Ralph Stephan von Bardeleben
Universitätsmedizin Mainz Germany
Edwards Cardioband™
Mitral Repair System –
Step by step approach

- Venous puncture
- Transseptal puncture (CT preplanned)
- TS Sheath positioning
- GC positioning near LAA at landing zone
- GC and anchor repositioning (MPR/FlexiSlice)
- Cinching and MR assessment
Cardioband Procedural Steps

1. Transseptal Puncture
2. System Insertion
3. Implant Deployment
4. Implant Size Adjustment
Edwards Cardioband - FMR Pre Procedure
TEE Views and Anatomic Correlate

SVC
Ao
PV
RV
Fossa
IVC

Short Axis View

Bi-Caval View

IVC
SVC

Courtesy Grayburn
TEE Views and Anatomic Correlate

SVC  Ao  PV  Fossa  IVC

Four-Chamber View

Courtesy Grayburn
Edwards Cardioband Transseptal
MPR MultiPlanarReconstruction FlexiSlice

Procedure von Bardeleben, RS Mainz
Edwards Cardioband
Mitral Repair Procedure – LA

von Bardeleben Universitätsmedizin Mainz
Edwards Cardioband - Initial Anchors
Edwards Cardioband -
Classic 2D Echo Analysis
Initial Anchors LAA vs Hinge

Procedure von Bardeleben, RS Mainz
Anchor Implantation and Cinching
Implant Technique
Procedural Echo guidance
standardize and simplify echo guidance during implant

- **Universitätsmedizin Mainz** introduced using MPR or FlexiSlice. It allows to capture a high quality 3D volume and work with the **same** volume for long sessions reducing the image acquisition time.

- **Changing the section of interest** is performed by rotating the axes on the screen rather than manipulating the TEE probe making the process more structured and fast (90-100 min).
Edwards Cardioband - MPR MultiPlanarReconstruction FlexiSlice

Zentrum für Kardiologie
Edwards Cardioband -
MPR MultiPlanarReconstruction FlexiSlice
Visibility of Anchors in Echo!

Procedure von Bardeleben, RS Mainz
Edwards Cardioband - MPR MultiPlanarReconstruction FlexiSlice

Procedure von Bardeleben, RS Mainz
Edwards Cardioband - MPR MultiPlanarReconstruction FlexiSlice
3D TEE of Cardioband After Cinching
3D TEE Images Pre-, During, Post-Procedure
Edwards Cardioband Mitral System

Baseline (pre-device)  Device Pre-Cinching  Device After Cinching
Edwards Cardioband Mitral - Cinching Effect Assessment Final Echo “Cont
Edwards Cardioband - FMR Post Procedure

Procedure von Bardeleben, RS Mainz
- Heart Implant Team: **Communication** between Interventional Cardiologist and Interventional Echocardiographer is vital
- Both **3D echo (MPR/Flexi Slice) and fluoro** allow for direct virtual control
- Imaging-guided control of the position and angulation of each anchor allow to control **position and angulation** of each anchor
- **Cinching effect** and gradients are controlled under normal hemodynamic conditions