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Case Studies

EVEREST II / PARTNER II TRIALS

MHI Valve Center @ ANW

Tuesday, 27– SEP-2011

Case Presentation # 1

Mitral Valve Regurgitation

EVEREST II Trial Inclusion

- Moderate to severe chronic mitral valve regurgitation (3 – 4+)
- Candidate for mitral valve repair or replacement surgery, including CABG
- 18 yrs of age or >
- Willing to participate in f/u visits

• **EL, 70 yr old NYHA Class II, CHF and severe mitral valve insufficiency**

- Atrial Fibrillation
 - Coumadin
- CAD
 - S/P CABG x 2, (1983, 1999) (RIM to the LAD, LIM to the OM, SVG distal RCA, SVG to the obtuse marginal 2 branch)
 - MI - posterior
 - Posterior leaflet is mildly shortened and motion is mildly restricted. LVEF = 48%
- Mitral Valve Insufficiency
 - Between A₁ P₁ and A₂ P₂ areas
- HT- 180 cm; Wt – 104.8 kg
- Risk Factors
 - HTN
 - Hypercholesterolemia
 - Former Smoker (quit 1982)
- DJD

Patient's symptoms / presentation

- No angina
- Wt gain
- Couldn't golf
- Holosystolic murmur – apex, grade III / VI
- Lower extremity edema

Treatment decisions - Risk versus Benefit

- Tools Used
- Scoring

Medications

- Pre-procedure
- Post procedure
- One year

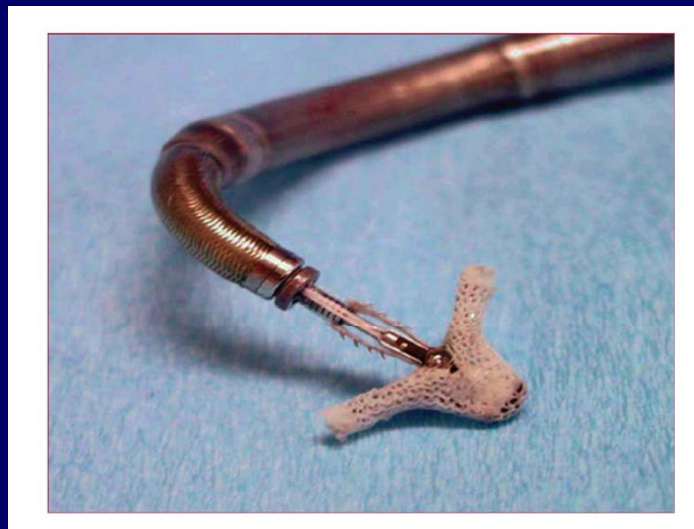
Hospitalization Course

- Intensive Care Unit
 - Nursing Cares
- Telemetry Unit
 - Nursing Cares

Discharge Considerations

- Medications
- Activity
- F/U
- When to call

Mitra-Clip Placement 16 – JUL-2007



Post procedure - 2010



Case Presentation # 2

Aortic Valve Stenosis

PARTNER II Trial Inclusion

- Probability of death or serious, irreversible morbidity should exceed 50%.
- NYHA functional class II or >
- Echocardiographically derived criteria:
mean gradient of > 40 mmHg or jet velocity > 4.0 m/s and initial AVA of ≤ 0.8 cm² or indexed EOA < 0.5 cm² / m²

• 77 yr old NYHA Class IV, CHF and severe AS

- CAD
 - S/P MIs, including transmural anterior MI
 - 3 vessel CAD – poor distal targets
 - No angina
 - CMR - extensive transmural antero-apical MI and other areas of non-transmural infarct, LVEF = 22%
 - DBA stress test with minimal myocardial recruitment
 - 22% - 28%
- CKD III Renal Insufficiency
 - Est GFR is 50
- Mild Pulmonary Fibrosis
- Risk Factors
 - DM Type II
 - HTN
 - Hypercholesterolemia
- Osteoarthritis

STS – RCL

Score attributes

Severe LV Dysfxn

Minimal Dba Recruitment

Non Graftable targets

NYHA Class: IV

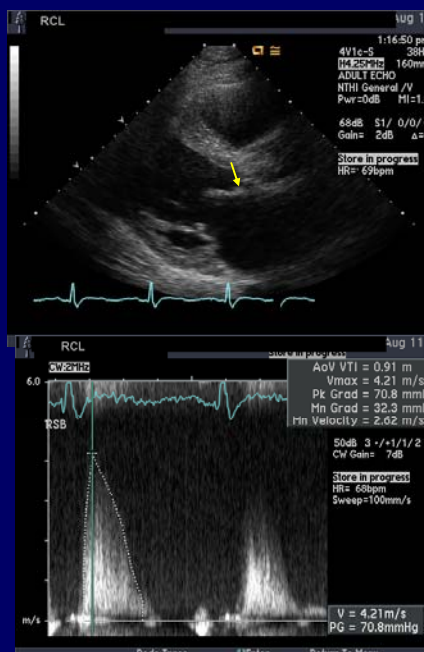
STS Score: 8.7 %

Calculations

Procedure Name	AVRepl+C ABG
Risk of Mortality	8.7%
Morbidity or Mortality	40.4%
Long Length of Stay	18.3%
Short Length of Stay	12.7%
Permanent Stroke	3.4%
Prolonged Ventilation	27.4%
DSW Infection	0.6%
Renal Failure	15.7%
Reoperation	14.2%

RCL's Echo Data

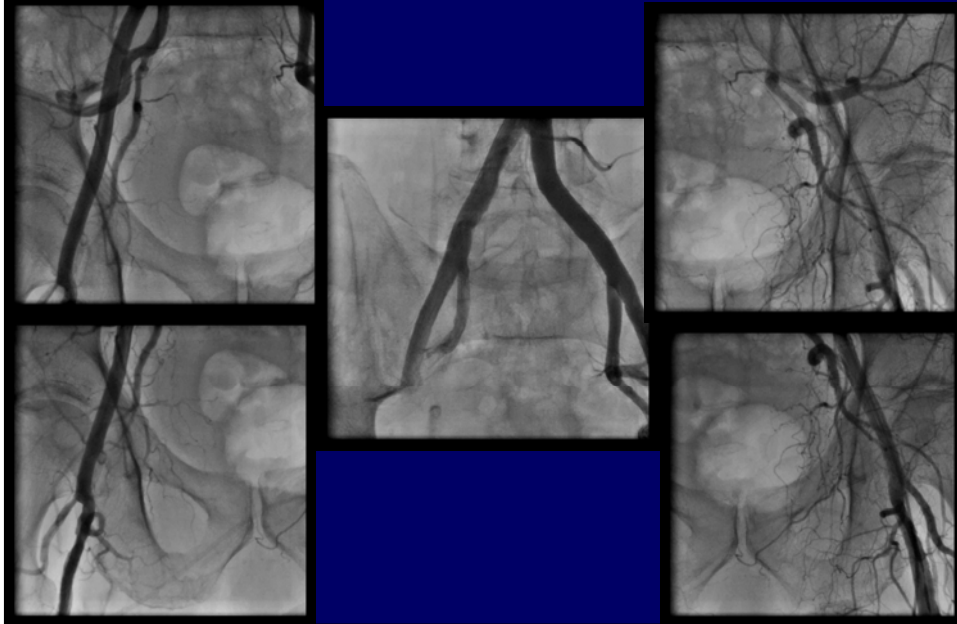
Echo Date:	03-AUG-2011
AVA:	0.63 cm ²
Peak Gradient:	70.8 mm Hg
Mean Gradient:	44.0 mm Hg
Peak Velocity:	4.2 m/s
Annulus Measurement: (LVOT)	2.2 cm
EF:	20 - 25 %
STJ measurement:	24.0 mm
Characteristics of Sinuses of Valsalva:	normal
LV or RV dysfunction (if app):	Severe LV dysfxn, mild RV dysfxn
Degree of MR, MAC, AI, TR:	mild MR, AI 2+, 2+ TR
Dobutamine Stress Echo	No significant recruitment



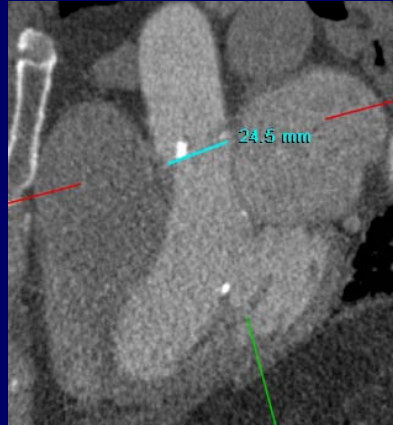
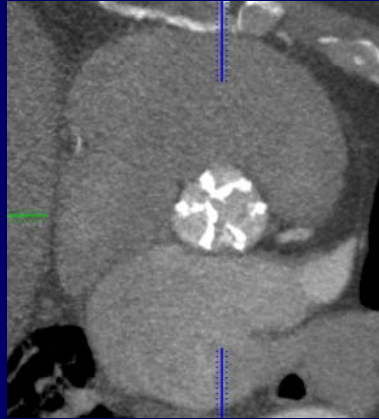
RCL's Coronary angiogram



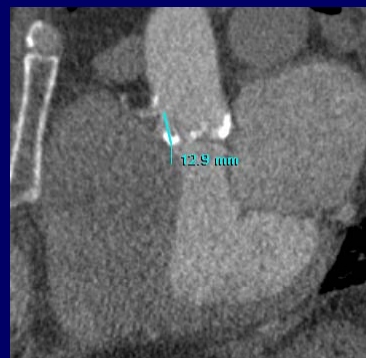
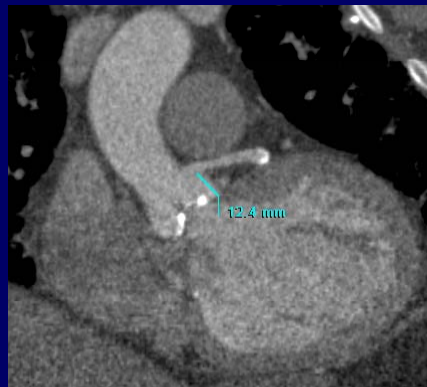
RCL's Abd Aogram with pelvic runoff

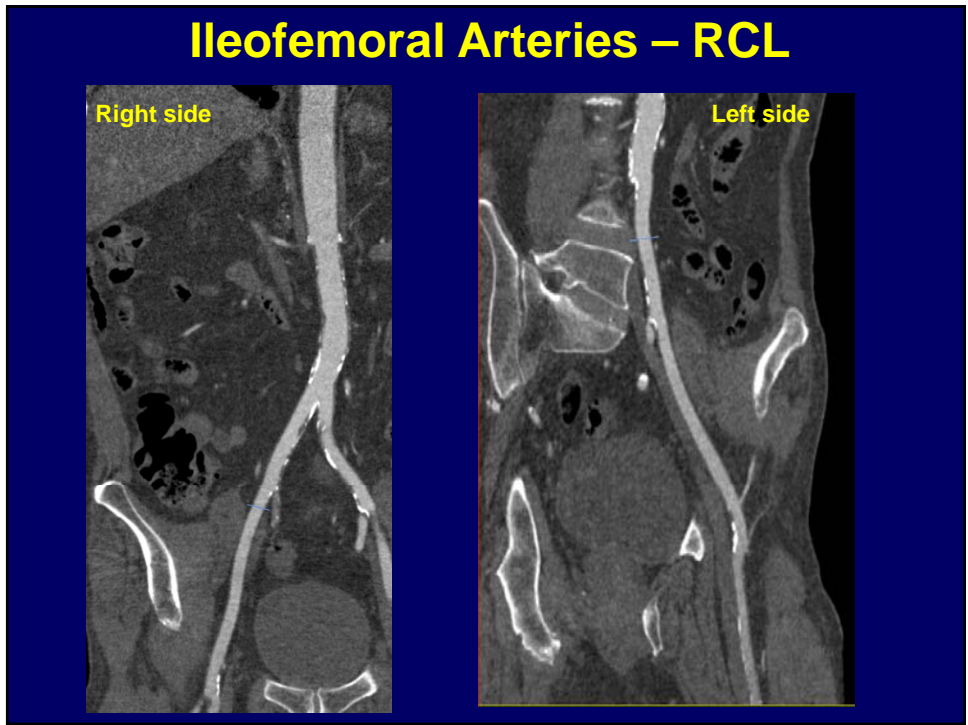
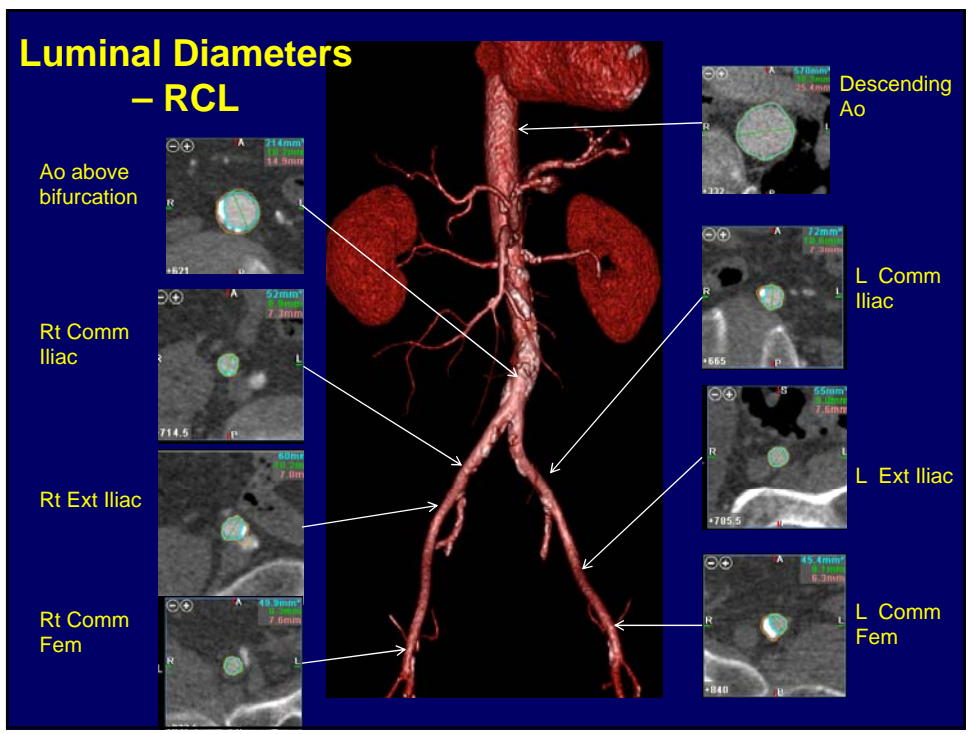


Aortic Valve / Annulus - RCL



Annulus-to-Coronary Os Measurement – RCL





Treatment decisions - Risk versus Benefit

- Tools Used
- Scoring

Medications

- Pre-procedure
- Post procedure
- One year

Hospitalization Course

- Intensive Care Unit
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Discharge Considerations

- Medications
- Activity
- F/U
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RCL's Summary

Age and sex:	77 yr old male
ICU Days	1
Total post-procedure Hospital Days	3
Hospital admissions - 2011	3 / 0

Transcatheter Aortic Valves



Please answer True or False to
the following statements
regarding the EVEREST II trial
results:

Percutaneous MitraClip repair was
safer than surgical mitral valve repair.

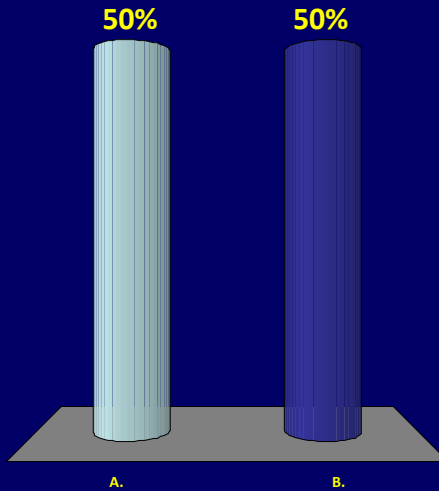
True

B. False

Percutaneous MitraClip repair was more effective than surgical mitral valve repair in relieving mitral stenosis.

A. True

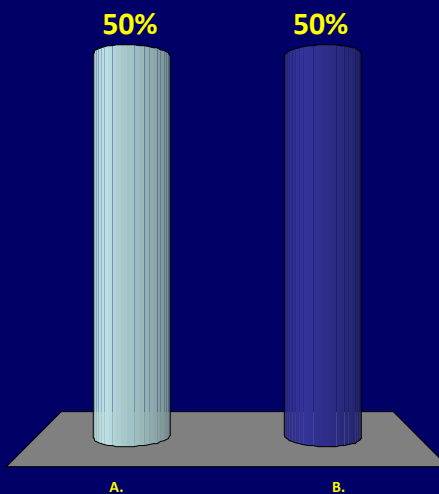
☺ B. False



Percutaneous MitraClip repair resulted in an improved NYHA Heart Failure Classification in one year than surgical mitral valve repair.

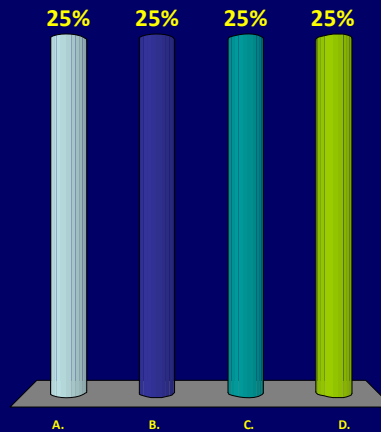
☺ A. True

B. False



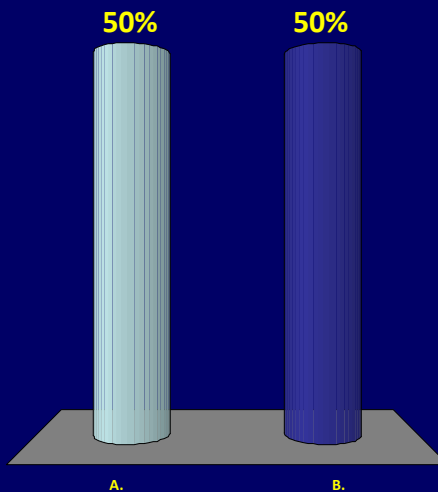
In the PARTNER I trial, it was demonstrated that there was a ___% improvement in _____ over standard therapy in one-year follow up of these patients

- 😊 A. 46, all-cause mortality
- B. 69, all-cause mortality
- C. 15, cardiovascular mortality
- D. 9, cardiovascular mortality




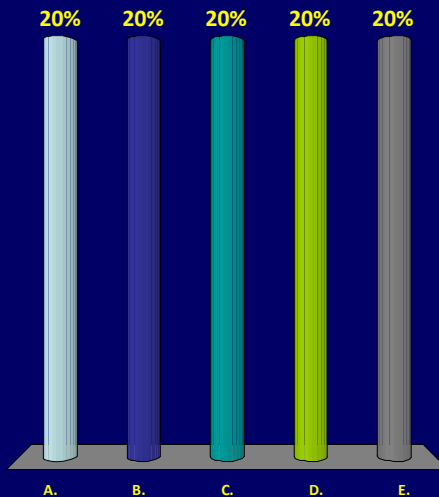
Standard surgical replacement of the aortic valve is still considered the “gold standard” for treatment of aortic valve stenosis.

- 😊 A. True
- B. False




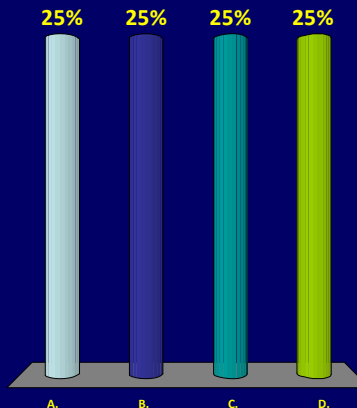
Percutaneous balloon aortic valvuloplasty is considered to be:

- A. An elective, palliative procedure
- B. Improves patient's quality of life
- C. Not a replacement for aortic valve surgical replacement
- D. None of the above
-  E. All of the above



A typical PARTNER II trial candidate will have all of the following attributes except:

- A. NYHA Class II – IV classification of Heart Failure
-  B. An aortic mean gradient <40 mmHg or jet velocity less than 4.0 m/s and an initial aortic valve area of $\geq 0.8 \text{ cm}^2$ or indexed EOA $> 0.5 \text{ cm}^2/\text{m}^2$
- C. The probability of death or serious irreversible morbidity exceeding 50% determined by a surgeon
- D. Frailty determined by results of Katz Index, MMSE, 15 foot walk time, grip strength average



Questions?



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