

REDO MITRAL OR TRICUSPID VALVE SURGERY WITH PORT-ACCESS: OUR STANDARD APPROACH

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Redo MV/TV Port-Access (PA)

December 1997 – 15 June 2009

- 1755 pts intention to treat mitral and/or tricuspid valve surgery through Port-Access (PA)
- 200 pts (11.4%) had redo surgery PA
 - 11 pts (5.5%) perop conversion to sternotomy before cardiac arrest
 - 7 *preop strategy changes for lung adhesions*
 - 4 *patients for cannulation problems*
 - 189 pts (11%) Redo valve surgery Port-access

PREOP CHARACTERISTICS (n = 189)

NYHA	I:	11 (5.8 %)
	II:	84 (44.4 %)
	III:	81 (42.9 %)
	IV:	13 (6.9%)

Previous myocardial infarction : n = 39 (21%)

Mean age: 67y +/- 11 (29-88)

Atrial fibrillation : n = 66 (35%)

Pacemaker : n = 22 (11.6%)

Ejection fraction: 30-50%: 37 pts (19.6%)

< 30%: 12 pts (6.3%)

Mean Logistic EuroScore : 19.2 % ± 17.2 (4-86)

PREOP CHARACTERISTICS (n = 189)

Regurgitation grade	MI	% MI	TI	%TI
4	42	22.5	13	6.9
3	97	51.3	31	16.4
2	24	12.7	64	33.9
1	17	9.0	62	32.8
0	9	4.8	19	10.1

Paravalvular leak prosthesis : n = 27 (14.3 %)

Endocarditis : n = 23 (12.2 %)

Trombus formation : n = 1 (0.5 %)

REDO PORT-ACCESS SURGERY (n = 189)

Initial surgery	N	%
MVP	57	30.2
MVR	28	14.8
<i>TOTAL MV</i>	<i>85</i>	<i>45.0</i>
CABG	79	41.8
AVR	29	15.3
Congenital repair	16	8.5
Transplantation	4	2.1
Ablation	3	1.6
Pericardectomy (sternot)	1	0.5

Nbr of redo	N	%
1st	157	83
2nd	26	14
3th	4	2
4th	2	1

Second Port-Access™
Approach: n = 17 (9 %)

Mean time to redo surgery (years) : 13.9 +/- 11.2 (0.1-46)

SURGERY DATA (n = 189)

PROCEDURES (%)

- MVP: n = 64 (33.9)
- MVR: n = 63 (33.3)
- MV +TV : n = 55 (29.1)
 - MVP + TVP : n = 27 (14.3)
 - MVP + TVR : n = 3 (1.6)
 - MVR + TVP : n = 24 (12.7)
 - MVR + TVR : n = 1 (0.5)
- TVR : n = 7 (3.7)
- + RF ablation: n = 38 (20.1)
- + Cryo ablation: n = 1 (0.5)
- + Morrow: n = 1 (0.5)
- + closure ASD/PFO: n = 7 (3.7)
- + angioplasty femoral art.: n = 3 (1.6)
- + iliofemoral bypass: n = 1 (0.5)

PERI-OPERATIVE CHARACTERISTICS (n = 189)

- 1 perop conversion to sternotomy : AV dehiscence
- 1 lung bleeding
- 1 laparotomy for repair iliac artery
- No endoclamp : n = 6
- Deep hypothermia : n = 3

Mean ECC time	155 min. \pm 48 (71 – 315)
Mean Cross Clamp time	98 min. \pm 38 (35 – 262)

POSTOP CHARACTERISTICS (n = 189)

- Mean length of ICU stay : 3.8 d +/- 6.1 (1 - 59)
- Mean length of hospital stay : 13.4 d +/- 11.7 (5-90)
- 30-day mortality : n = 14 (7.4%) ↔ 19.2% euroscore (log)
- Early redo same approach : n = 2 (1.1 %)
 - *MR due to detachment ring* : n = 1 (0.5 %)
 - *Redo TVR for TI* : n = 1 (0.5 %)
- Thoracotomy with CPB (bleeding) : n = 1 (0.5 %)
- Pericardial fenestration (drainage) : n = 2 (1.1 %)
- Revision bleeding : n = 12 (6.3 %)
- AMI : n = 3 (1.6 %)
- Pacemaker : n = 19 (10.1 %)
- ICD : n = 3 (1.6 %)
- IABP : n = 3 (1.6 %)
- TIA/CVA : n = 5 (2.6 %)
- Pneumonia : n = 10 (5.3 %)
- Tracheotomy for pulm insufficiency : n = 7 (3.7 %)

Late Follow-up (n=145) 1997-2007

Late re-redo (n = 6)

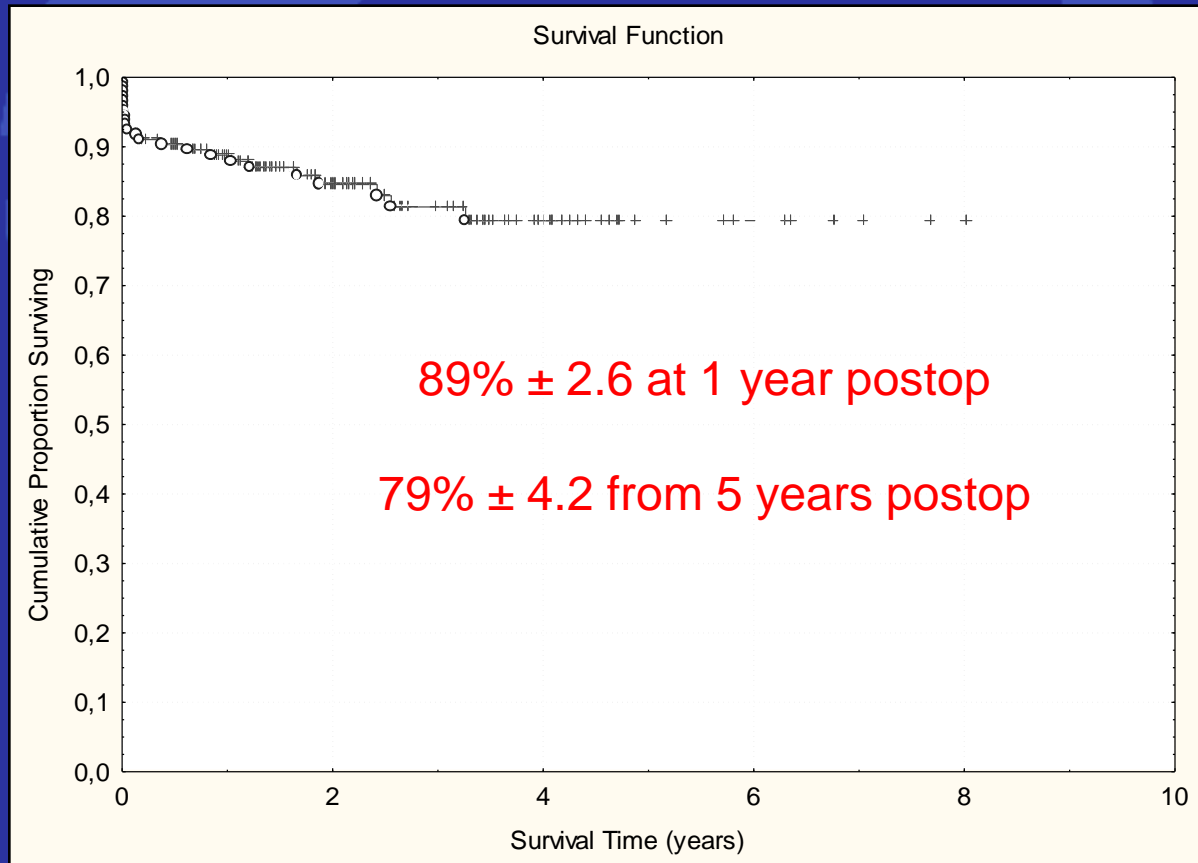
- all procedures : sternotomy
- after MVR (n = 4)
 - Thrombus formation : n = 1
 - Endocarditis : n = 2
 - Leak : n = 1
- after MVP (n = 2)
 - Residual MI : n = 2

Median NYHA : II

Late Follow-up

- pts operated till 31/12/2007 : n = 145
 - 12 early deaths
 - Clinical Follow-up : 100% (n=133)
- Total nbr patient-years : 350 y
- Mean patient follow-up : 2.6 y \pm 1.9 (0.2-8.8)
- 13 late deaths, 9% (several reasons)
 - Heartfailure : n = 9
 - Respiratory failure : n = 2
 - General decline : n = 2

Survival function Dec '97 - Dec '07 (n = 145)



CONCLUSION

Port-Access Surgery has become the standard approach for redo mitral and/or tricuspid surgery.

Our initial experience demonstrated low morbidity and mortality in a high risk subset of patients.