Hospices Civils de Lyon

"A recurrent Endocarditis in a patient with 2 prosthetic valves…"

Cardiothoracic and Vascular Surgery Department

Hôpital Louis Pradel

LYON - France

Hospices Civils de Lyon

Affiliation/Financial Relationship	List of companies
> Grant/Research Support	Boeringher, Saint Jude Medical, Abbott, Medtronic, Edwards
> Consulting Fees/Honoraria	Edwards, Saint Jude Medical, Medtronic, Servier, Novartis
> Major Stock Shareholder/ Equity	
> Royalty Income	Landanger, Delacroix-Chevalier
> Ownership/Founder	
> Intellectual Property Rights	Landanger, Delacroix-Chevalier
> Other Financial Benefit	Medtronic, Sorin, Thoratec, Astra Zeneca

"A recurrent Endocarditis in a patient with 2 prosthetic valves…"

Acute phase (398 pt in 2008)
- Aortic ➔ 55%
- Mitral ➔ 33%

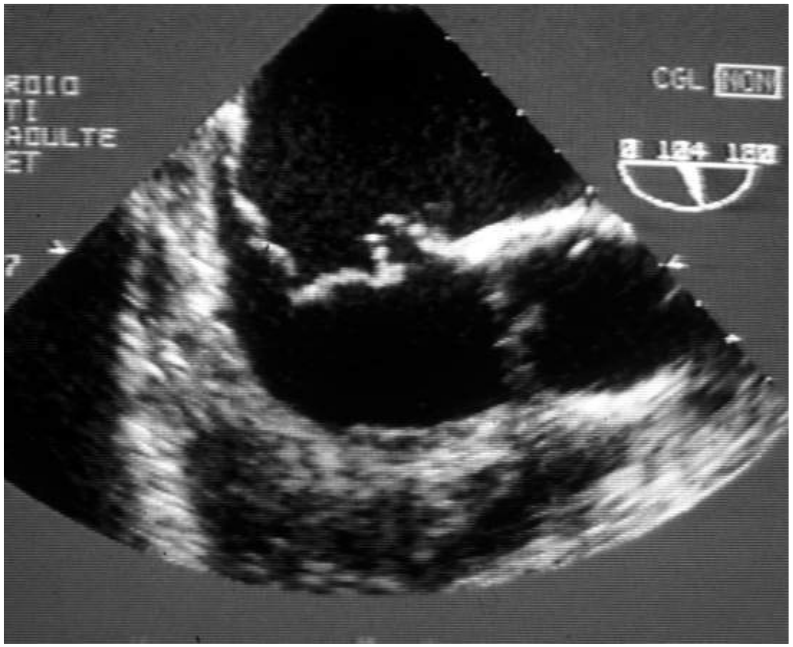
Months ➔ 20 %

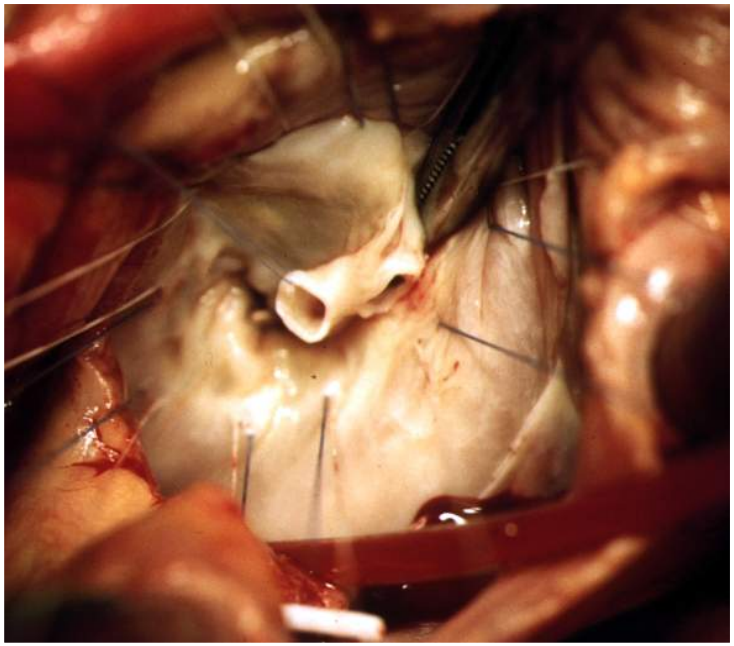
Years ➔ 9 % of recurrent IE

Cancer Treatment

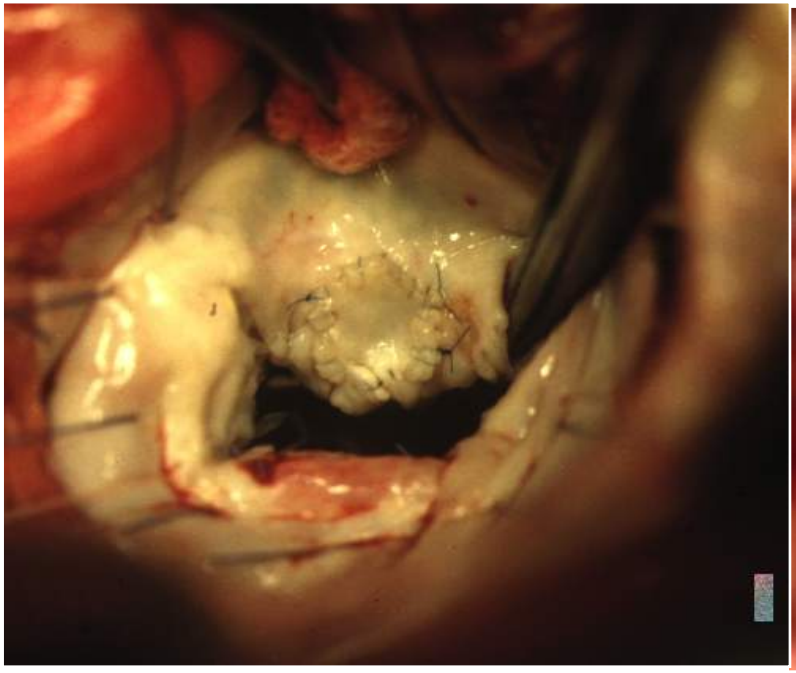
1) Chemotherapy
2) Resect of all the infected tissue
3) Reconstruction

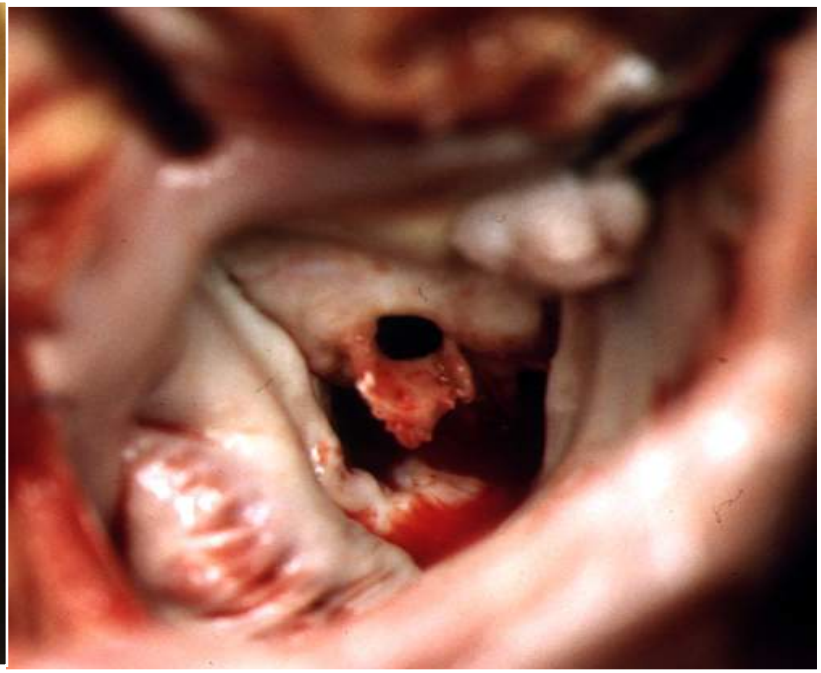
Healed IE → Easy repair



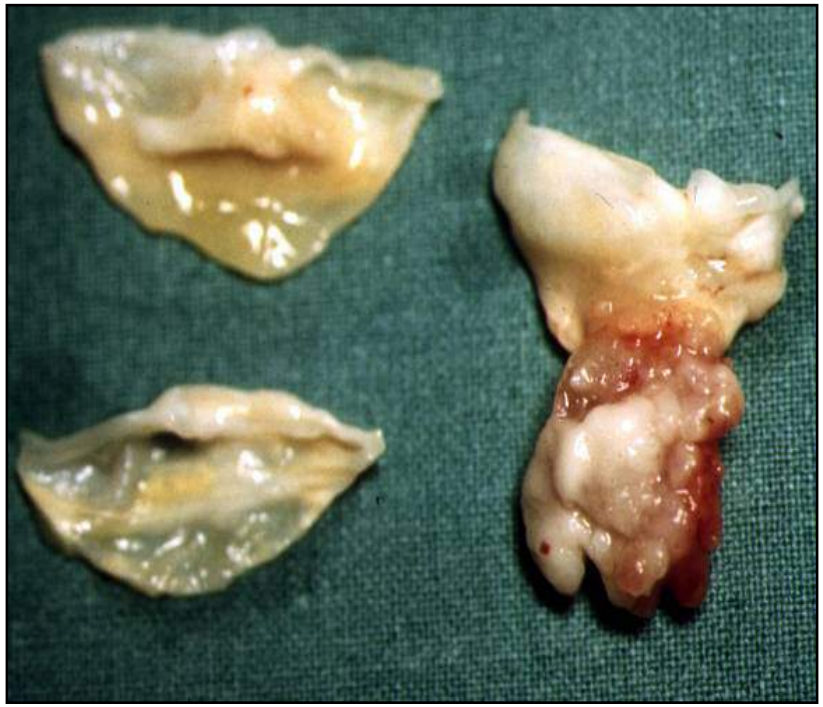


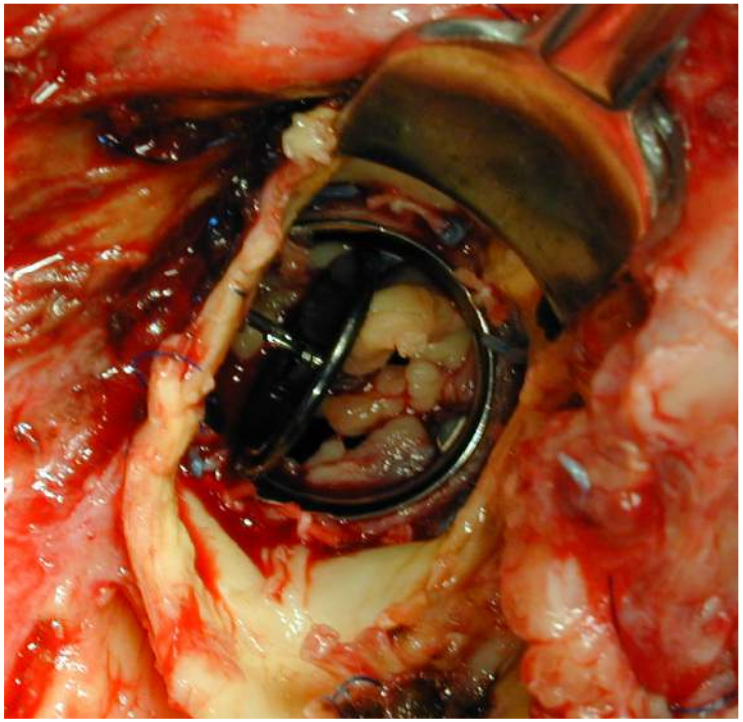
Acute phase → more complex repair





IE on prostheses ➔ More complex





Year 1976 :

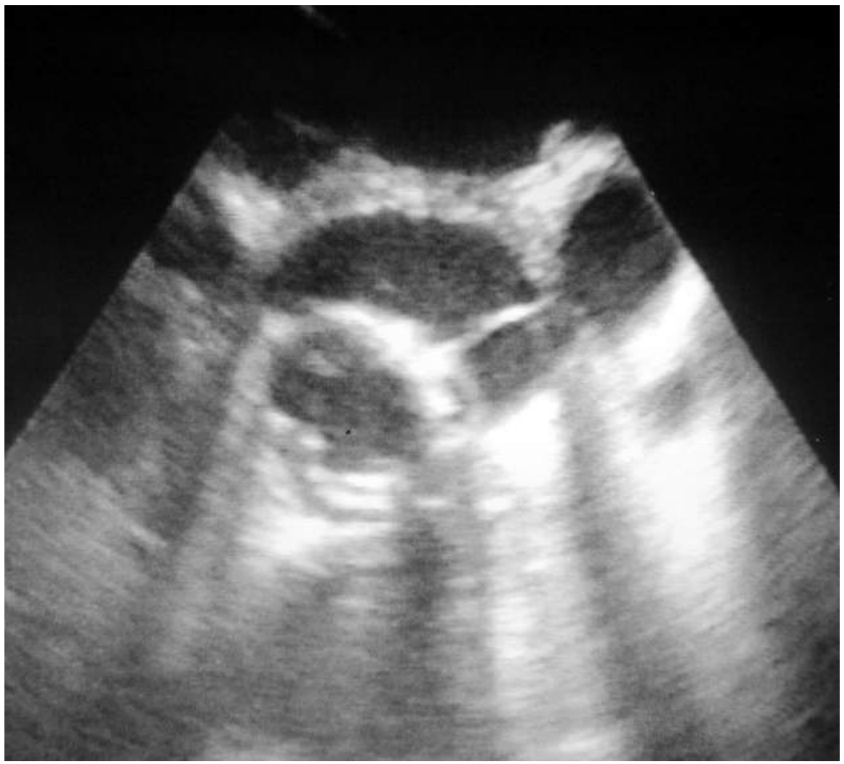
- Surg 1 : (16 years) Sub-aortic stenosis ➔ AVR 1
- Surg 2 : Endocarditis "Staph" ➔ AVR + MVR 2

Year 2000 (24 years later) :

- Surg 3 : (42 years) mandible fracture ➔ IE
  Kingella ➔ AVR + MVR 3

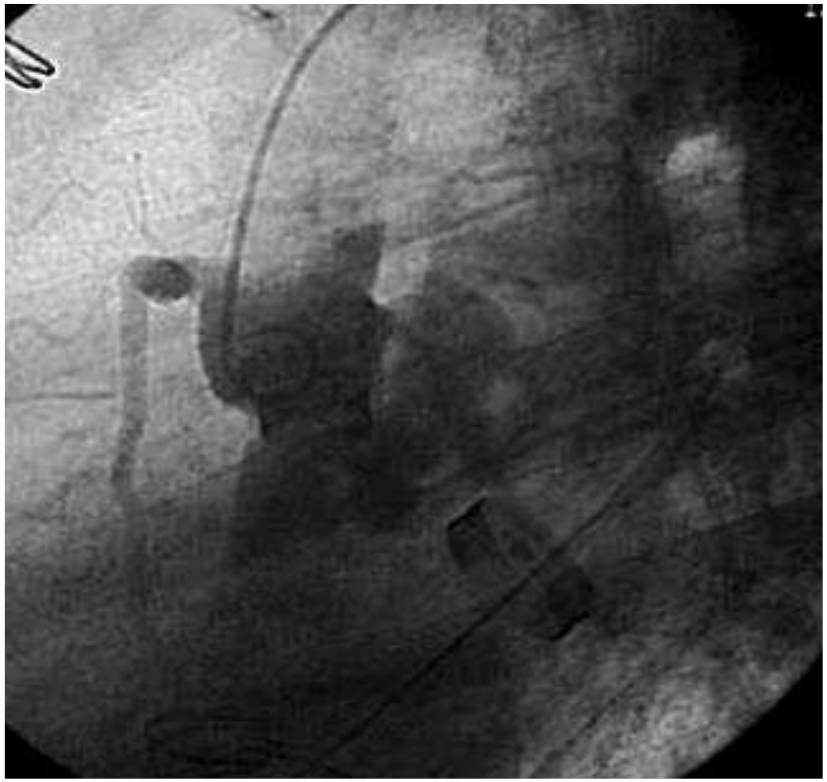
- 3 months later ➔ Fever 38°, PCR = 150, WBC = 16 000
  Hospitalization, negative culture

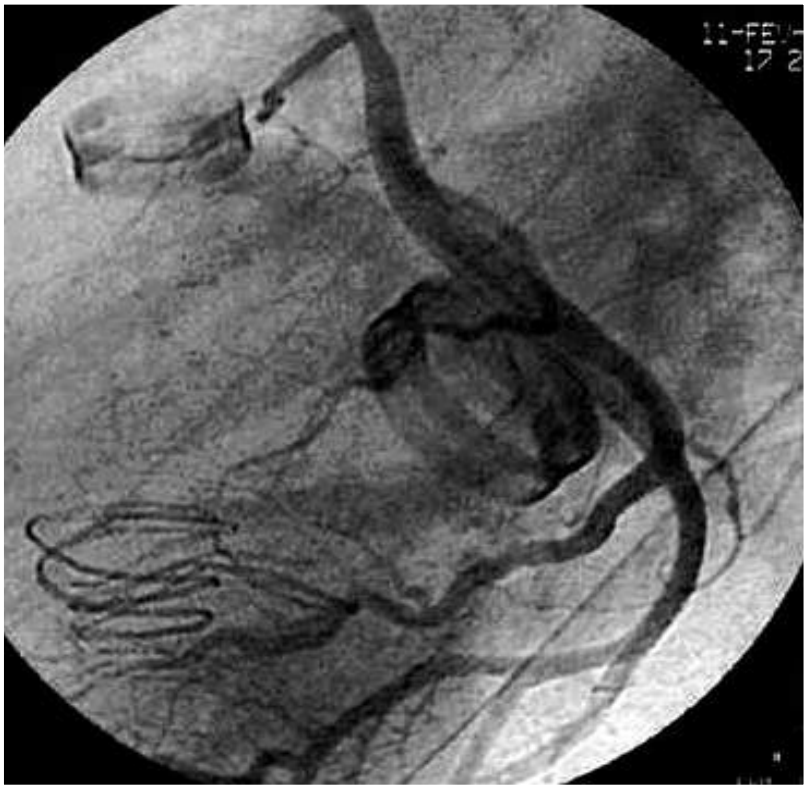
Echography



- Huge para-valvular abscess
- Small Aortic paravalvular regurg
- No Mitral dehiscence
- No vegetations on the prostheses
- LV function preserved

Angiography





QUIZ 1

Which options ?

A ➔ leave the medical treatment a chance

B ➔ Double **mechanical** prostheses replacement

C ➔ Double **biological** prostheses replacement

D ➔ Aortic **Homograft** + Mitral bioprostheses

E ➔ Anything else ?

QUIZ 1

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E → Anything else ?

Guidelines on the prevention, diagnosis, and treatment of infective endocarditis

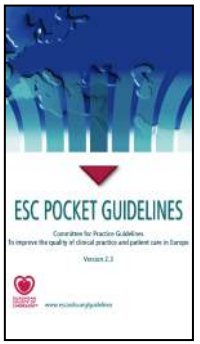
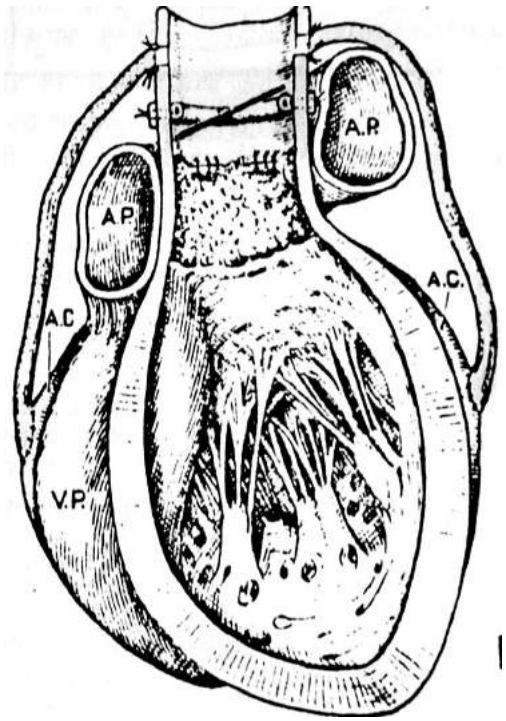


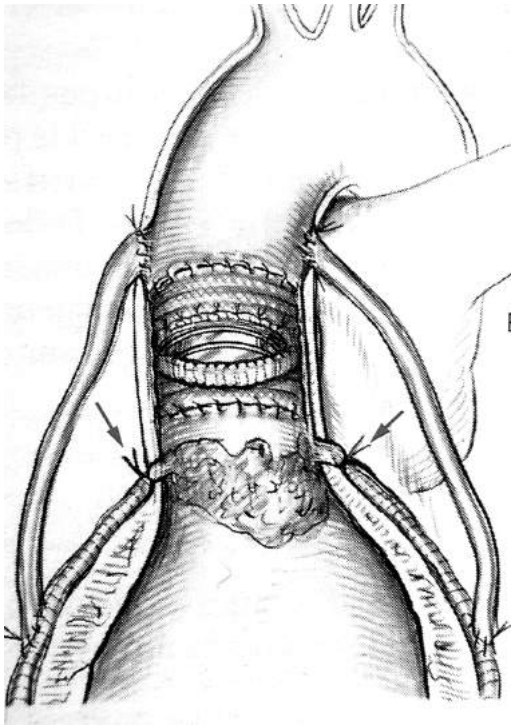
Table 23 Indications and timing of surgery in prosthetic valve infective endocarditis (PVE)

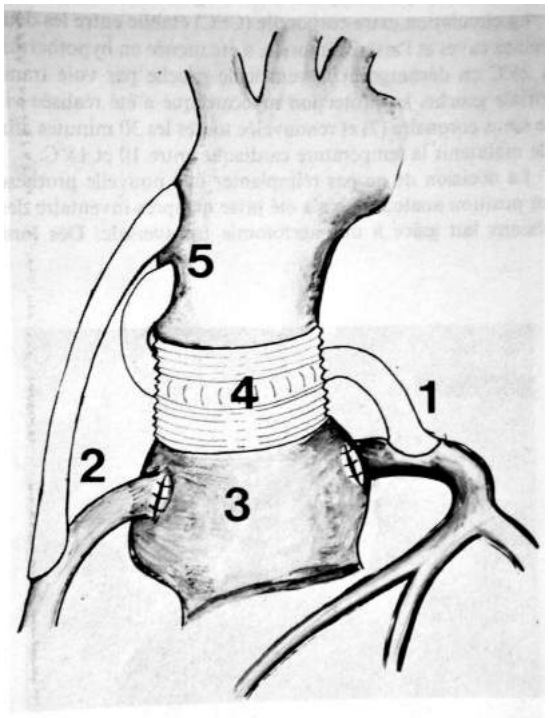
Indications for surgery in PVE	Timing*	Class[a]	Level[b]
A - HEART FAILURE			
B - UNCONTROLLED INFECTION			
Locally uncontrolled infection (abscess, false aneurysm, fistula, enlarging vegetation)	Urgent **24h**	I	B
PVE caused by fungi or multiresistant organisms	Urgent/elective	I	B
PVE with persisting fever and positive blood cultures > 7–10 days	Urgent	I	B
PVE caused by staphylococci or gram negative bacteria (most cases of early PVE)	Urgent/elective	IIa	C
C - PREVENTION OF EMBOLISM			

Extensive Aortic Abcess

Dannielson → ***Notin*** → ***Gandjbakch***

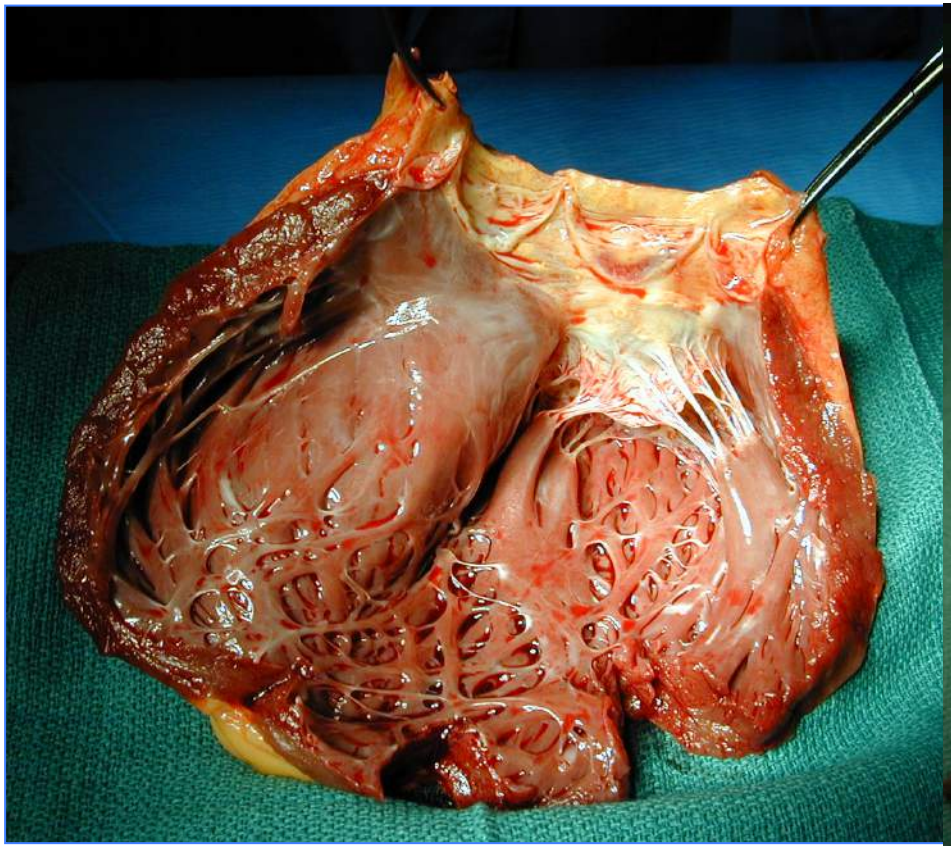




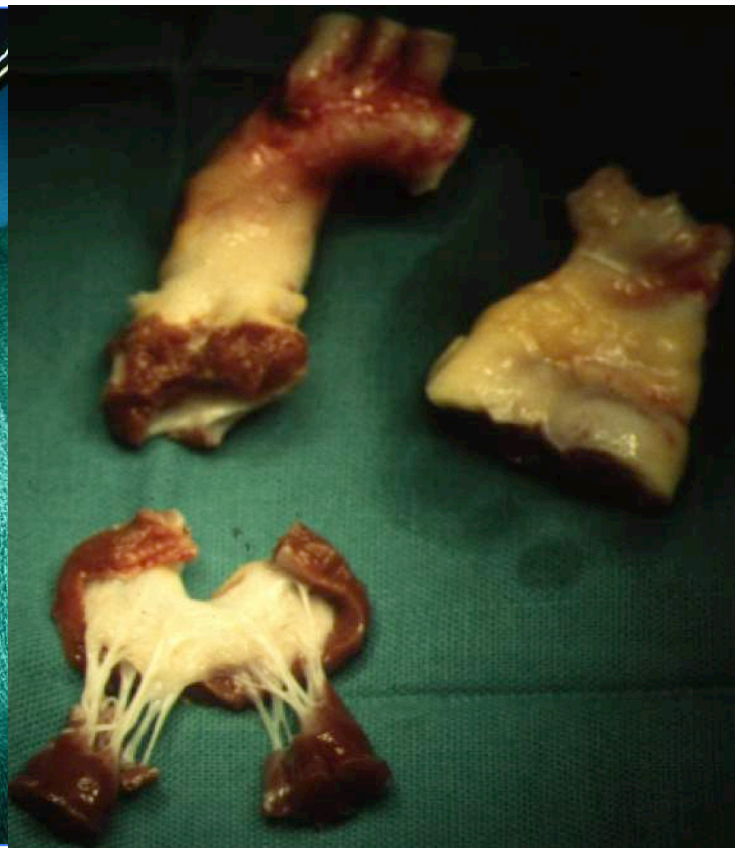


Extensive Aortic Abcess

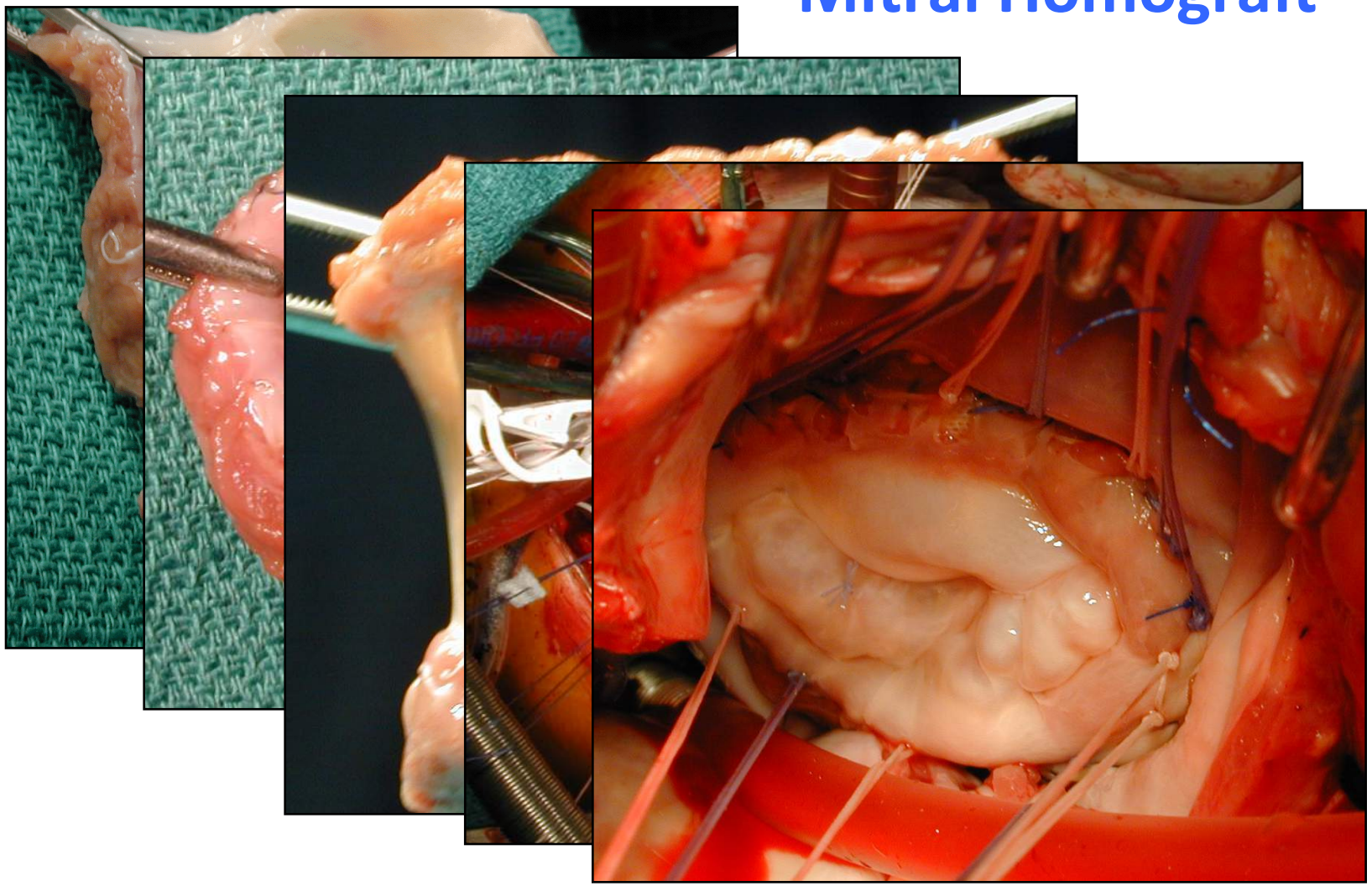
Sub-aortic Curtain



Homograft



Mitral Homograft



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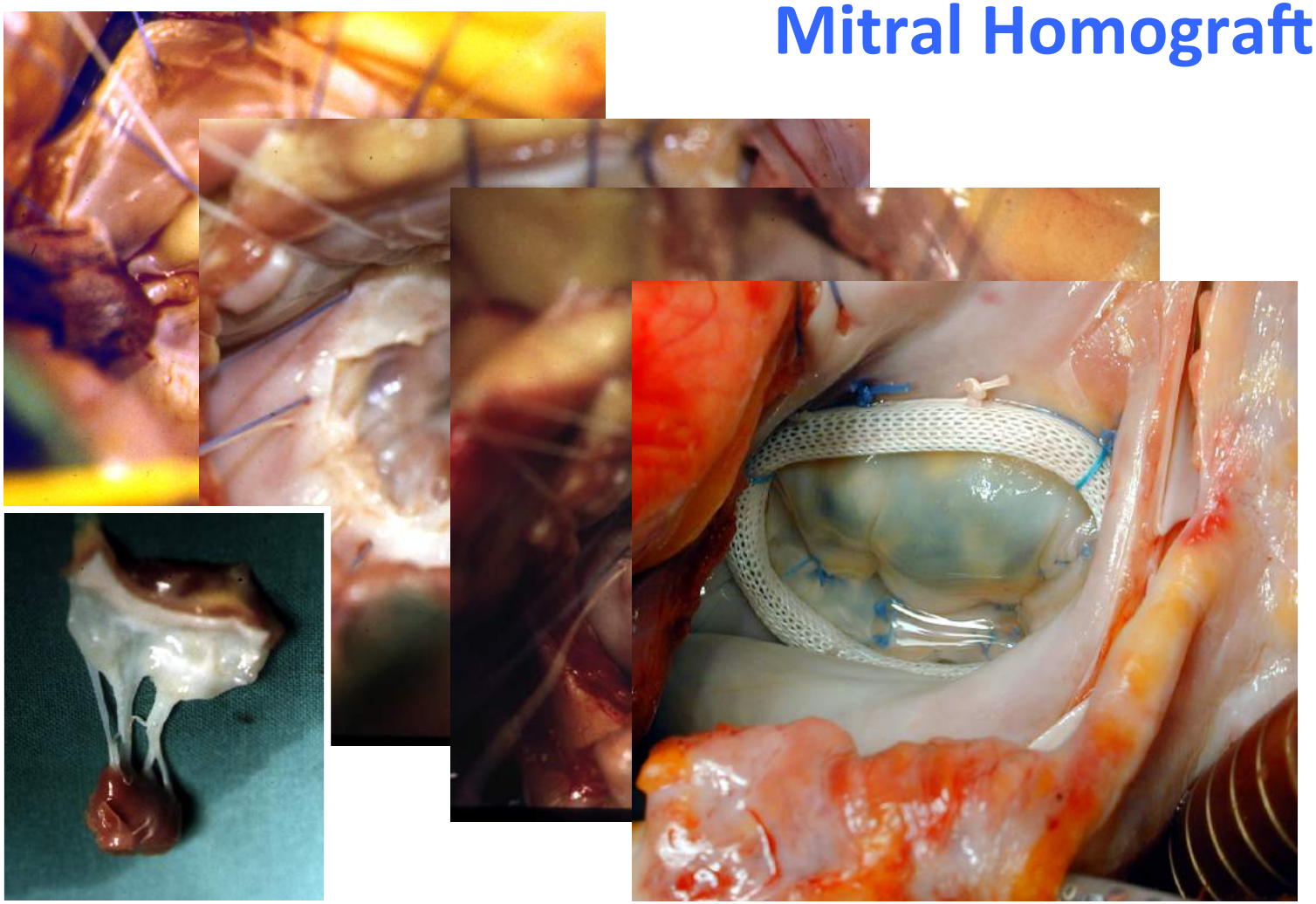
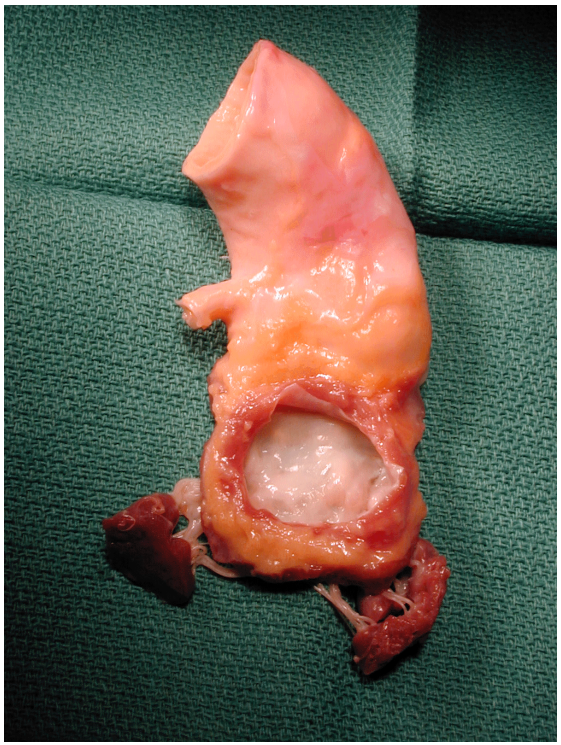
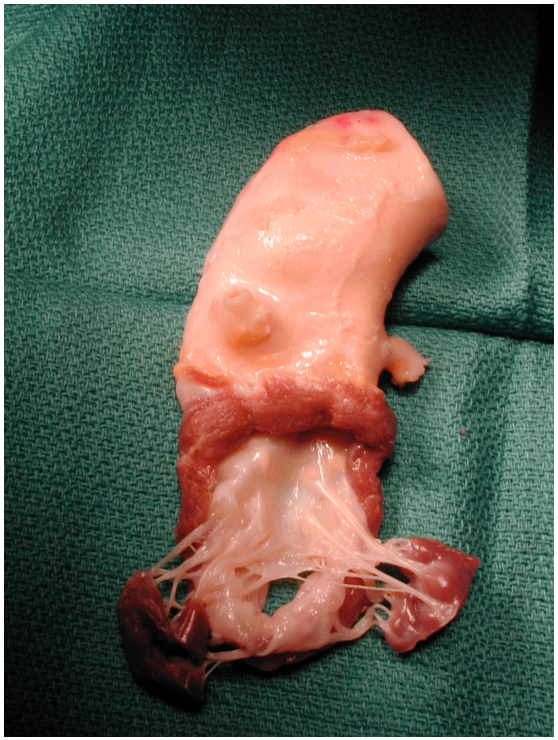


Monobloc aorto-mitral homograft as a treatment of complex cases of endocarditis

Jean-François Obadia, Olivier Raisky, Laurent Sebbag, Sydney Chocron, Christine Saroul and Jean-François Chassignolle

J Thorac Cardiovasc Surg 2001;121:584-586





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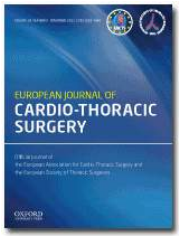

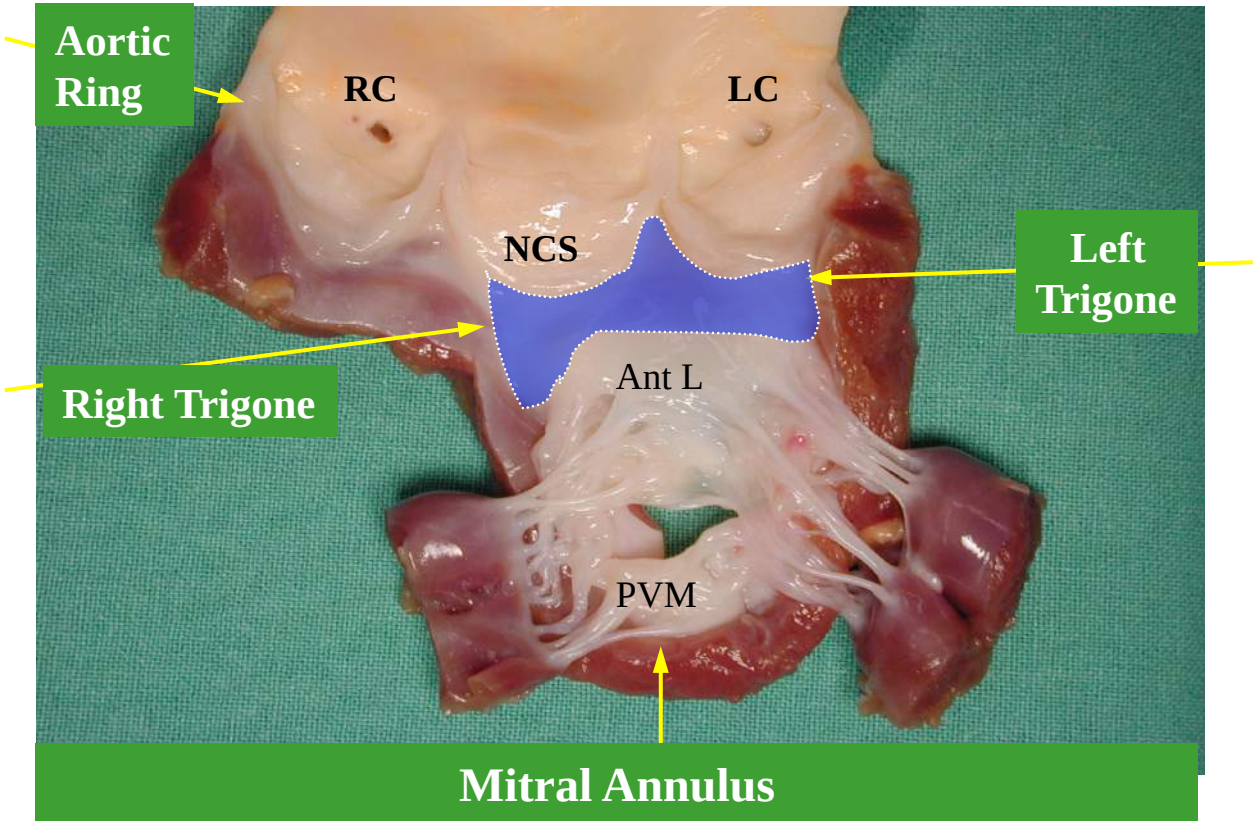

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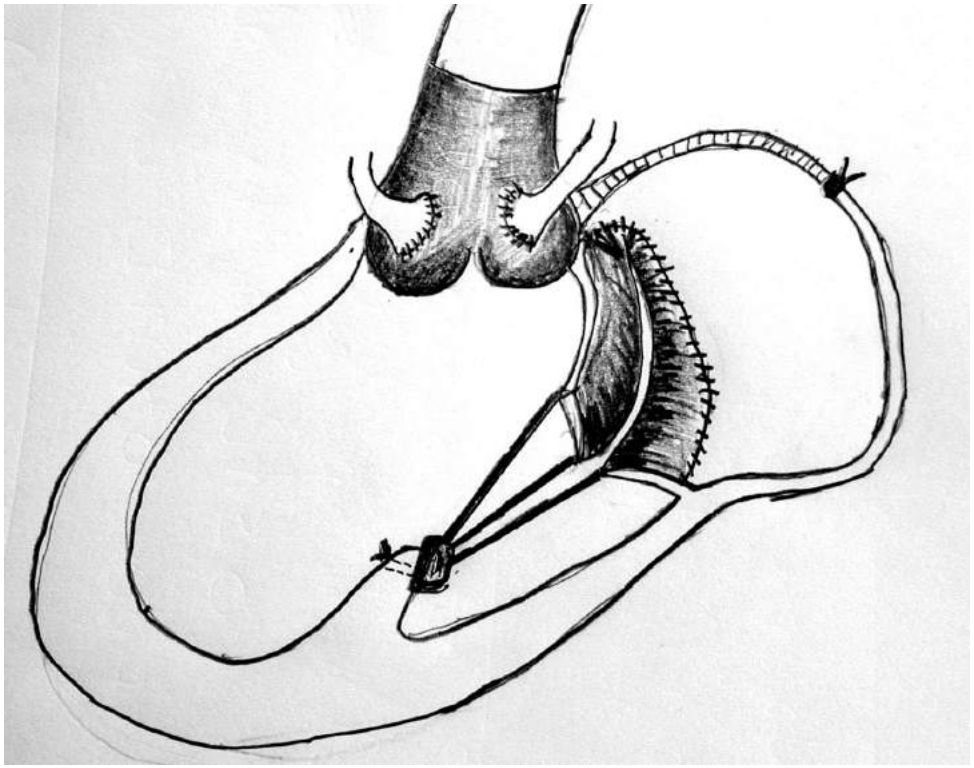

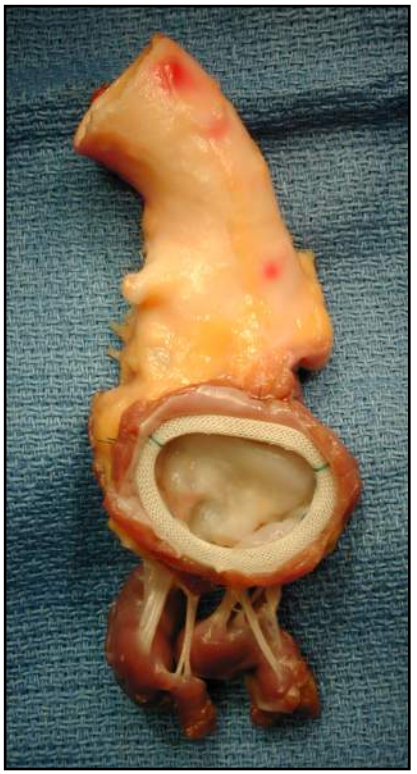

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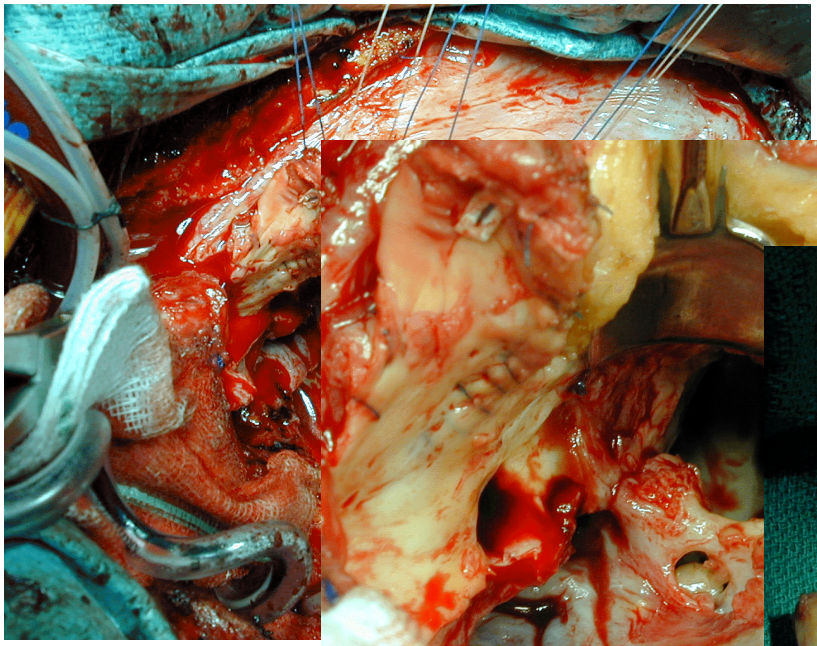

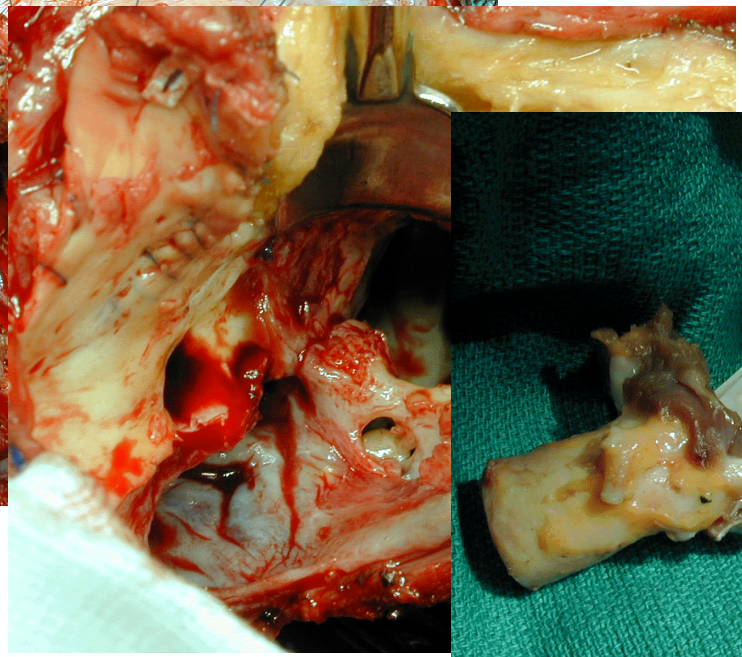

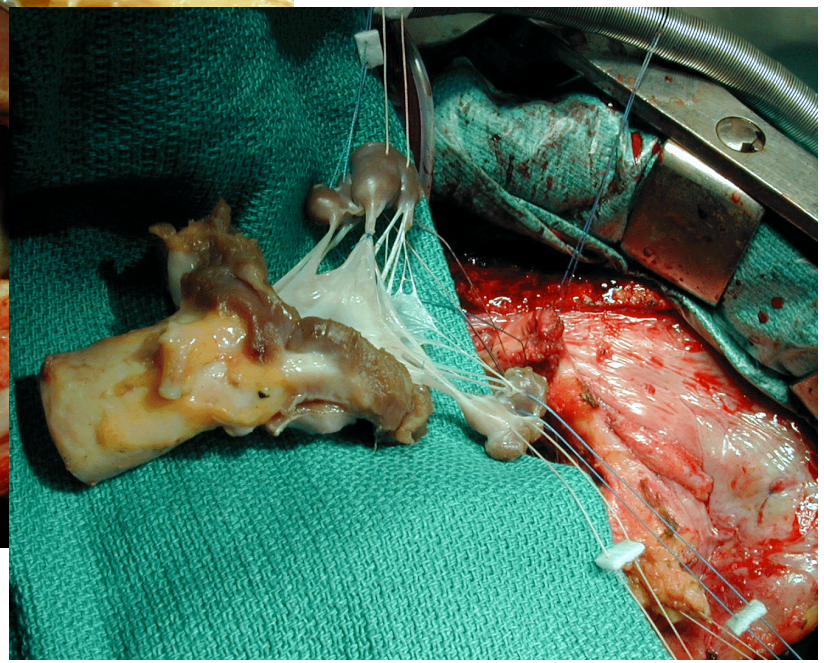

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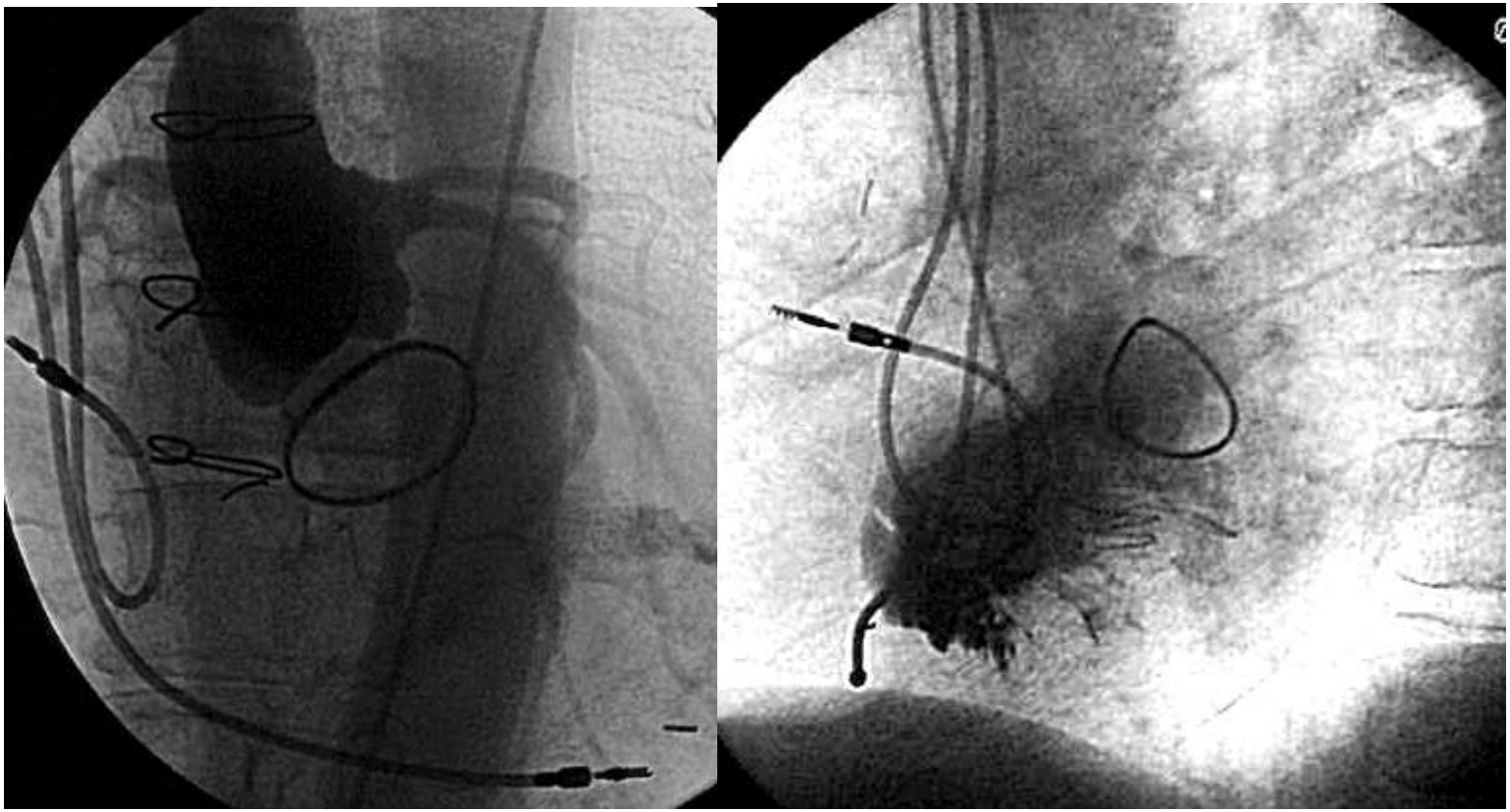
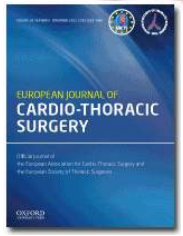


Monobloc aorto-mitral homograft or mechanical valve replacement: A new surgical option for extensive bivalvular endocarditis

J. F. Obadia, MD, PhD,[a] R. Hénaine, MD,[a] C. Bergerot, MD,[b] I. Ginon, MD,[b] P. Nataf, MD,[c] N. Chavanis, MD,[a] J. Robin, MD, PhD,[a] X. André-Fouët, MD,[b] J. Ninet, MD,[a] and O. Raisky, MD, PhD,[a] Lyon and Saint Denis, France



J Thorac Cardiovasc Surg 2006;131:243-245

Figure 1. Monobloc aorto-mitral homograft. All hearts harvested

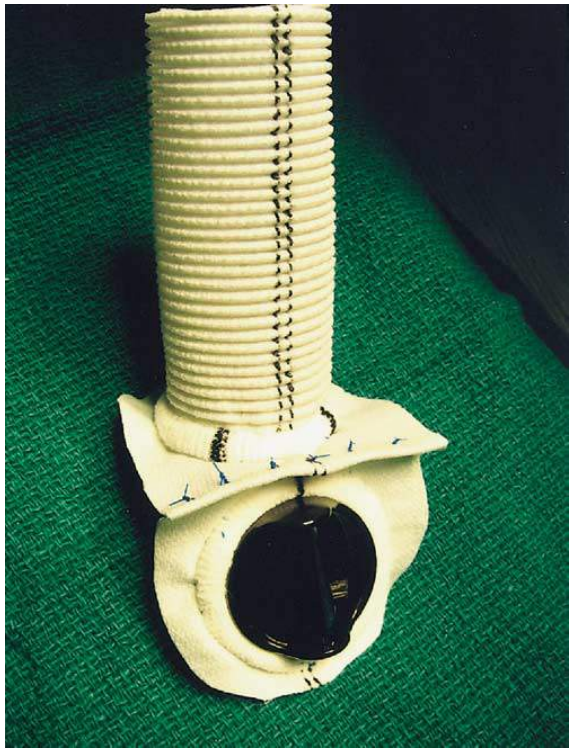


Figure 2. Monobloc aorto-mitral mechanical valve replacement.


Monobloc Aorto-mitral
Mécanique
JF Obadia - Lyon

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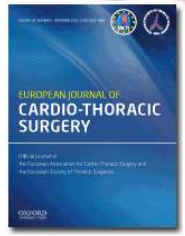
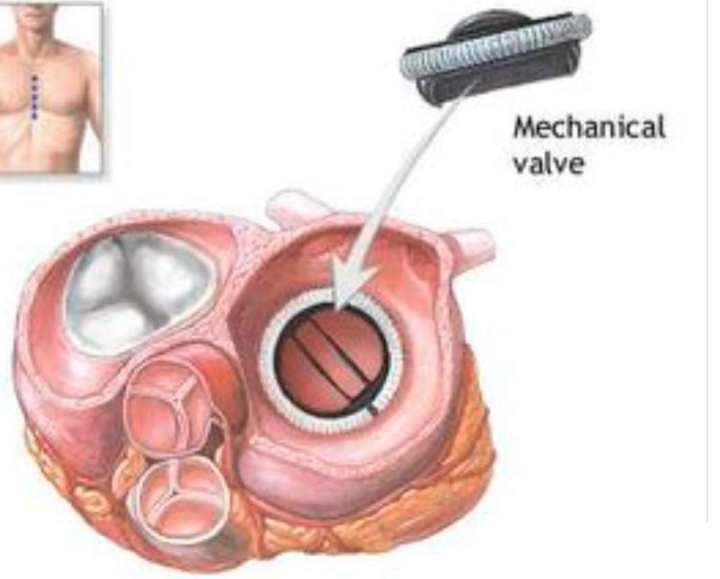


7 Patients : 7 procedural success

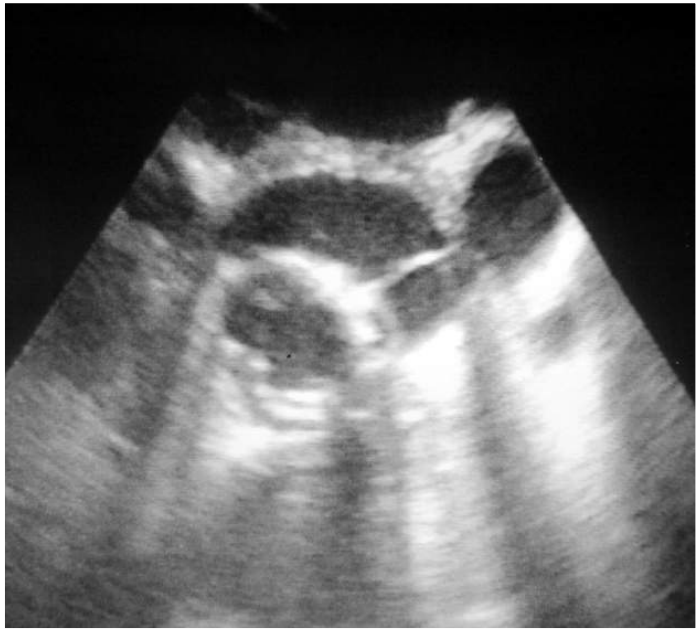
➔ 4 deaths (postoperative course)

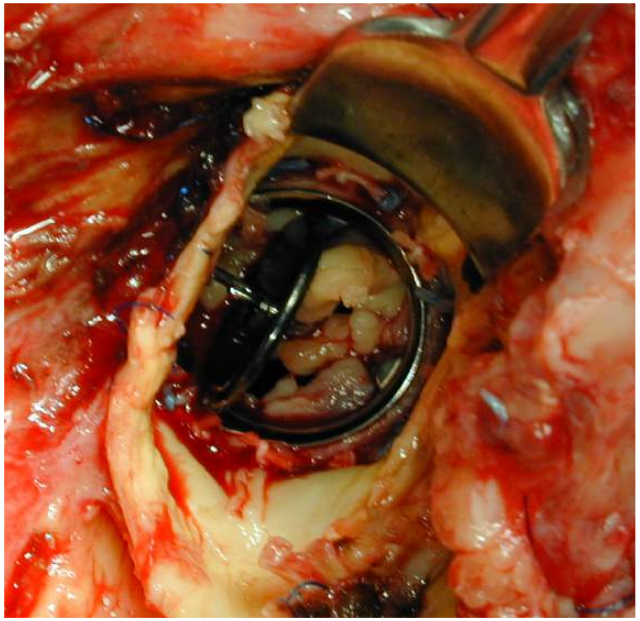
➔ 3 surviving pts 14-10-6 y
2 reop. for MVR
- 2 years
- 3 years
1 Bi-mechanical



Prosthetic Valve Endocarditis

* ≈ 1% per Pt/year (no dif bio/meca)
* 16% French Survey / 20% ICE / 26% Euro heart Survey
* Mortality rate ➔ 20 to 40 % (staph, Fungi…)
* Performed ➔ 50 % !!!





Which Substitute ?

« Treatment of Endocarditis with Valve Replacement : The question of Tissue versus Mechanical Prosthesis. 2001 ; 71 : 1164-71»

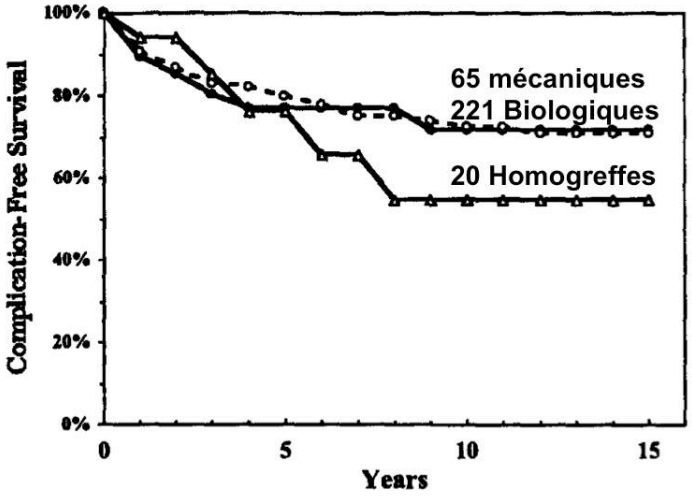
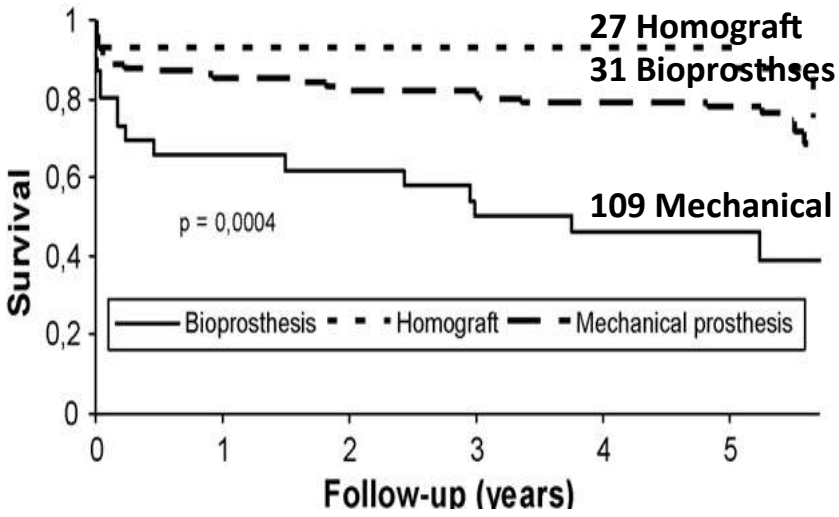


Fig 4. Complication-free survival for patients undergoing valve replacement with mechanical, bioprosthetic, or homograft valves.

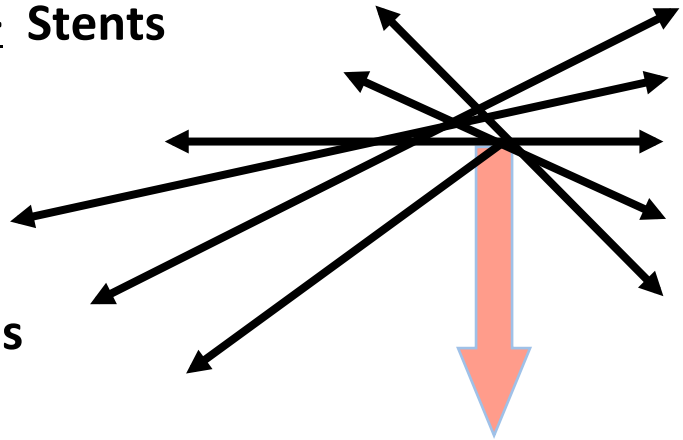
Aortic valve replacement for active infective endocarditis: 5-year survival comparison of bioprostheses, homografts and mechanical prostheses☆

Duc Trung Nguyen[a,b,c], François Delahaye[d,e], Jean-François Obadia[d,f], Xavier Duval[g], Christine Selton-Suty[h], Jean-Pierre Carteaux[b,i], Bruno Hoen[j], François Alla[b,c,k,*], for the AEPEI study group[l]



European Journal of Cardio-thoracic Surgery 37 (2010) 1025—1032

- **Which Substitute ?**
  - Mechanical Prostheses
  - Biological ± Stents
  - Repair
  - Ross
  - Bentall
  - Homograft's



Aortic
Mitral
Aorto-mitral
Tricuspid
Abscess

Consensus +

- **Cancer Surgery**
  - *1) Resection of all the lesions*
  - *2) Reconstruction*
  - 3) Chemotherapy

IE Heart Team

QUIZ 2

Is there in your institution a structured IE Heart team ?

A ➔ Yes

B ➔ No

Structured Heart team :

- Regular meetings at a precise time (Weekly basis)
- at least 3 different specialties
- Several members / Specialties
- Involving Nurses and Coordinator
- Pre-program announcing the files to discuss
- Written decisions recorded
- Yearly evaluation

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No rules : Bio > Meca > HomoG
Desperate situations
➔ Complex surgery
➔ Less frequent