



Traitement chirurgical des CIA / RVPAp / CAVp

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Plan

- Rappel-généralités
- TTT chirurgicaux
- Conséquences

Rappel-généralités-résultats

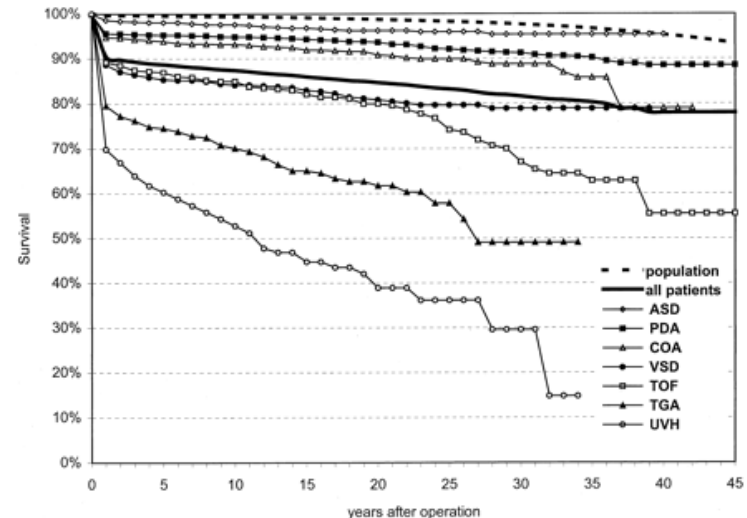
- Histoire naturelle ?

- 128 patients > 18 ans: KT droit
- 75% symptomatiques
- 25% PAPm augmentées
- 15% PAPm très augmentées

Craig RJ, Selzer A. Natural history and prognosis of atrial septal defect. Circulation 1968; 37: 805–815.

- Résultat: excellent !

- Après chirurgie cardiaque
- *Nieminen, Circulation. 2001*



Class I

- 1. Closure of an ASD either percutaneously or surgically is indicated for right atrial and RV enlargement with or without symptoms. (*Level of Evidence: B*)**
- 2. A sinus venosus, coronary sinus, or primum ASD should be repaired surgically rather than by percutaneous closure. (*Level of Evidence: B*)**
- 3. Surgeons with training and expertise in CHD should perform operations for various ASD closures. (*Level of Evidence: C*)**

Class IIa

- 1. Surgical closure of secundum ASD is reasonable when concomitant surgical repair/replacement of a tricuspid valve is considered or when the anatomy of the defect precludes the use of a percutaneous device. (*Level of Evidence: C*)**
- 2. Closure of an ASD, either percutaneously or surgically, is reasonable in the presence of:**
 - a. Paradoxical embolism. (*Level of Evidence: C*)**
 - b. Documented orthodeoxia-platypnea. (*Level of Evidence: B*)**

Table 3 Indications for intervention in atrial septal defect

Indications	Class ^a	Level ^b
Patients with significant shunt (signs of RV volume overload) and PVR <5 WU should undergo ASD closure regardless of symptoms	I	B ²⁶
Device closure is the method of choice for secundum ASD closure when applicable	I	C
All ASDs regardless of size in patients with suspicion of paradoxical embolism (exclusion of other causes) should be considered for intervention	IIa	C
Patients with PVR ≥5 WU but <2/3 SVR or PAP <2/3 systemic pressure (baseline or when challenged with vasodilators, preferably nitric oxide, or after targeted PAH therapy) and evidence of net L–R shunt (Qp:Qs >1.5) may be considered for intervention	IIb	C
ASD closure must be avoided in patients with Eisenmenger physiology	III	C

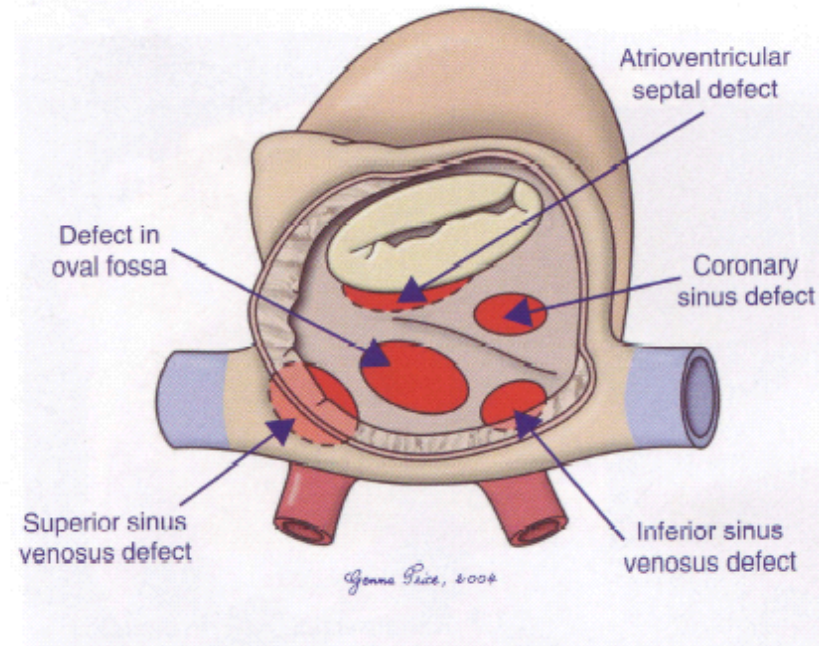
^aClass of recommendation.

^bLevel of evidence.

ASD = atrial septal defect; L–R shunt = left-to-right shunt; PAH = pulmonary arterial hypertension; PAP = pulmonary artery pressure; PVR = pulmonary vascular resistance; Qp:Qs = pulmonary to systemic flow ratio; SVR = systemic vascular resistance; WU = Wood units.

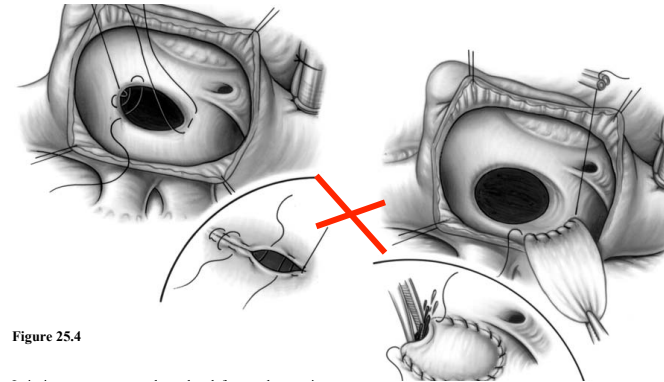
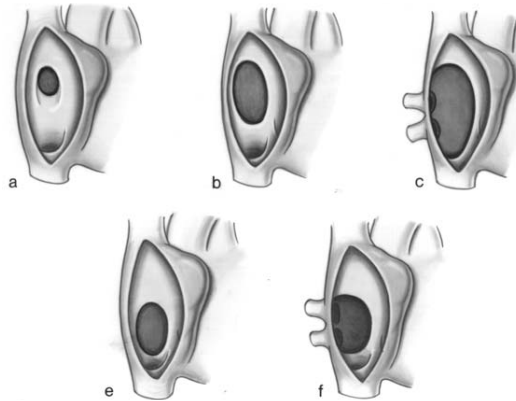
Rappel- anatomie

- Plus fréquente des CC
 - Isolée / associée (30%)
- **CIA OS (75%)**
- **CIA SV (10%)**
- **CIA SC (< 1%)**
- CIA associé à CAVP (15%)



Technique chirurgicale: CIA OS

- Sternotomie: gold standard



- Thoracotomie postérieure
 - 85 enfants (07/2003 à 02/2013)
 - Age moyen : 5.5 ans (2 à 10ans)
 - Poids : 16.8 kg (8.5 à 33 kg)

Technique chirurgicale: CIA OS

- Thoracotomie antéro-latérale



Technique chirurgicale: CIA OS

- Thoracotomie antéro-latérale

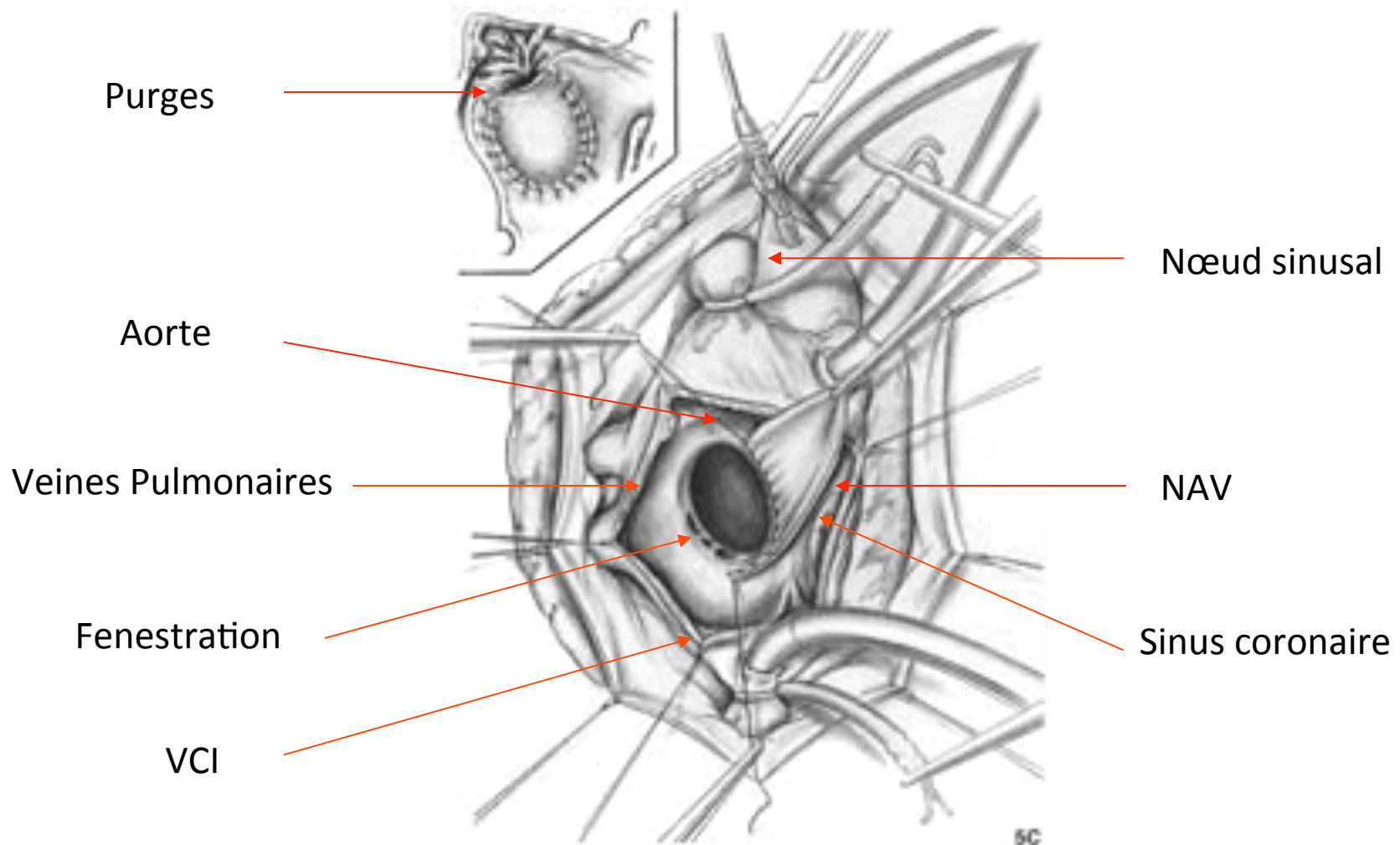


Technique chirurgicale: CIA OS

- Thoracotomie postérieure
 - 101 enfants (07/2003 à 02/2014)
 - Age moyen : 5.5 ans (2 à 10ans)
 - Poids : 16.8 kg (8.5 à 33 kg)



Complications rares: court terme



Procédures associées (adulte +++)

- Sténose pulmonaire
- Prolapsus valvulaire mitral
- Fuite tricuspide
- Pontages?
- Arythmies:
 - CIA « vieillie »
 - Insuffisant de se contenter de corriger le défaut
Brandenburg Am J Cardiol 1983
 - CLASS IIb (C`

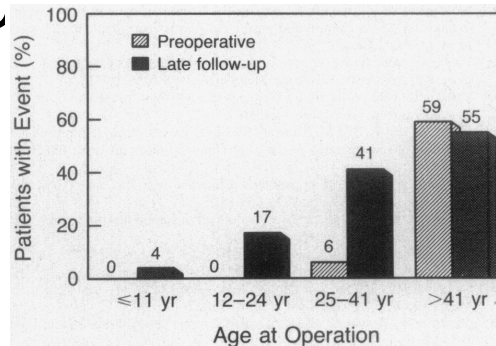
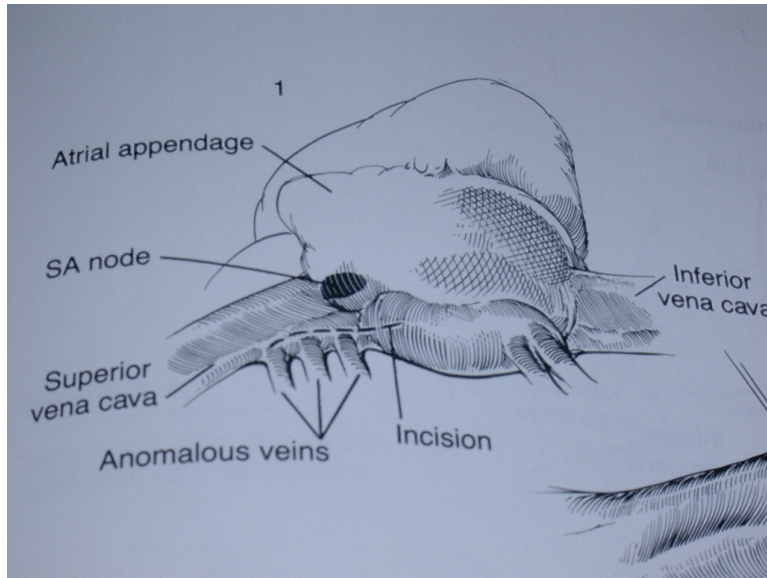


Figure 4. Incidences of Preoperative and Late Atrial Fibrillation or Flutter, According to Age at Operation.

CIA SV

Association avec RVPAP



Haute

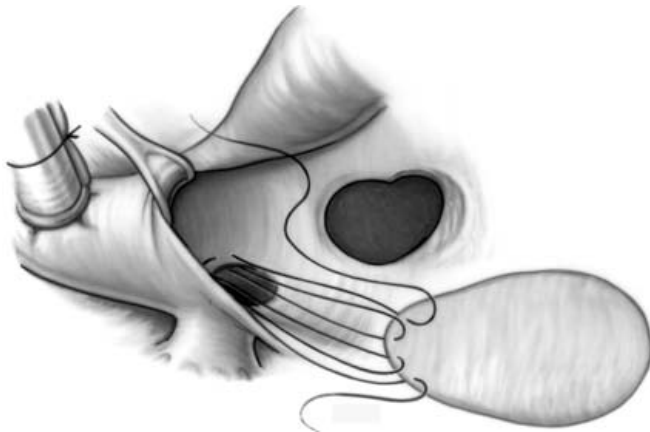
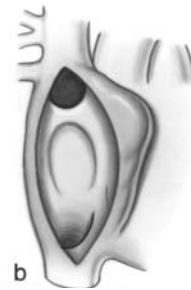
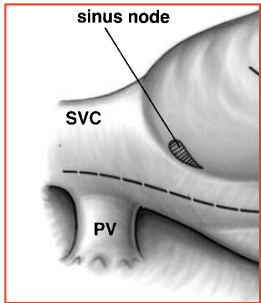


Moyenne

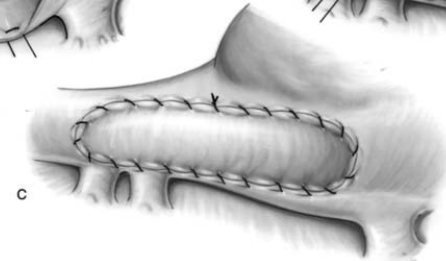
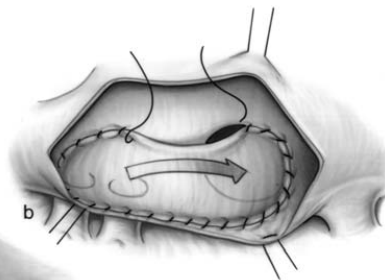
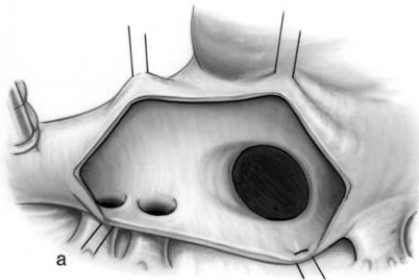
Basse

Technique chirurgicale: CIA SV

Technique classique



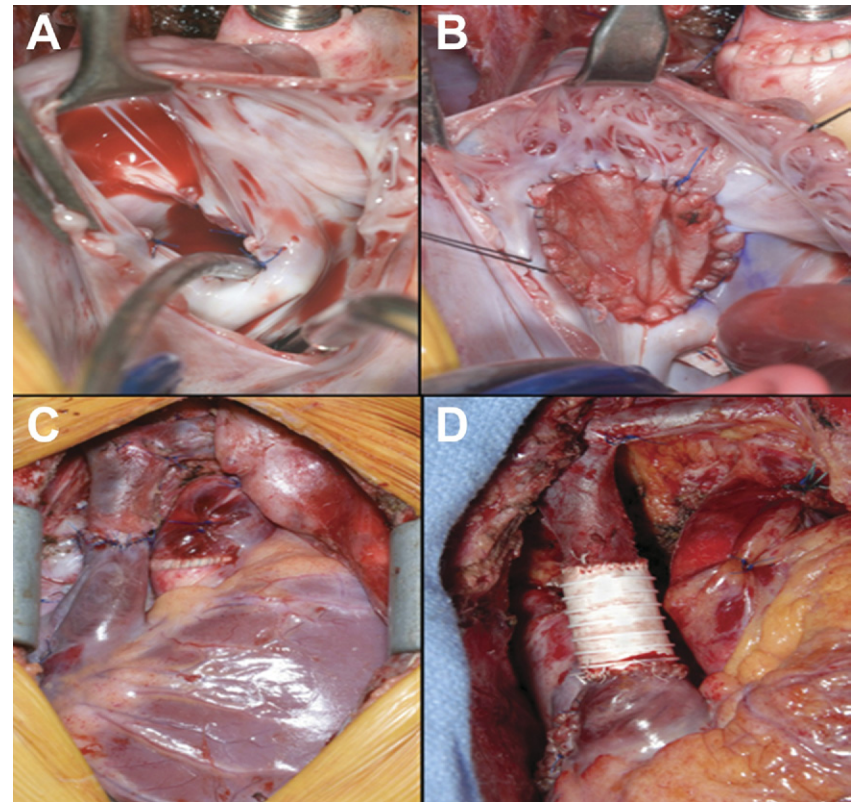
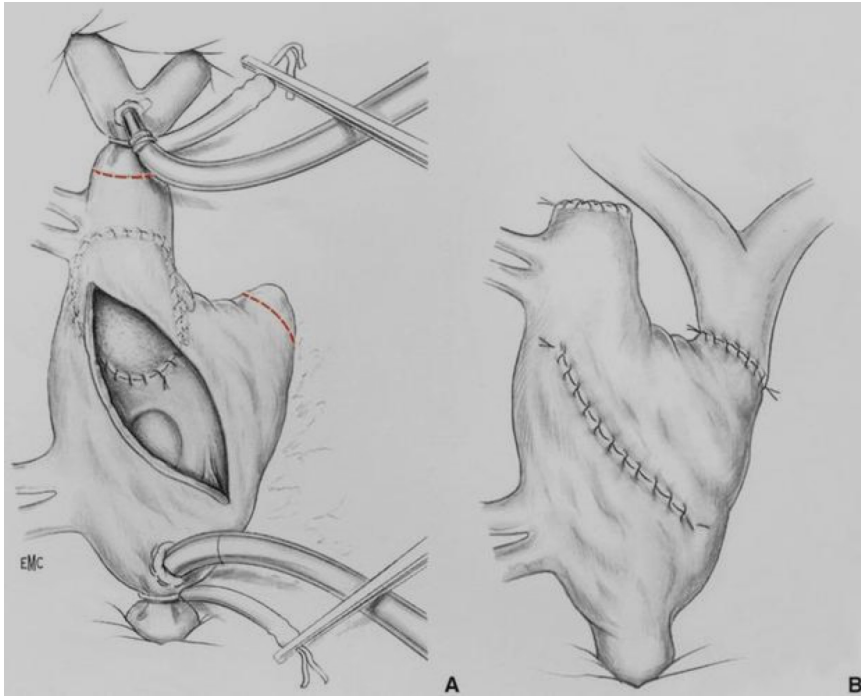
VP dte « basses »



VP dte « hautes »

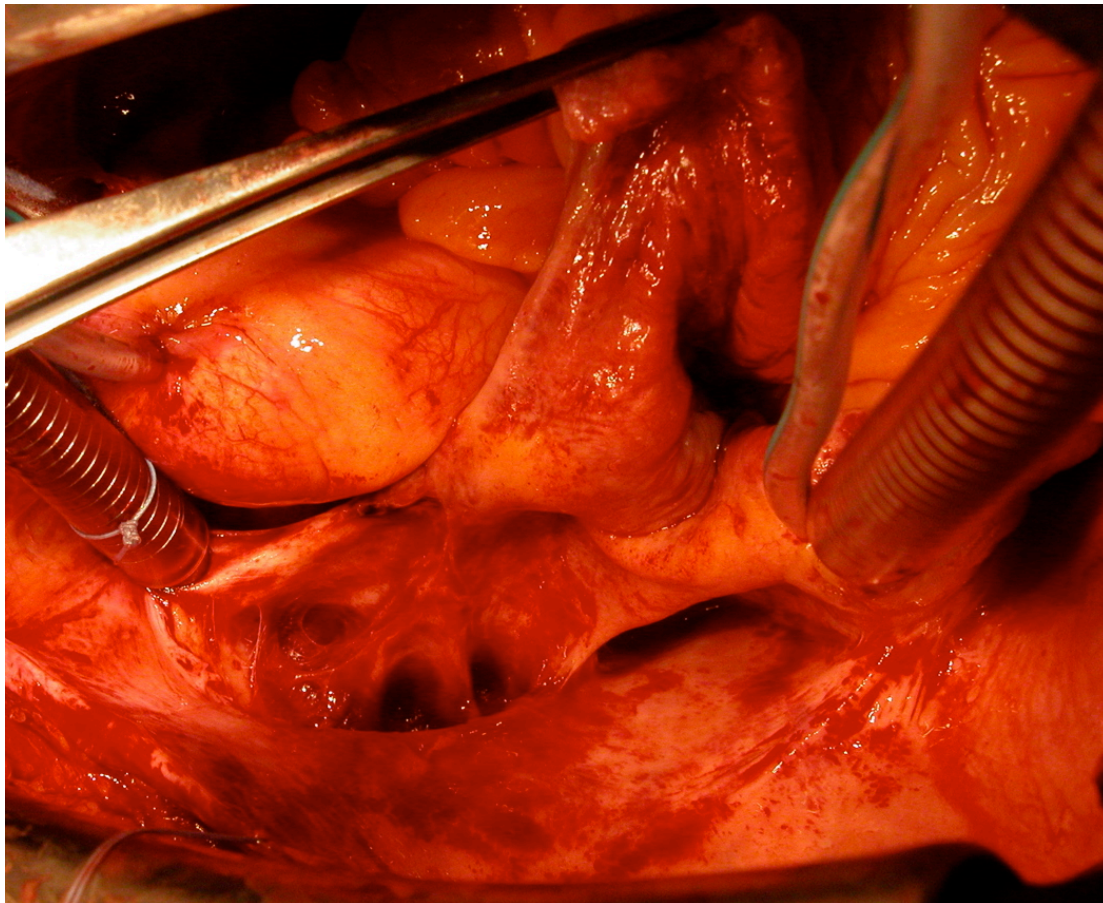
Technique chirurgicale: CIA SV

Technique de Warden



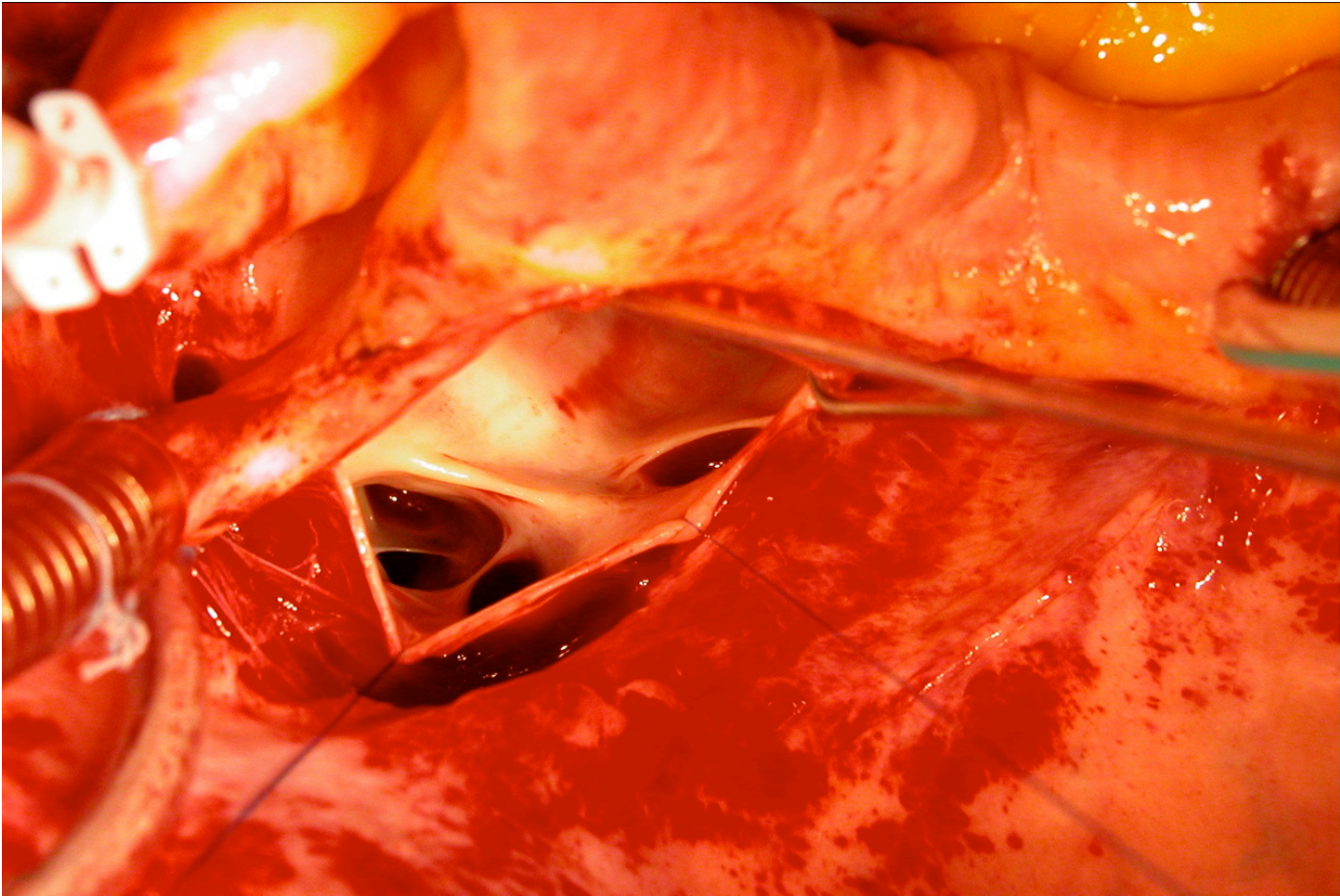
Technique chirurgicale: CIA SV

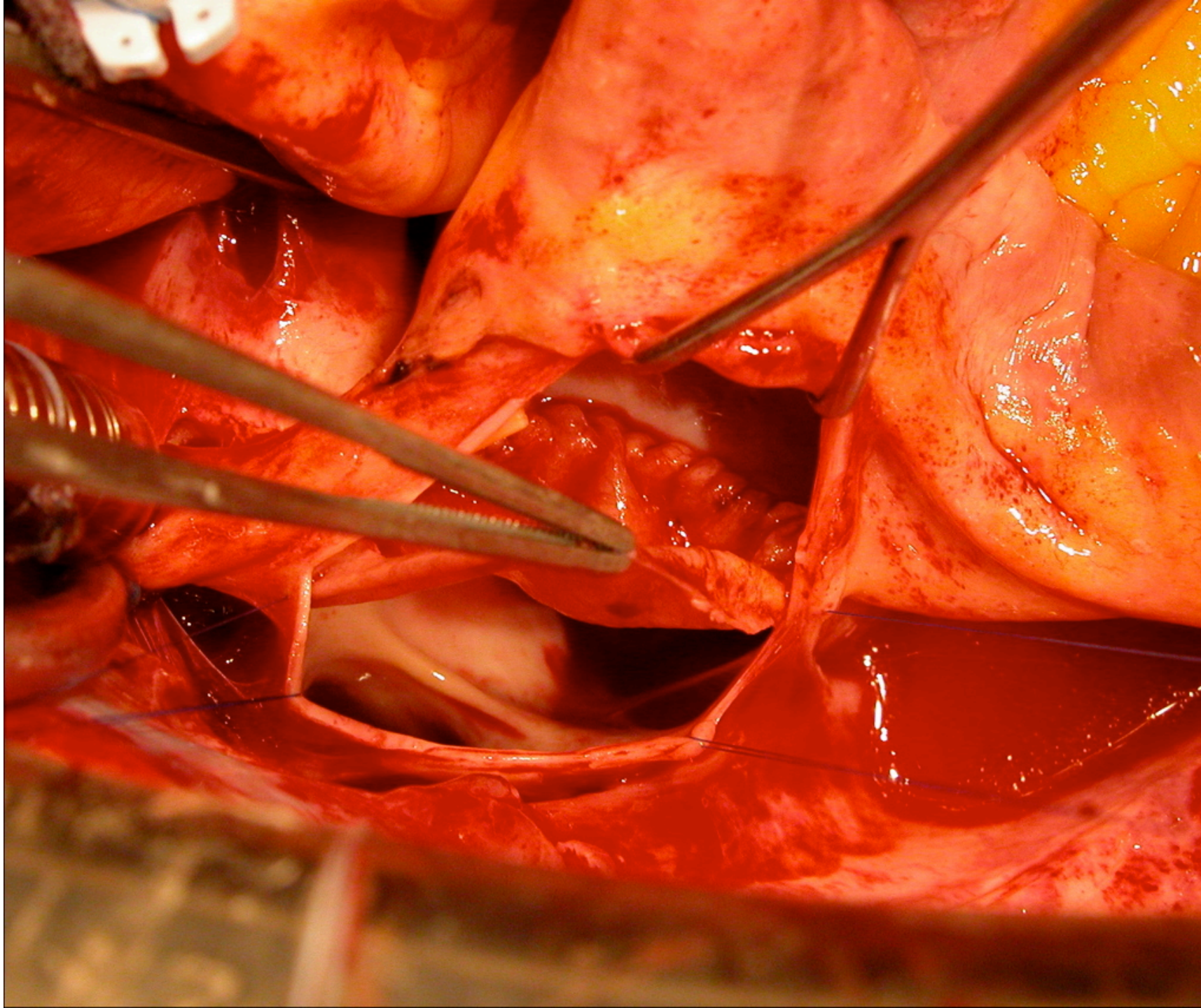
Technique trans-cave

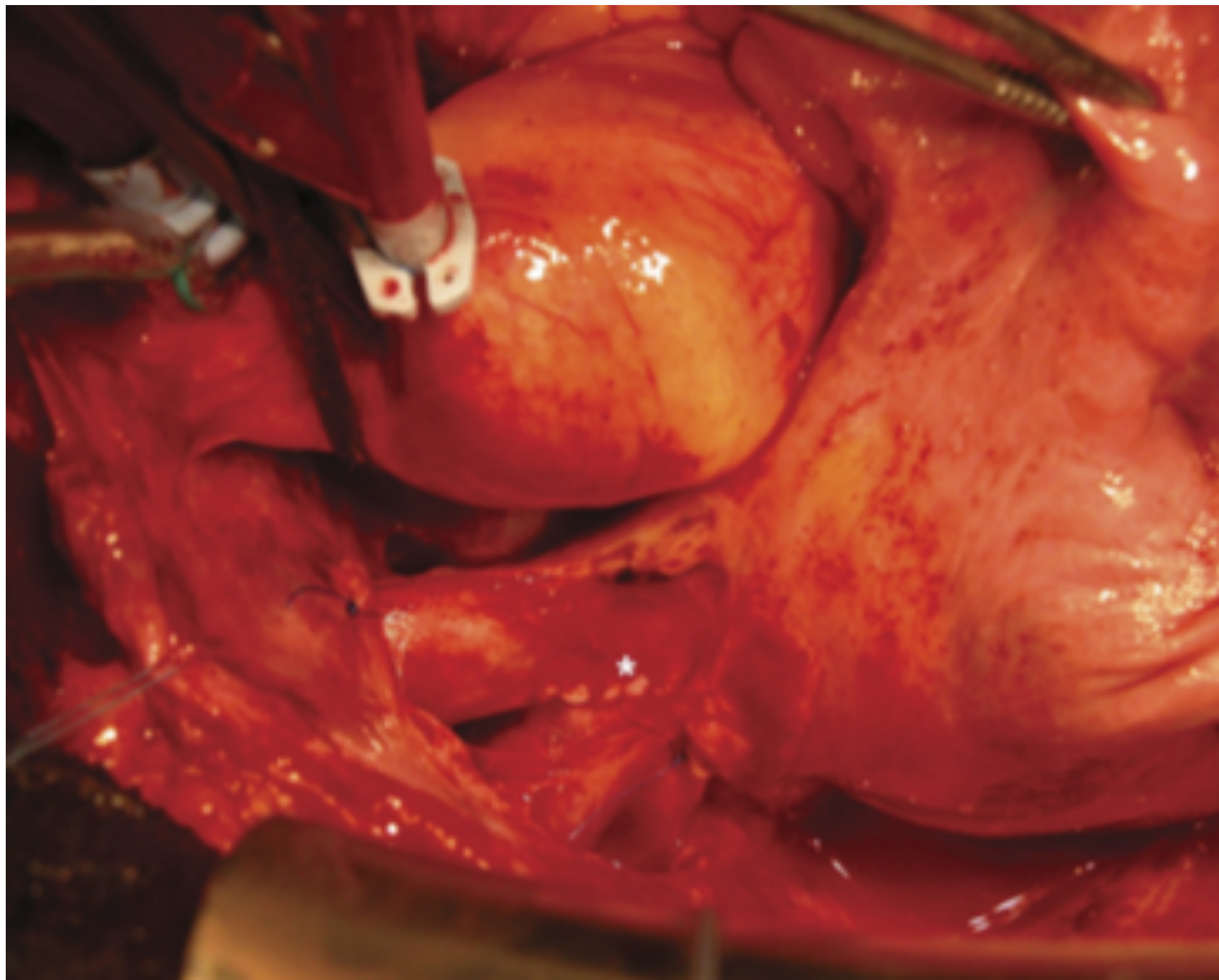


Technique chirurgicale: CIA SV

Technique trans-cave

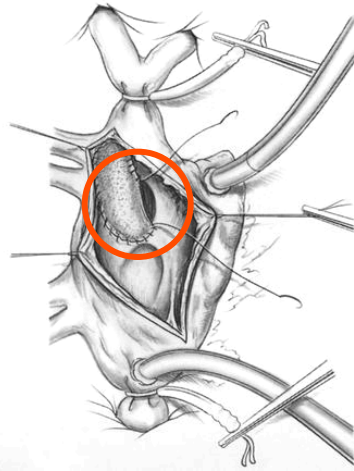
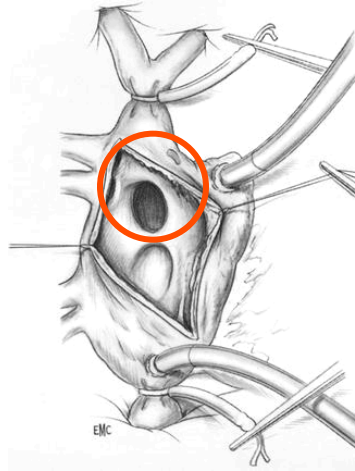




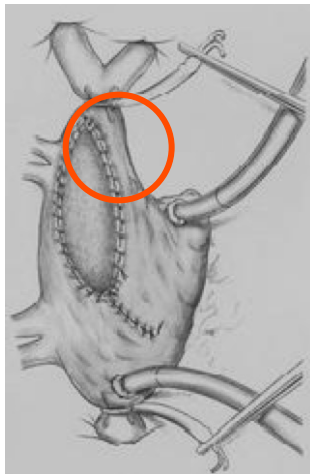


Complications potentiels CIA SV

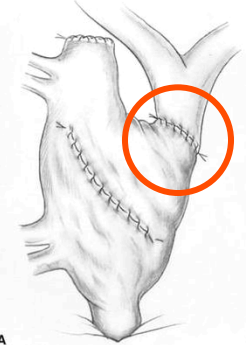
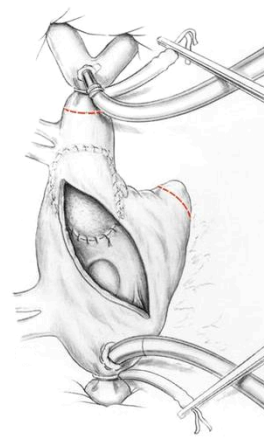
Taille de la CIA



Obstruction des
Veines Pulmonaires



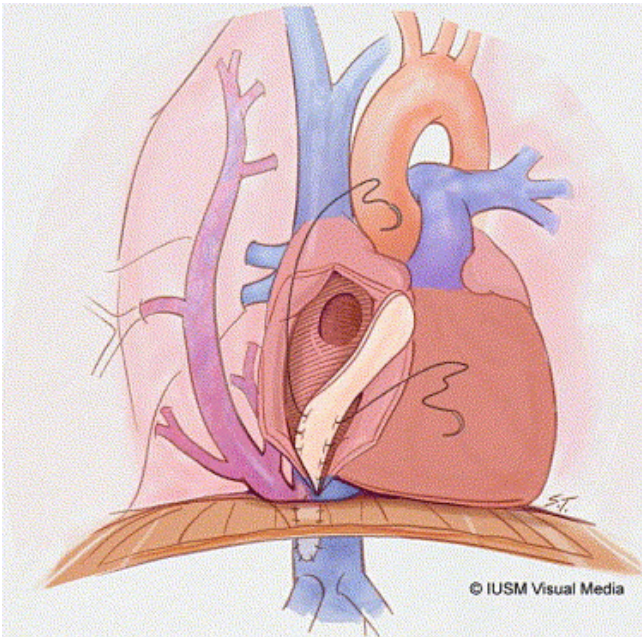
Rythme



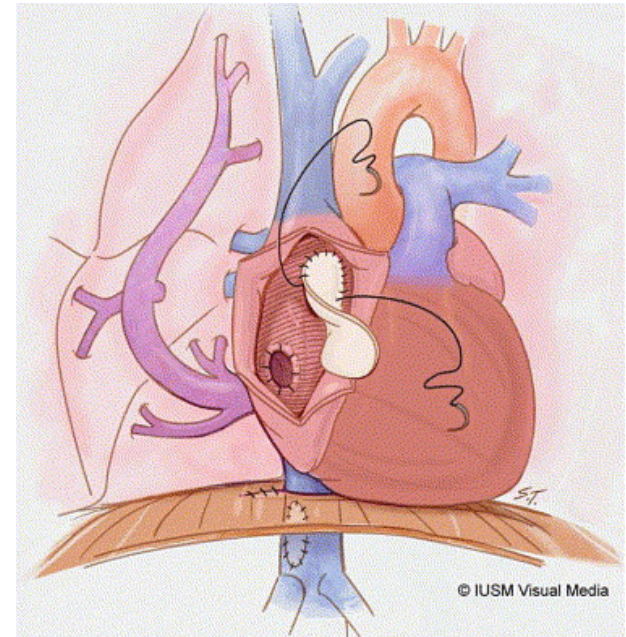
Obstruction VCS

Technique chirurgicale: Sd Cimeterre

Pas de gold standard !

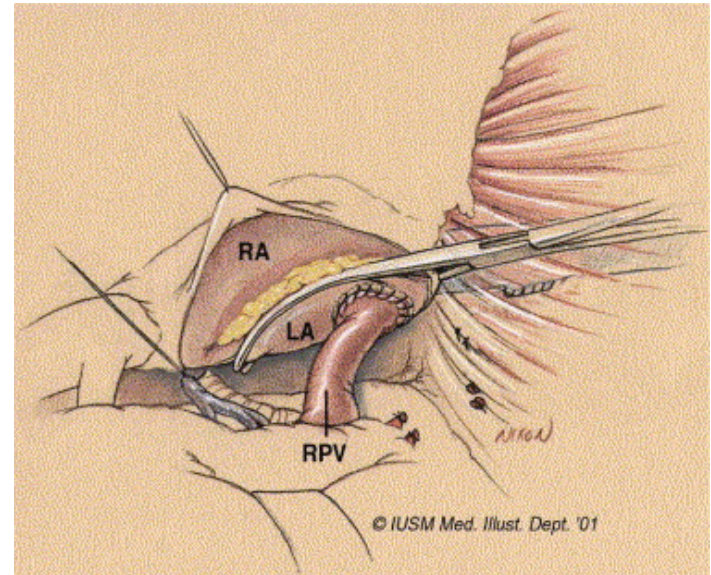
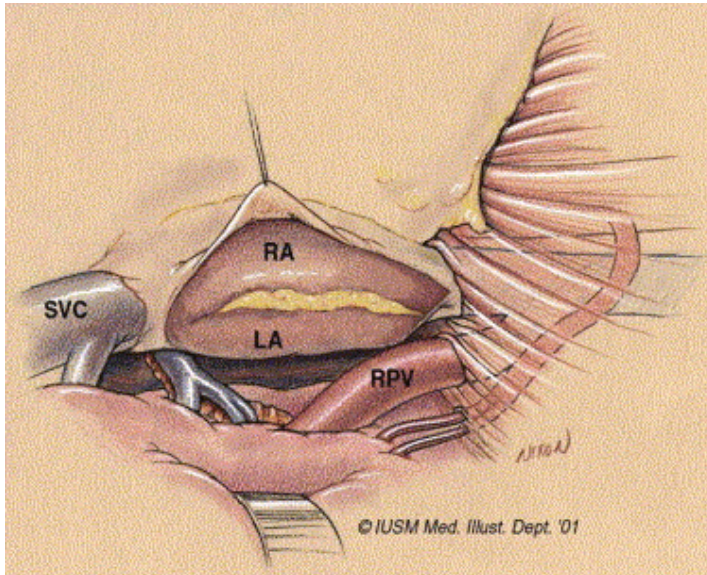


Longue tunnelisation !



Hypothermie profonde !

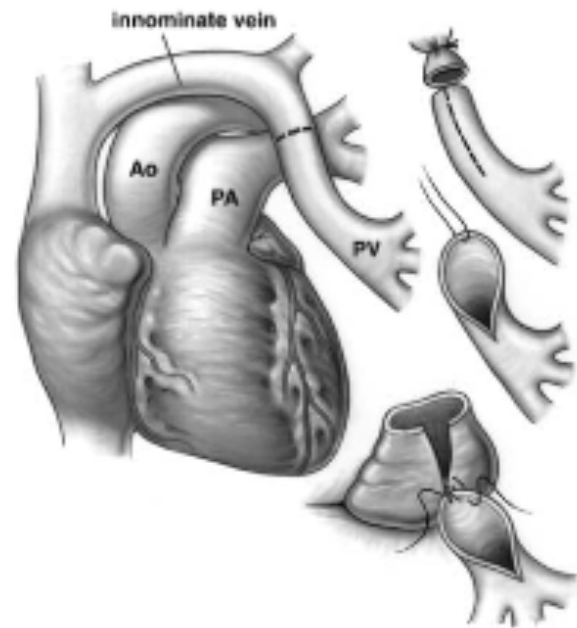
Technique chirurgicale: Sd Cimeterre



Alternative sans CEC: réimplantation directe/ thoraco droite

Brown JTCS 2003

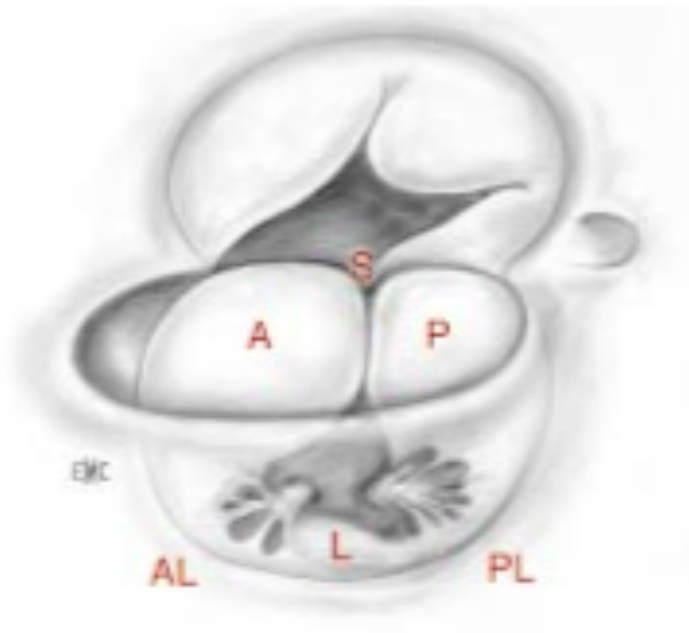
RVPAP gauche



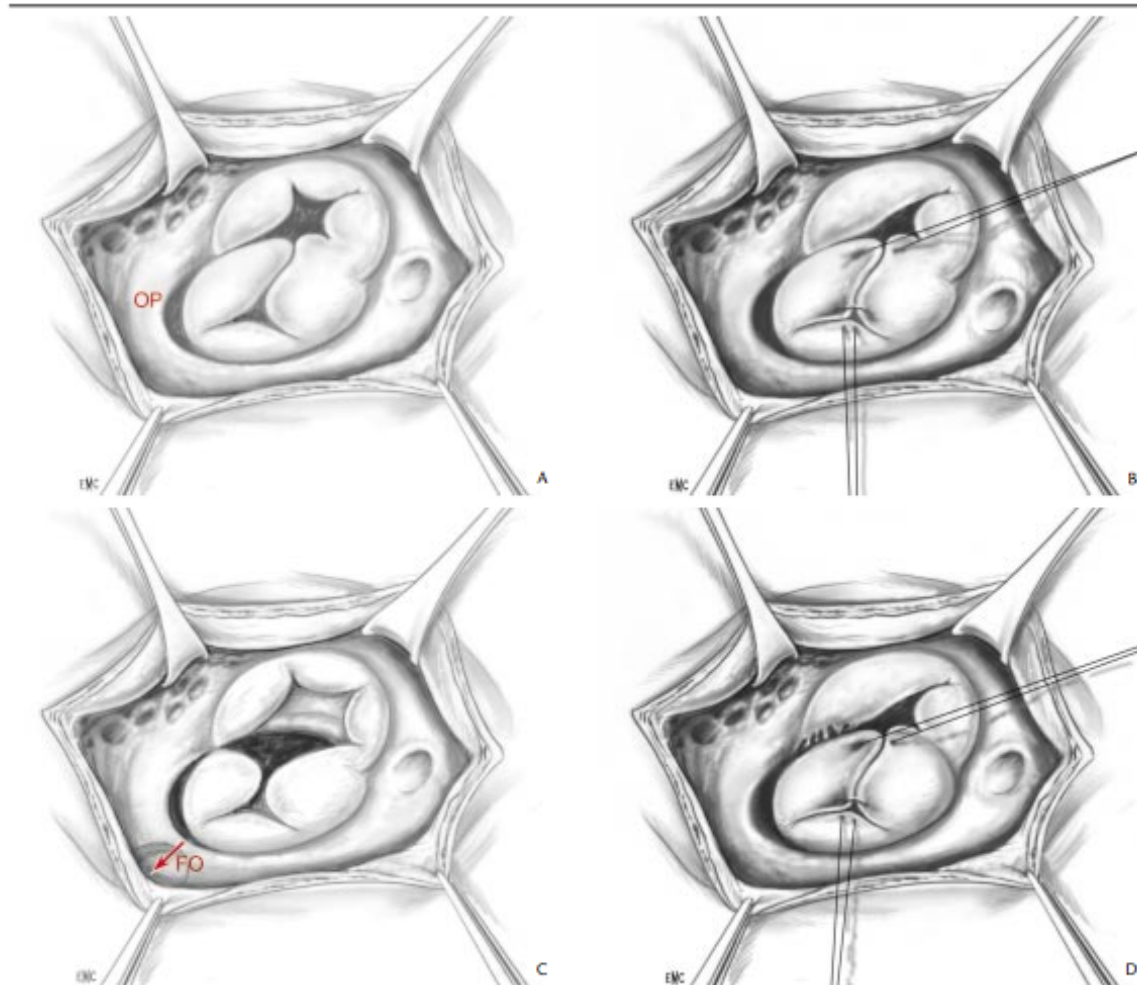
CAVP: buts de l'intervention chirurgicale

1. fermer la CIA
2. éviter les voies de conduction
3. créer deux valves AV fonctionnelles

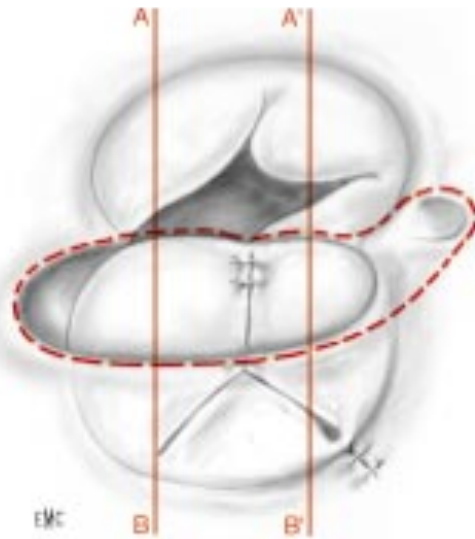
CIA : OP



CIA : OP



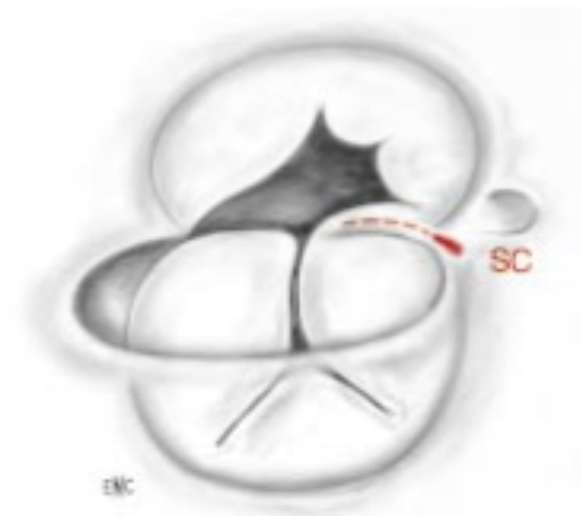
CIA : OP



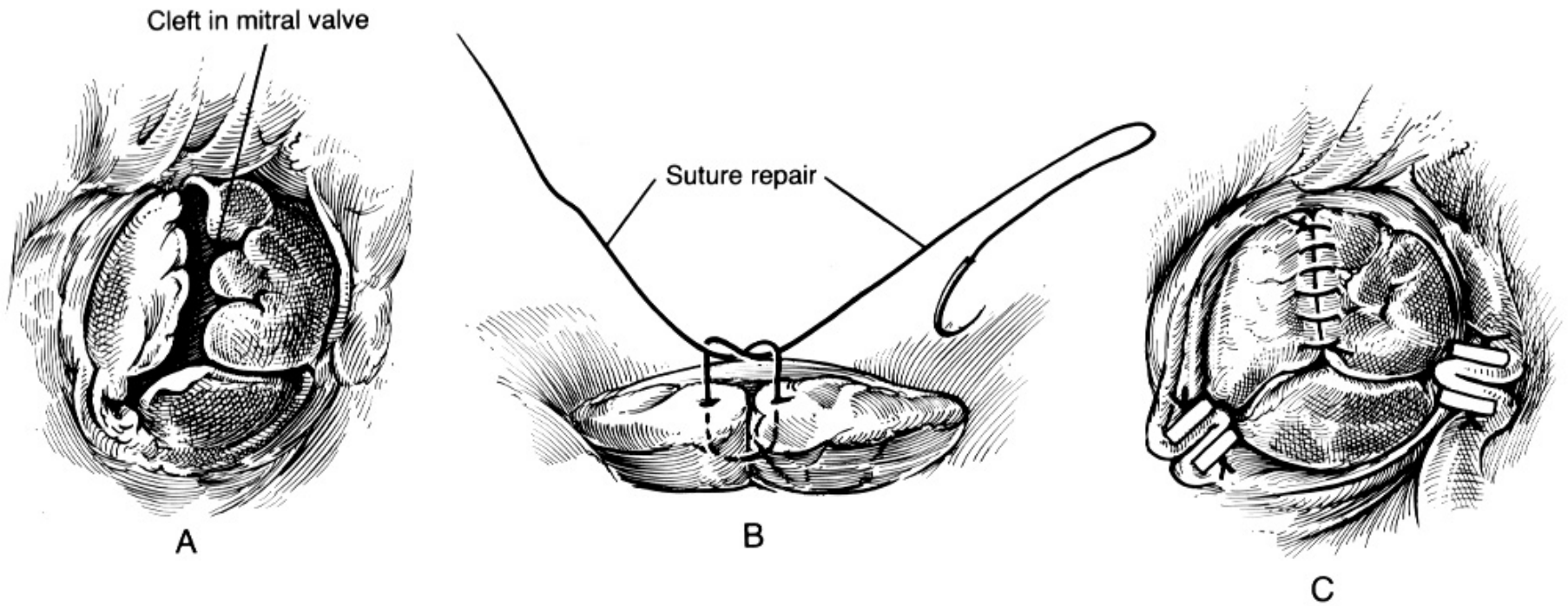
A



B



CAV : réparation mitrale



Lésions résiduelles potentielles

- CIA résiduelle
- insuffisance mitrale / sténose mitrale
- insuffisance tricuspидienne
- sténose sous-aortique

Messages importants:

le plus souvent: chirurgie »prophylactique »
pas droit à l'erreur
gestion douleurs, épanchements, etc.

parfois: complications potentielles
anomalies retour veineux
co-morbidités
VD 'explosé', tbl rythme...

