Société Française de Cardiologie
Filiale de Cardiologie Pédiatrique et Congénitale

Vendredi 20 juin 2025

Place de l'angioplastie coronaire

Pierre Aubry
Hôpital Bichat, Paris 75018
Centre Hospitalier, Gonesse 95500

HÔPITAUX UNIVERSITAIRES PARIS NORD VAL DE SEINE
Bichat - Claude-Bernard

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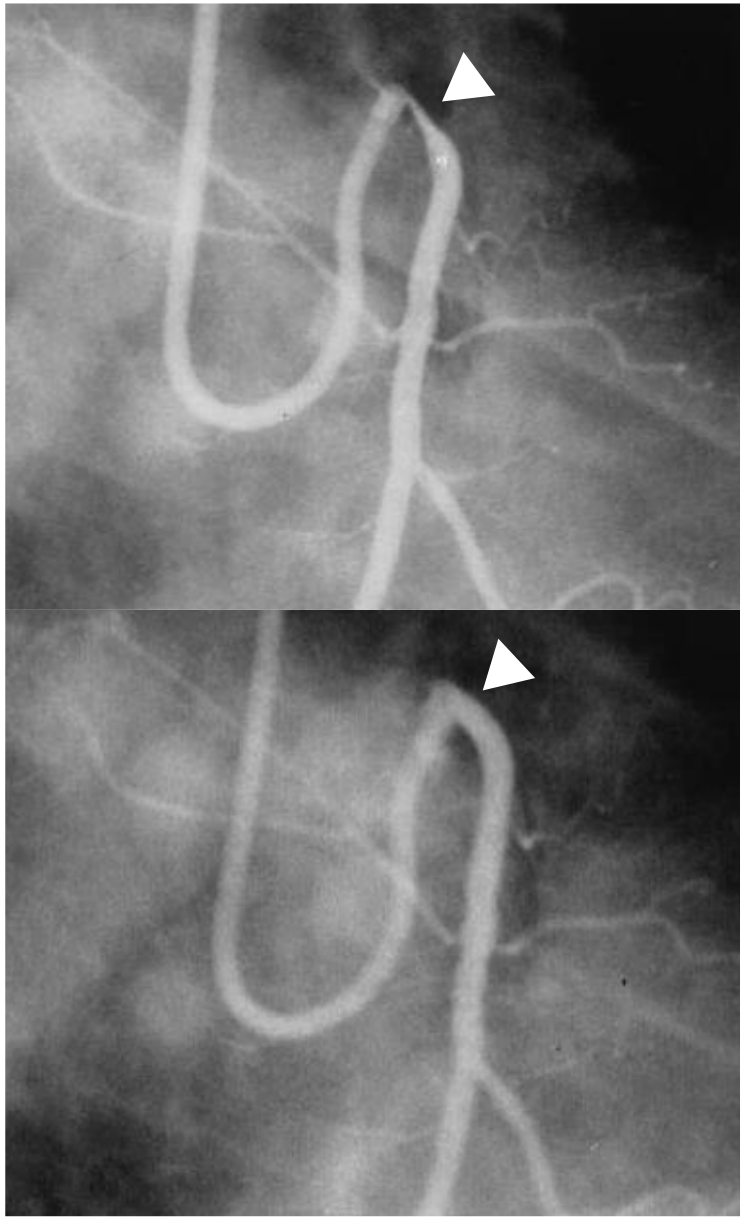
Groupement Hospitalier de Territoire
Saint-Denis Gonesse
Plaine de France

Six-Month Success of Intracoronary Stenting for Anomalous Coronary Arteries Associated With Myocardial Ischemia

Andrew J. Doorey, MD, Michael J. Pasquale, MD, James F. Lally, MD, Gary S. Mintz, MD, Erik Marshall, MD, and David A. Ramos, MD

THE AMERICAN JOURNAL OF CARDIOLOGY® VOL. 86 SEPTEMBER 1, 2000



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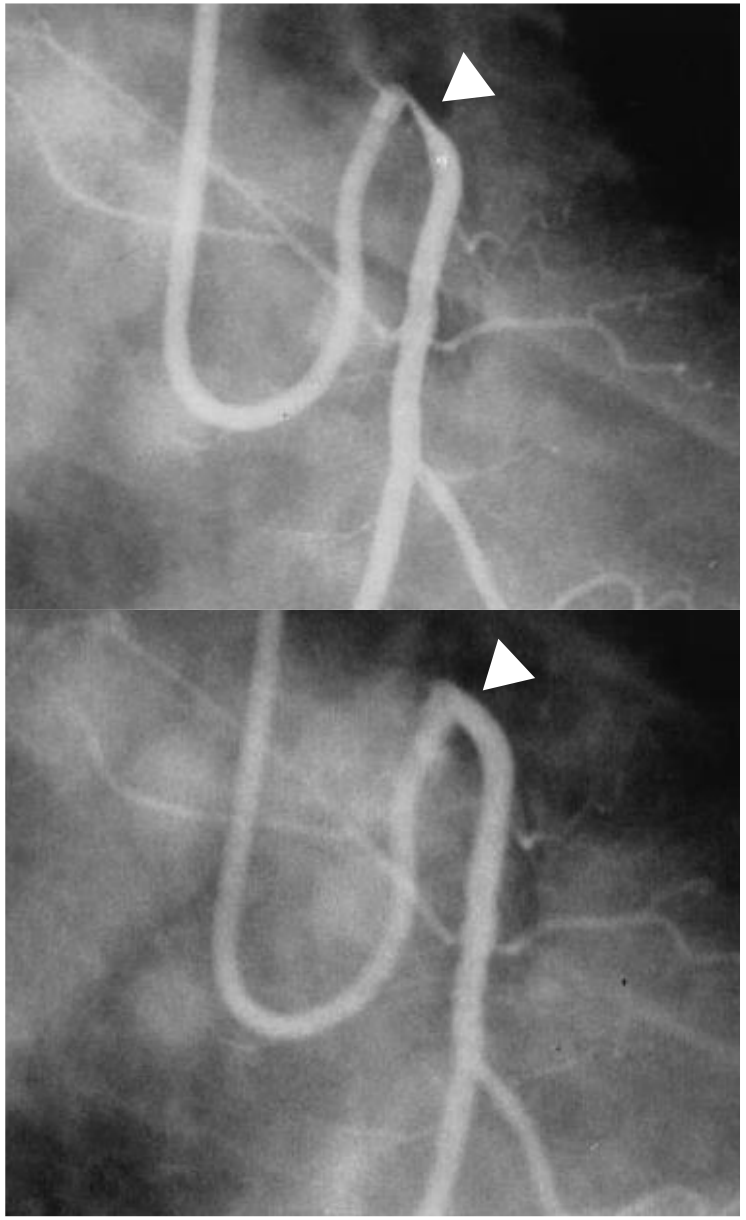
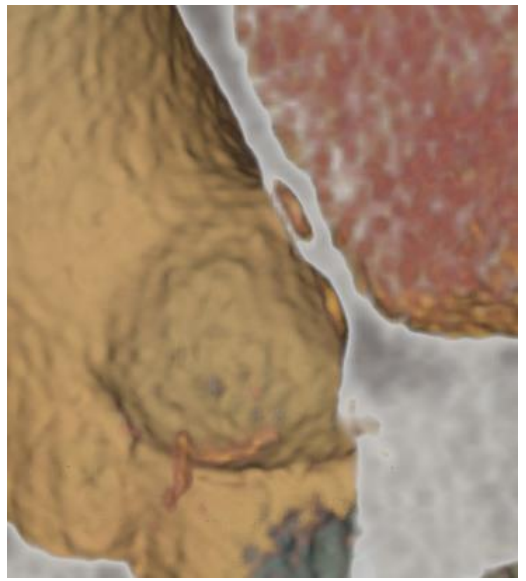
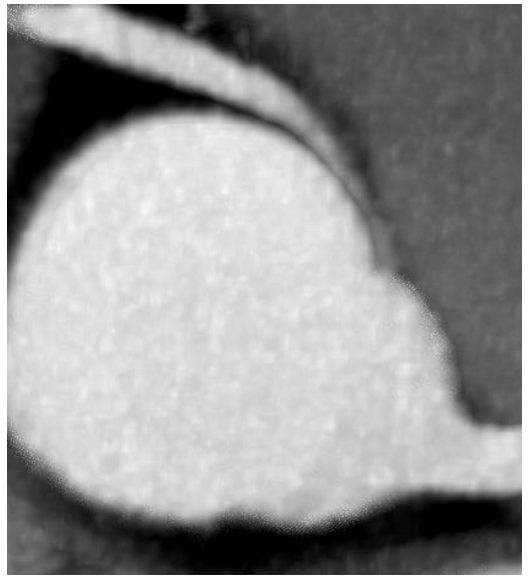






Guidelines

2018 AHA/ACC Guideline for the Management of Adults With Congenital Heart Disease: Executive Summary

COR	LOE	Recommendations
Therapeutic		
I	B-NR	1. Surgery is recommended for AAOCA from the left sinus or AAOCA from the right sinus for symptoms or diagnostic evidence consistent with coronary ischemia attributable to the anomalous coronary artery.[S4.4.5.2-1–S4.4.5.2-3]
IIa	C-LD	2. Surgery is reasonable for anomalous aortic origin of the left coronary artery from the right sinus in the absence of symptoms or ischemia.[S4.4.5.2-4–S4.4.5.2-6]
IIa	C-EO	3. Surgery for AAOCA is reasonable in the setting of ventricular arrhythmias.
IIb	B-NR	4. Surgery or continued observation may be reasonable for asymptomatic patients with an anomalous left coronary artery arising from the right sinus or right coronary artery arising from the left sinus without ischemia or anatomic or physiological evaluation suggesting potential for compromise of coronary perfusion (eg, intramural course, fish-mouth-shaped orifice, acute angle).[S4.4.5.2-4–S4.4.5.2-6]

Stout KK et al. Circulation. 2019.

2020 ESC Guidelines for the management of adult congenital heart disease

Anomalous aortic origin of the coronary artery		
Surgery is recommended for AAOCA in patients with typical angina symptoms who present with evidence of stress-induced myocardial ischaemia in a matching territory or high-risk anatomy.[c]	I	C
Surgery should be considered in *asymptomatic* patients with AAOCA (right or left) and evidence of myocardial ischaemia.	IIa	C
Surgery should be considered in *asymptomatic* patients with AAOLCA and no evidence of myocardial ischaemia but a high-risk anatomy.[c]	IIa	C
Surgery may be considered for symptomatic patients with AAOCA even if there is no evidence of myocardial ischaemia or high-risk anatomy.[c]	IIb	C
Surgery may be considered for *asymptomatic* patients with AAOLCA without myocardial ischaemia and without high-risk anatomy[c] when they present at young age (<35 years).	IIb	C
Surgery is not recommended for AAORCA in asymptomatic patients without myocardial ischaemia and without high-risk anatomy.[c]	III	C

Baumgartner H et al. Eur Heart J. 2020.

http://dx.doi.org/10.1016/j.jtcvs.2016.06.066

Expert consensus guidelines: Anomalous aortic origin of a coronary artery

Julie A. Brothers, MD,[a] Michele A. Frommelt, MD,[b] Robert D. B. Jaquiss, MD,[c] Robert J. Myerburg, MD,[d] Charles D. Fraser, Jr, MD,[e] and James S. Tweddell, MD[f]

Percutaneous Coronary Intervention

Due to safety issues with stenting anomalous coronary arteries in growing children, this procedure is not advisable in the pediatric population, **but may be considered in select cases in the adult population**.

J Thorac Cardiovasc Surg 2017;153:1440-57

Anomalous coronary arteries and PCI

Six-Month Success of Intracoronary Stenting for Anomalous Coronary Arteries Associated With Myocardial Ischemia

Doorey AJ et al. Am J Cardiol. 2000.

N=14

Origin of the Right Coronary Artery from the Opposite Sinus of Valsalva in Adults: Characterization by Intravascular Ultrasonography at Baseline and After Stent Angioplasty

Angelini P et al. Cathet Cardio Interv. 2015.

N=42

Technical success and long-term outcomes after anomalous right coronary artery stenting with cardiac computed tomography angiography correlation

Darki A et al. Cathet Cardio Interv. 2020.

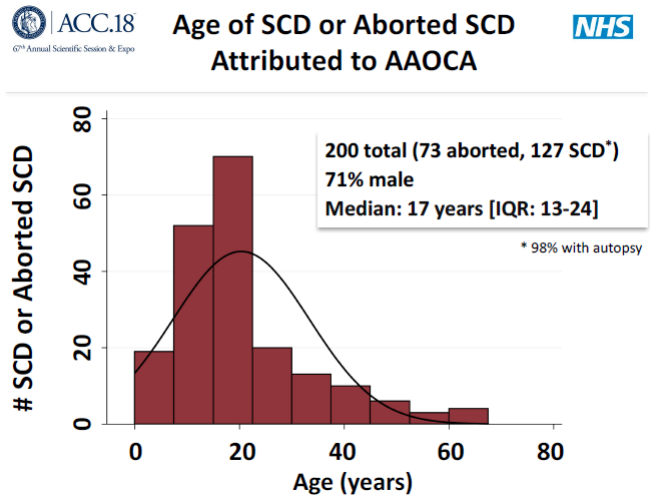
N=4

Place of Angioplasty for Coronary Artery Anomalies With Interarterial Course

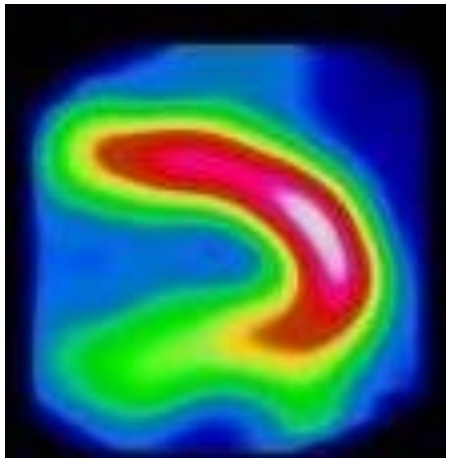
Aubry P et al. Front Cardiovasc Med. 2021.

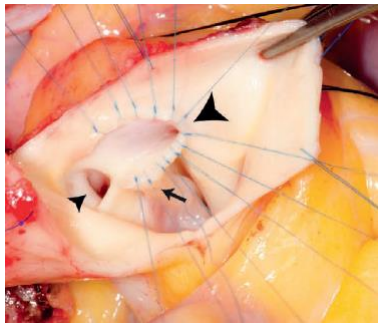
N=17

Rationnel

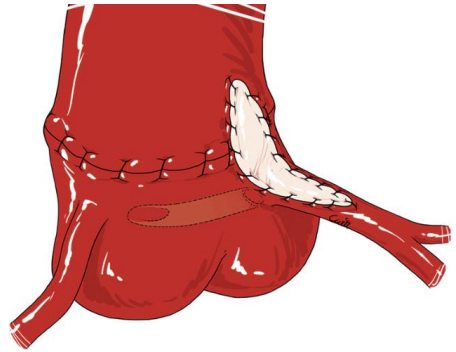


Shiwani H et al. ACC 2018.





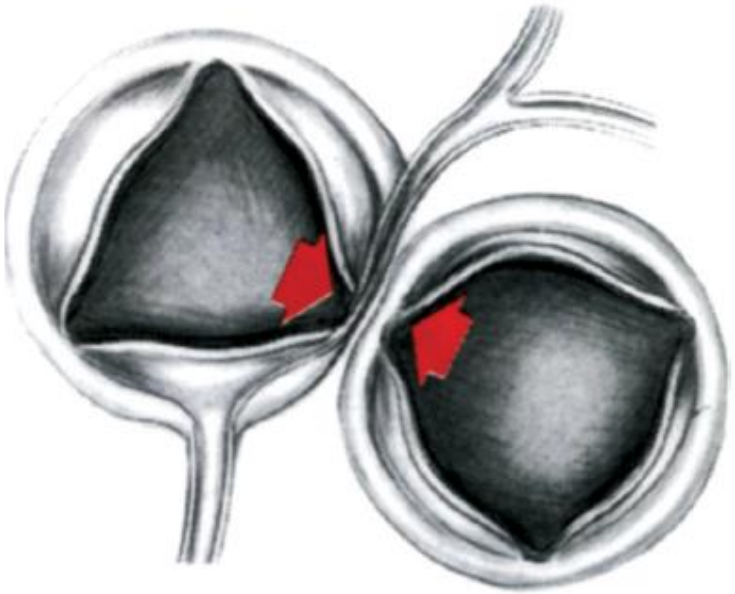
Molossi S et al.
MD Cardiovasc J. 2019.



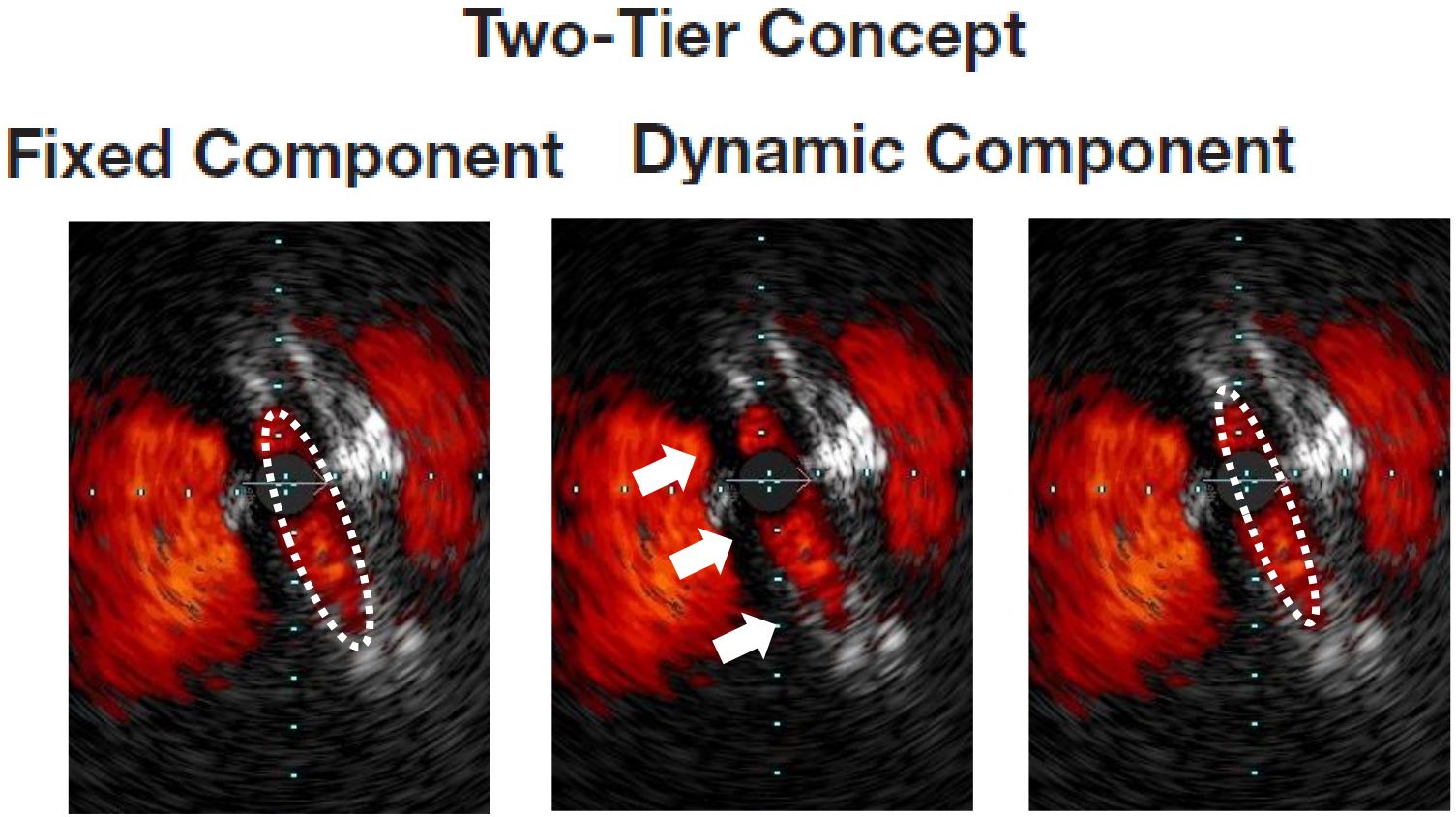
Vouhé P.
Bul Aca Nat Méd. 2014.

≈ 5% re intervention cardiaque

Padalino MA et al. Eur J Cardiothorac Surg. 2019.
Gaudino M et al. Ann Thorac Surg. 2023.



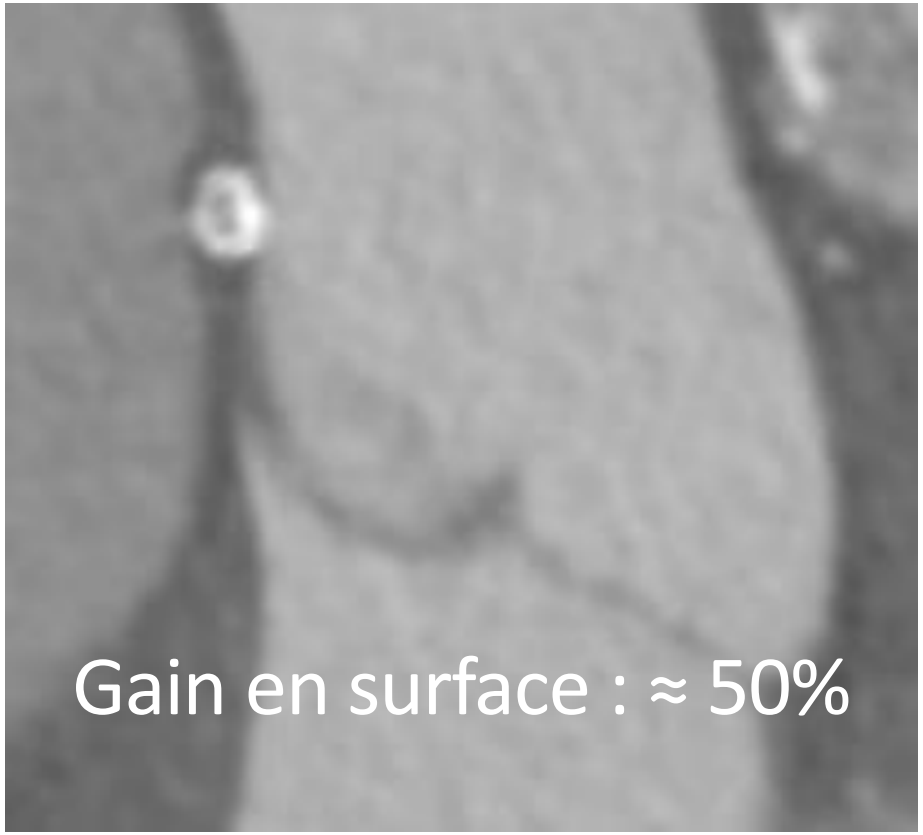
Raisky O, Vouhé P. EMC. 2007.



Bigler MR et al. Front Cardiovasc Med. 2021.

Two-Tier Concept

Fixed Component



Dynamic Component

Registre ANOCOR STENTING

- Groupe ANOCOR (CHU BICHAT-Paris)
- Registre observationnel
- Etude prospective
- 2014 - en cours
- Angioplastie d'une anomalie de connexion aortique (ACA)
- Indication de novo
- Indication post chirurgicale

DIU cardiologie interventionnelle

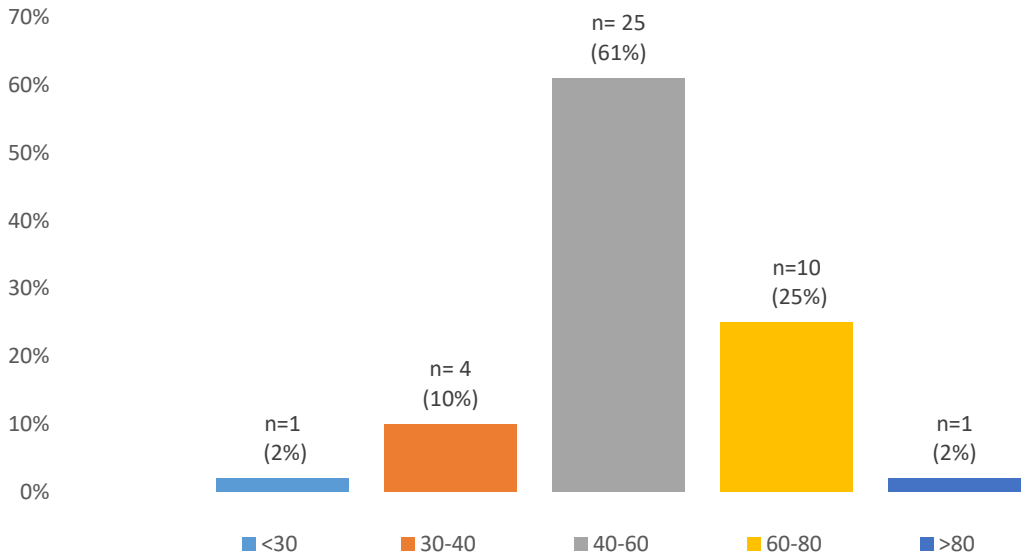
Angioplastie des anomalies coronaires congénitales :
résultats procéduraux et hospitaliers de la cohorte ANOCOR STENTING

Docteur Yassine Ettagmouti (Casablanca, Gonesse)

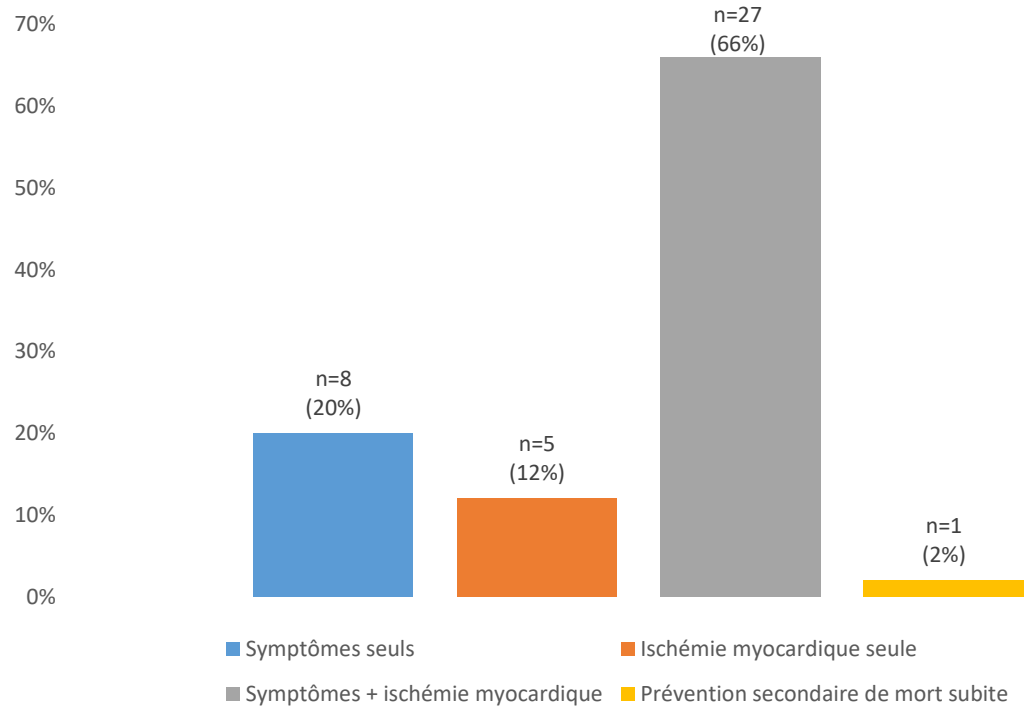
Registre ANOCOR STENTING

N=41

Hommes : 68% - Age moyen : 54 ± 10 ans (29-82)



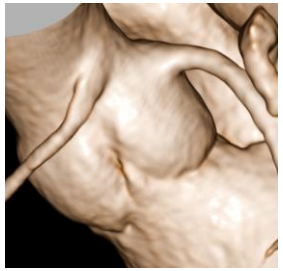
Répartition de la population par tranches d'âge

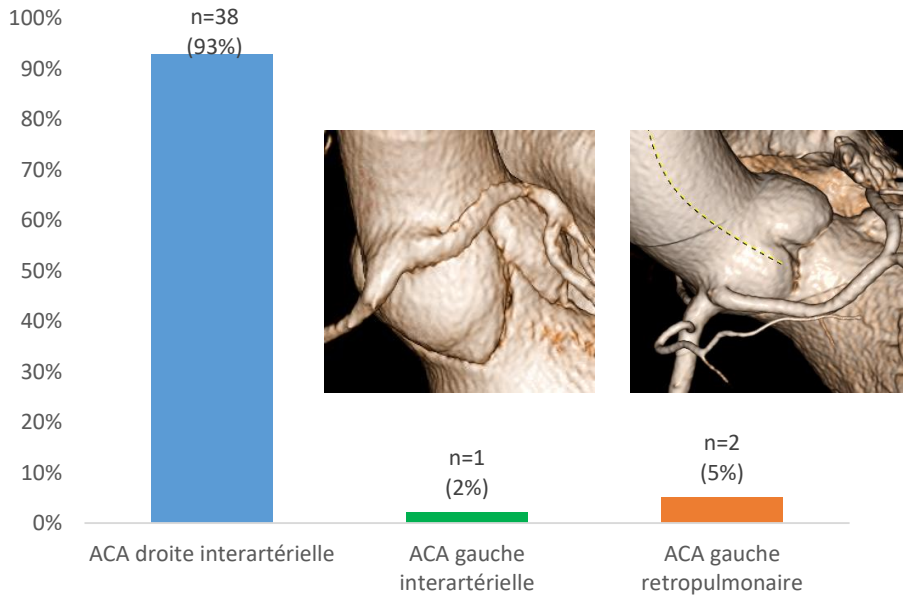


Présentation initiale

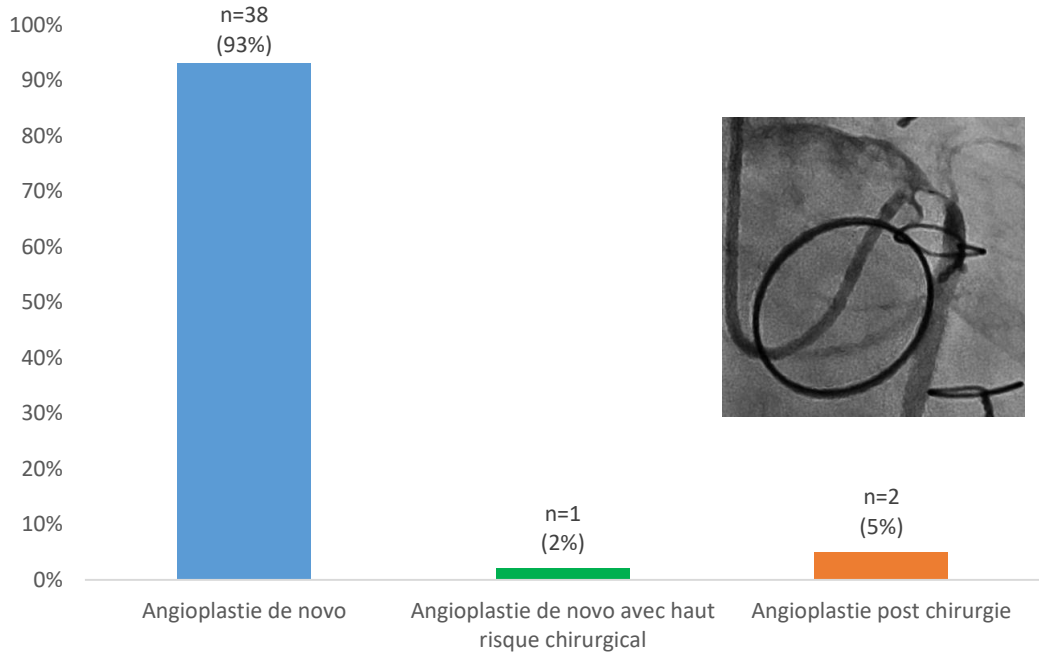
Registre ANOCOR STENTING

N=41





Répartition selon l'anatomie coronaire



Indications de l'angioplastie

Registre ANOCOR STENTING

N=41

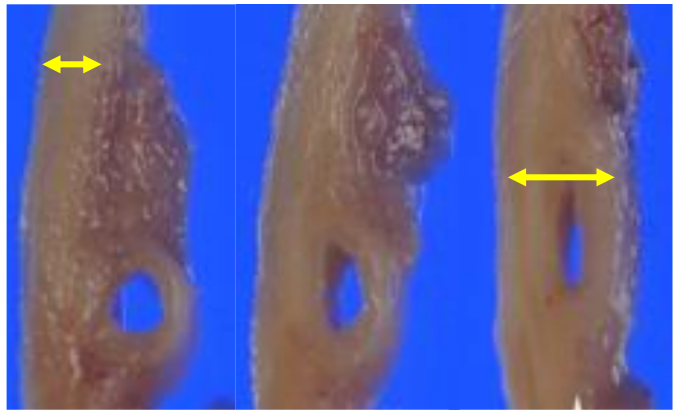
	N	%
Absence de sténose résiduelle	34	83
Sténose résiduelle < 30%	7	17
Flux TIMI 3 après angioplastie	41	100
Succès angiographique	41	100

	N	%
Succès clinique de l'angioplastie	40	98
Complications périprocédurales	1	2
Décès	0	
Infarctus du myocarde	0	
Nouvelle angioplastie urgente	0	
Chirurgie coronaire urgente	0	
Perforation coronaire	0	
Dissection aortique	0	
Complication vasculaire grave	0	
Accident vasculaire cérébral	1	2

Registre ANOCOR STENTING

N=41

	N	%
Absence de sténose résiduelle	34	83
Sténose résiduelle < 30%	7	17
Flux TIMI 3 après angioplastie	41	100
Succès angiographique	**41**	**100**

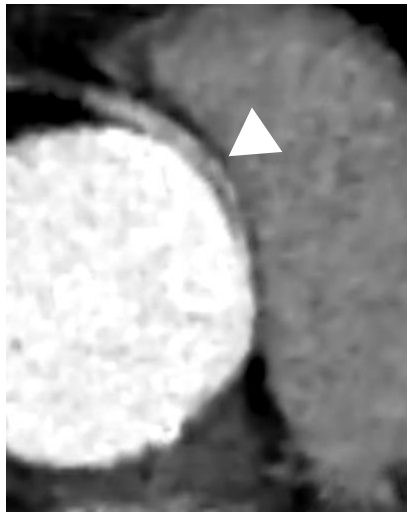


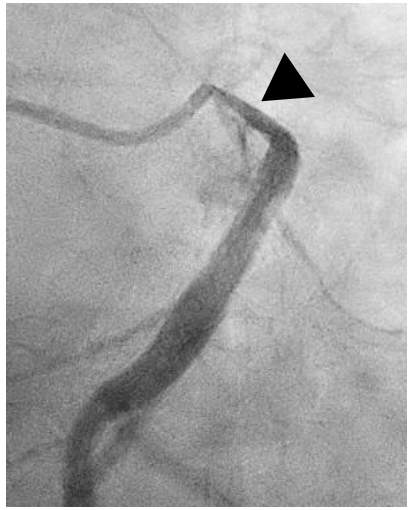
Hata Y et al. Cardiovasc Pathol. 2014.

	N	%
Succès clinique de l'angioplastie	**40**	**98**
Complications périprocédurales	1	2
Décès	0	
Infarctus du myocarde	0	
Nouvelle angioplastie urgente	0	
Chirurgie coronaire urgente	0	
Perforation coronaire	0	
Dissection aortique	0	
Complication vasculaire grave	0	
Accident vasculaire cérébral	1	2

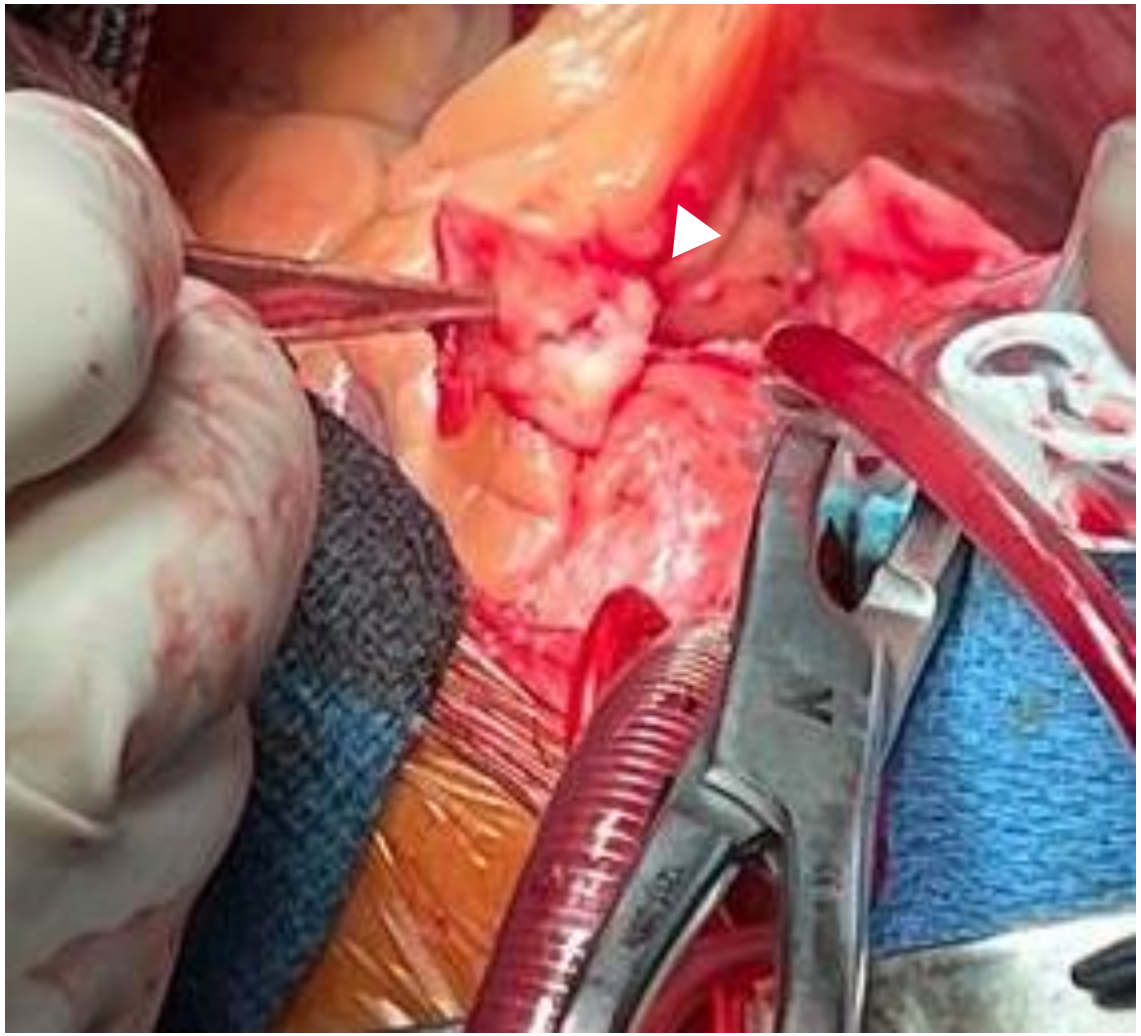
Cas clinique
Mme P.

- Femme de 59 ans
- SCA ST- troponine +
- Dilatation aortique : 55 mm
- Coronarographie/scanner coronaire : ANOCOR droite
- IRM cardiaque : rehaussement tardif inférieur
- Staff : tube aortique/reimplantation coronaire/VMA

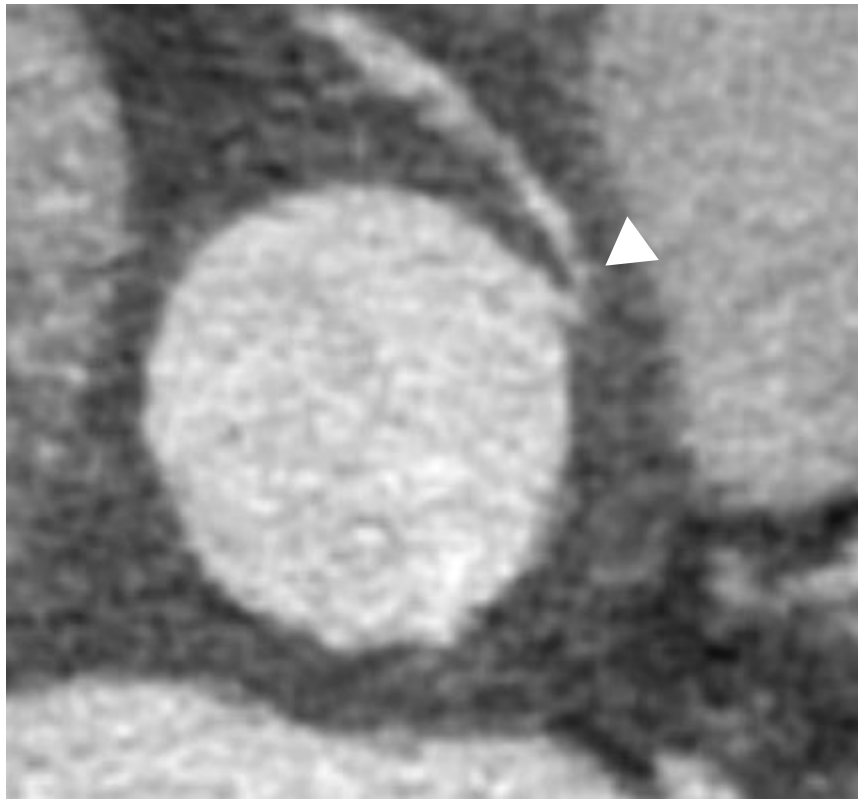


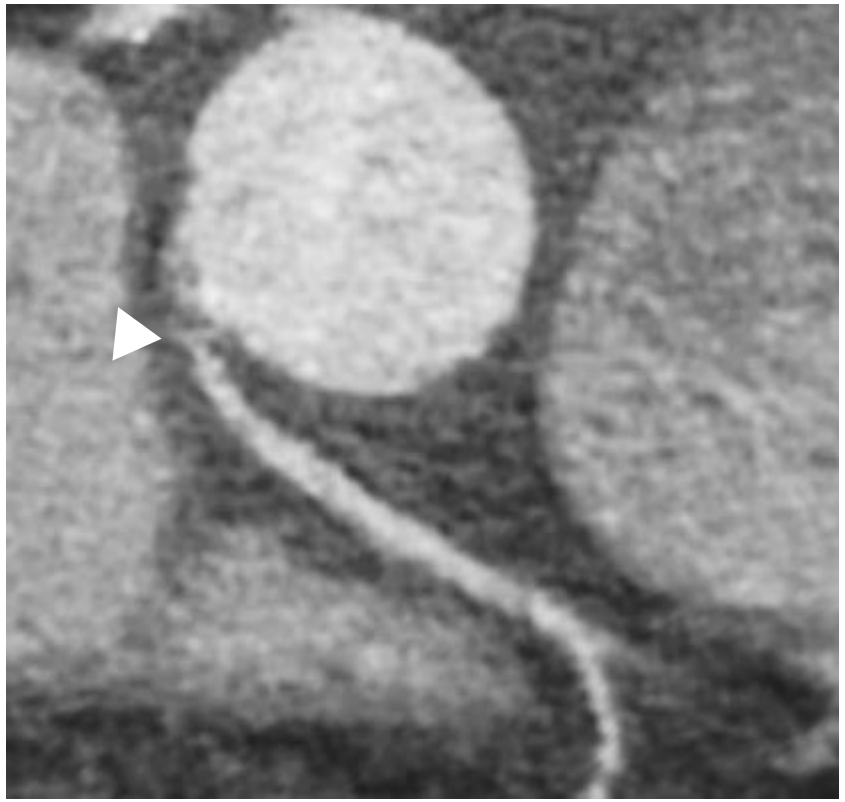


Intervention

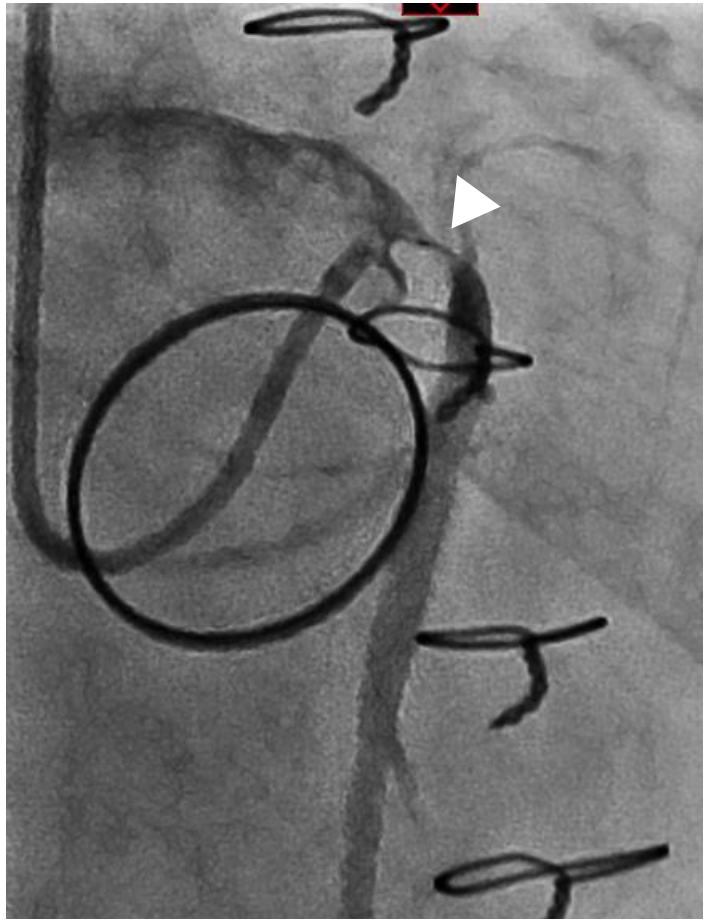


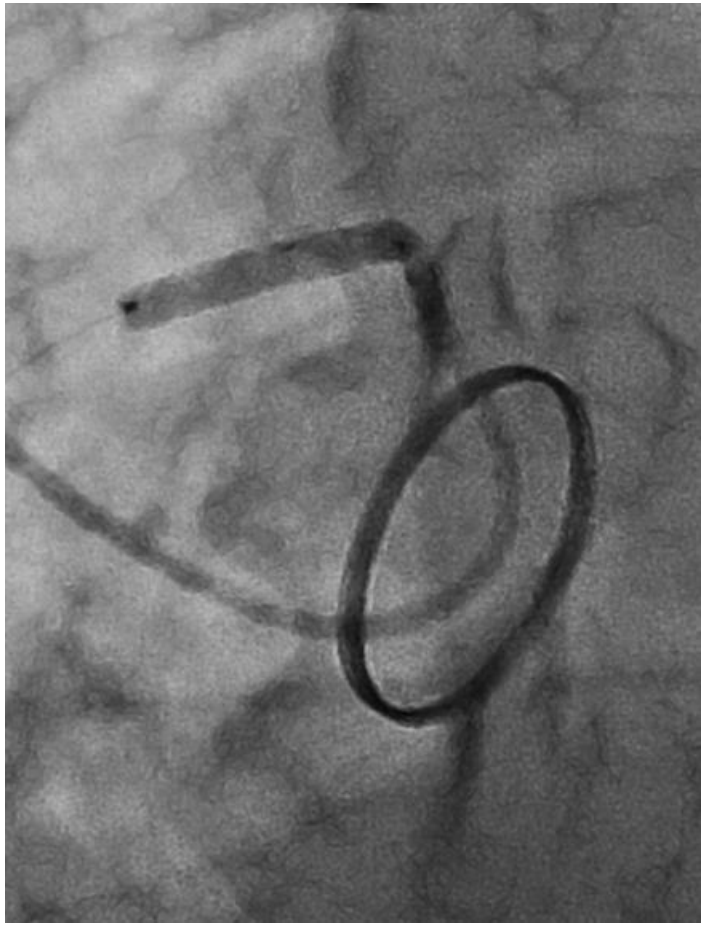
Scanner coronaire post opératoire



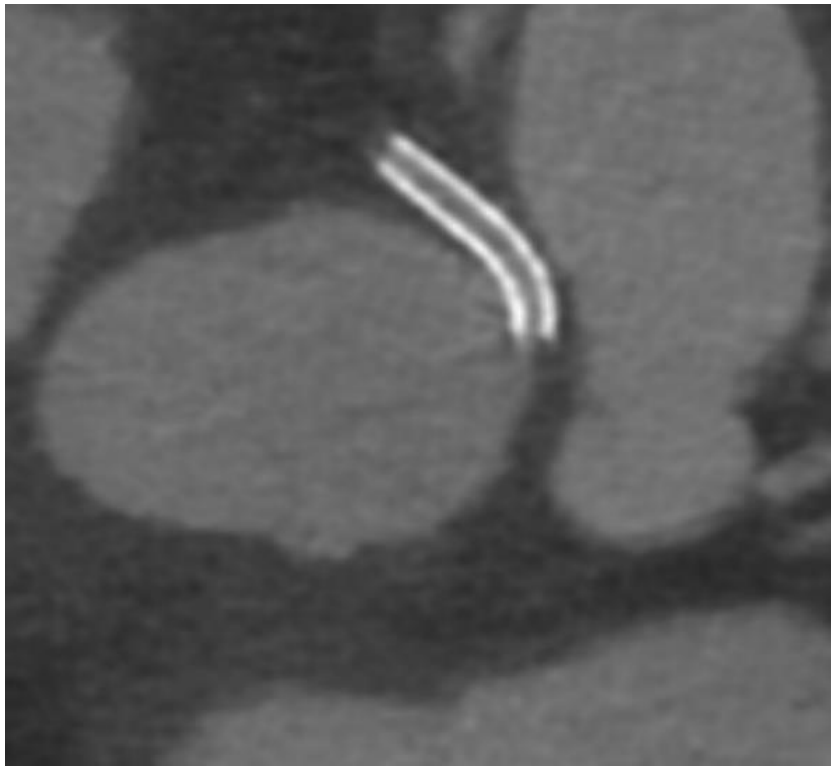


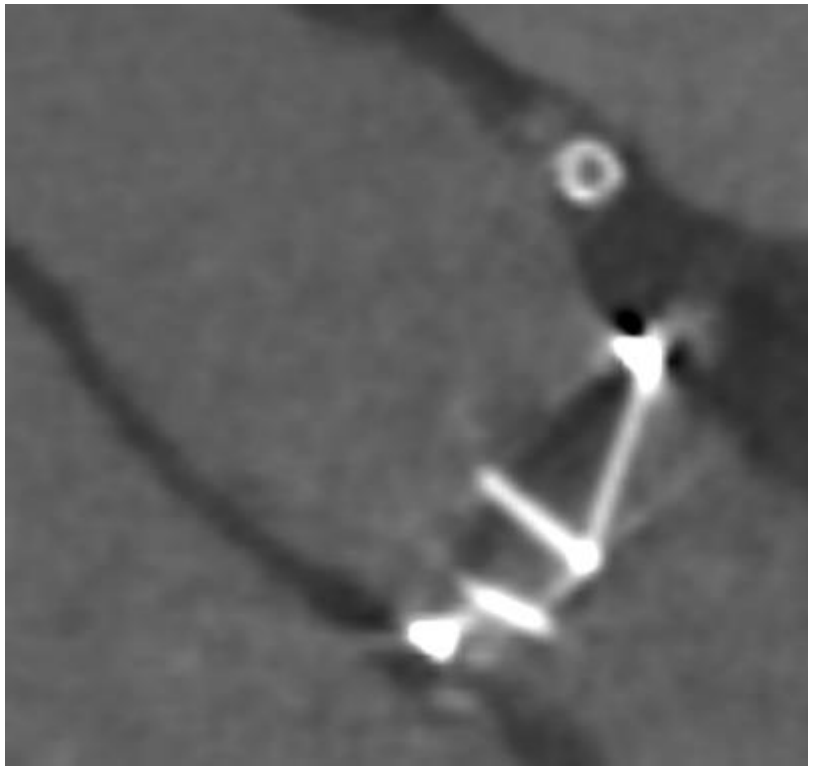
Angioplastie coronaire



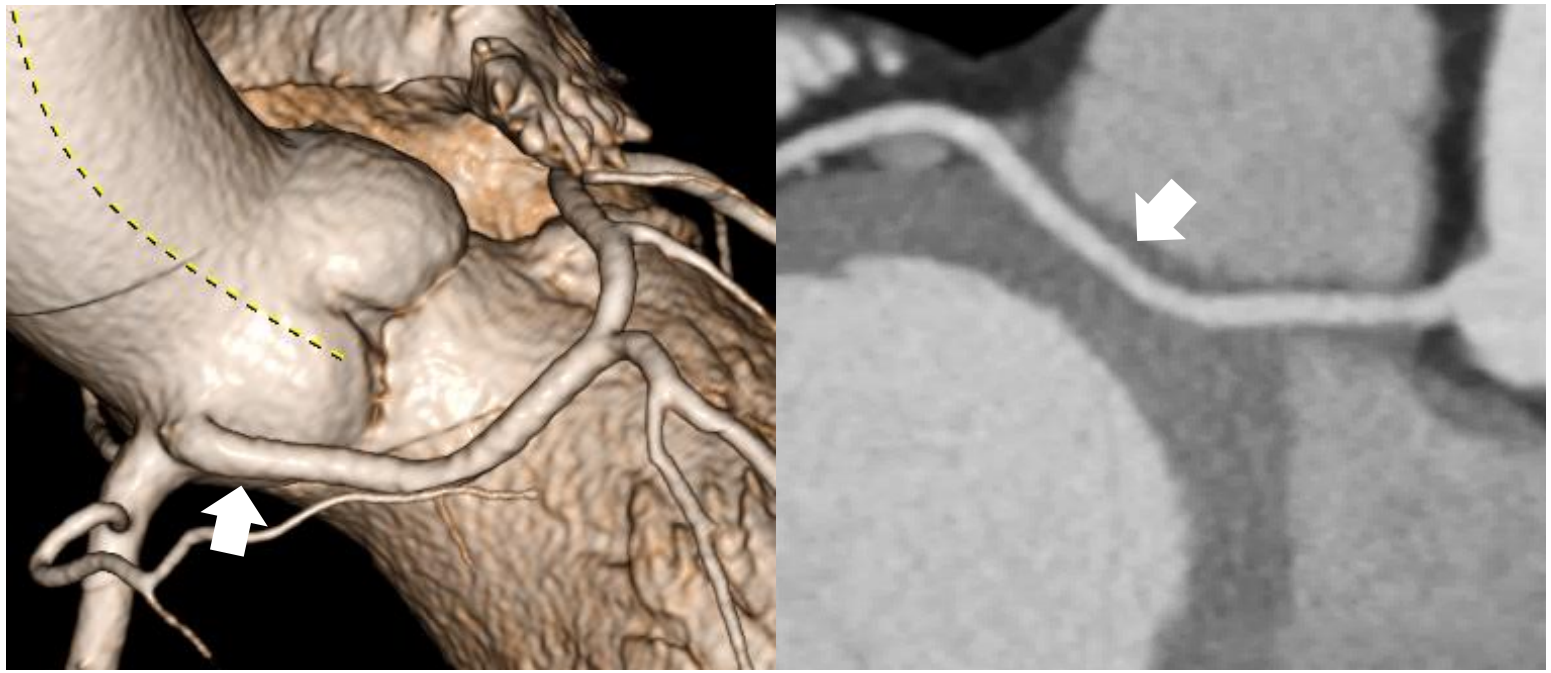


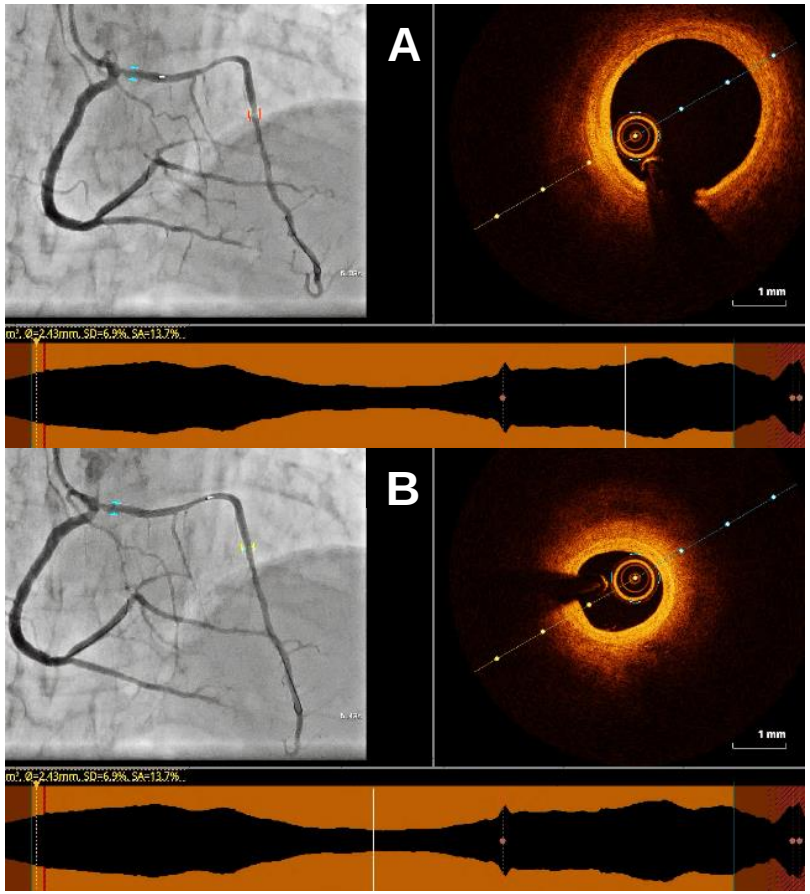
Scanner coronaire post angioplastie





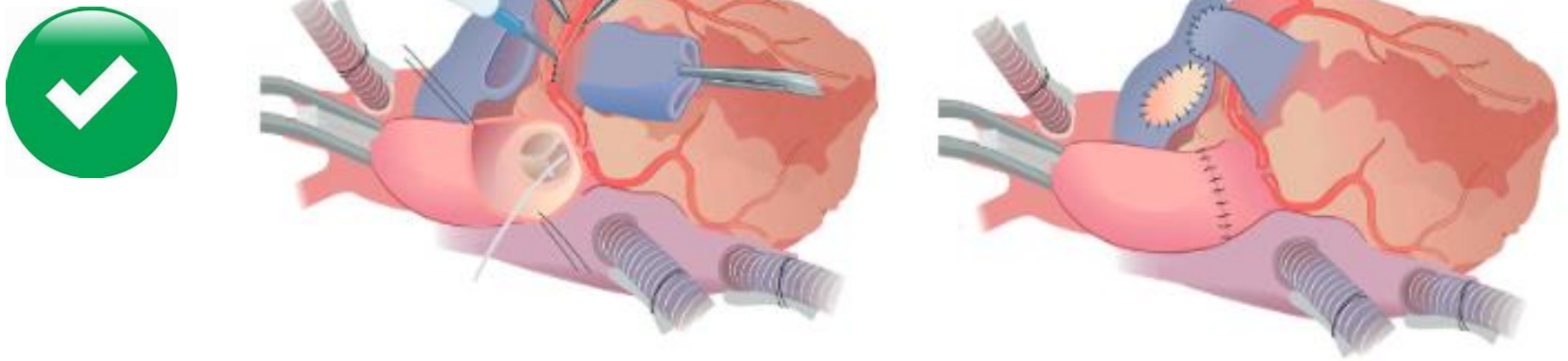
ANOCOR gauche rétropulmonaire





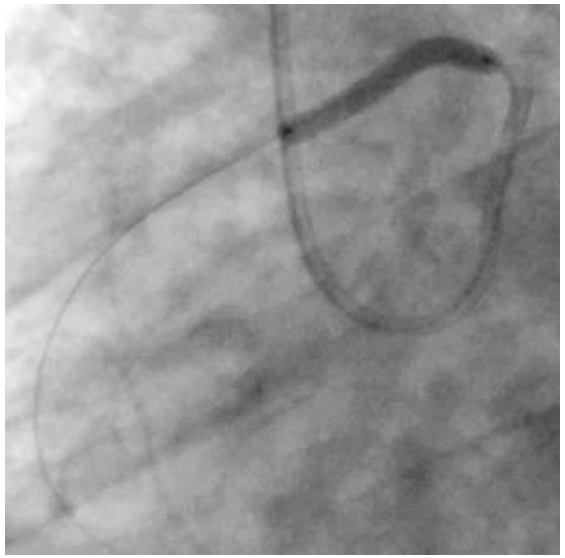
ANOCOR gauche rétropulmonaire

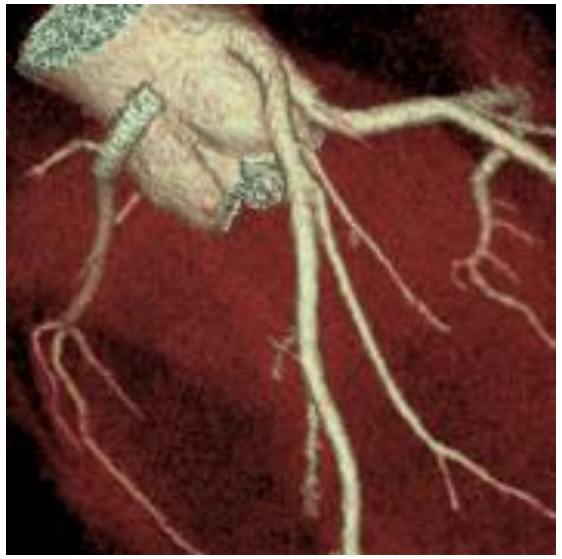
Techniques chirurgicales

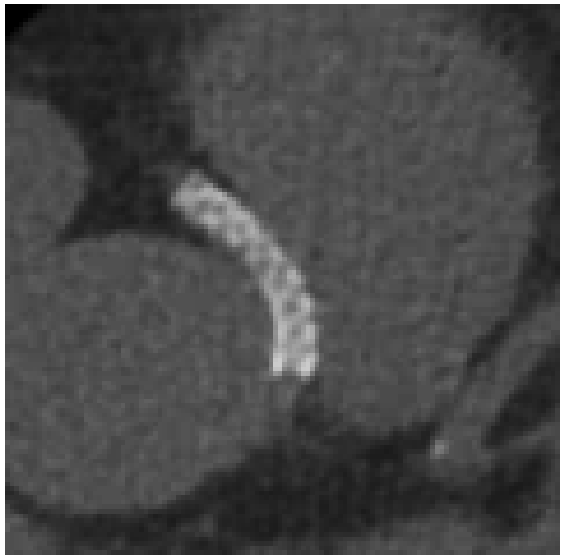


Gaudino M, et al. J Am Coll Cardiol. 2023;82(21):2034-2053.

Angioplastie anomalie coronaire congénitale







YES WE CAN!

Anomalous aortic origin of coronary arteries and PCI

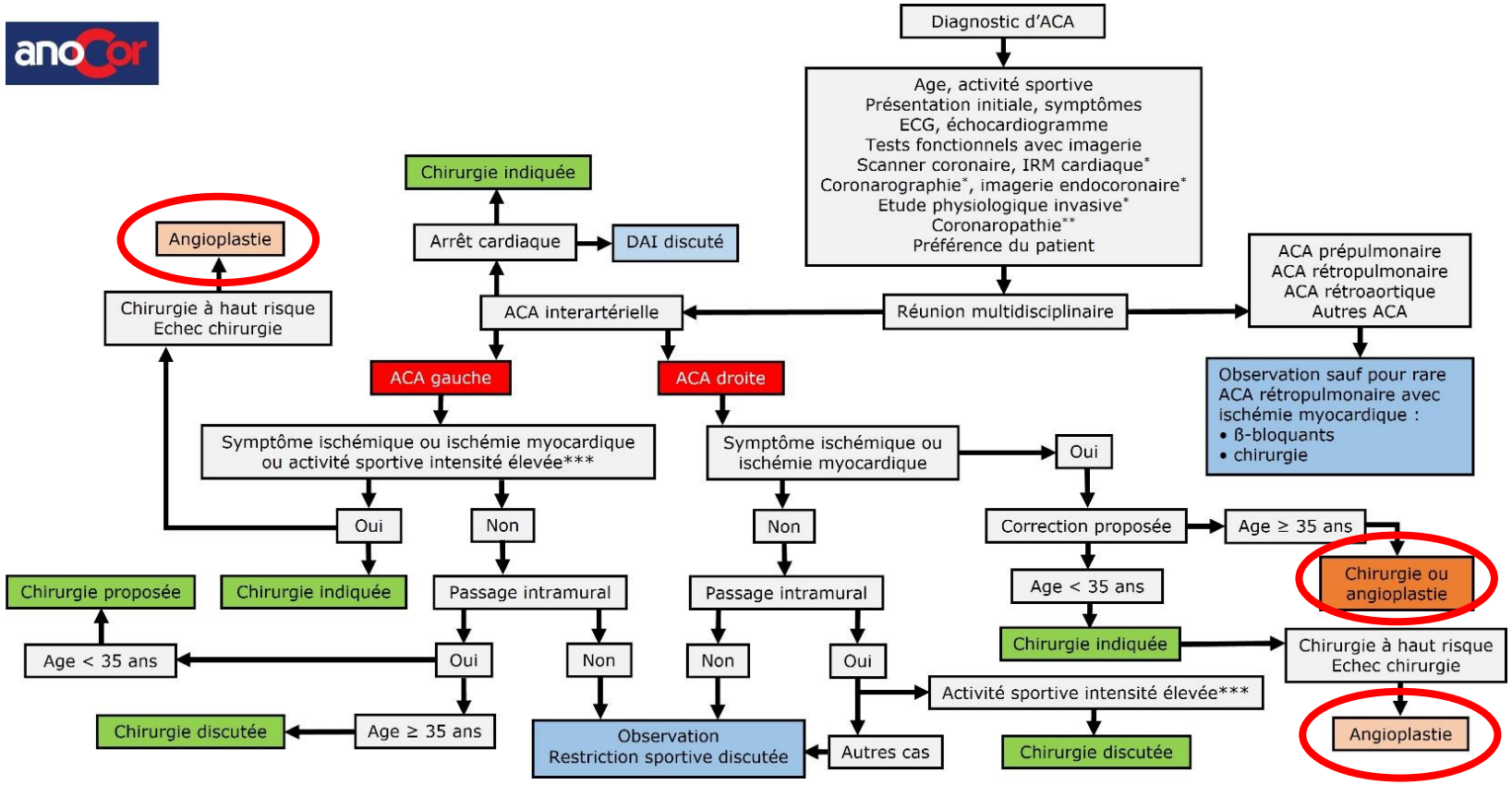
TABLE 1 | Main characteristics of patients included in series of AAOCA treated by angioplasty with stenting.

References	AAOCA type and number	Mean age years	BMS/DES number	Angiographic success (%)	Mean follow-up years	In-stent restenosis number (%)	Stent compression number (%)	Sudden cardiac death number
Doorey et al. (33)	3 Left/9 Right	56	12/0	100	0.5	3 (25)	1 (8)	0
Angelini et al. (35)	42 Right	48	3/39	100	5.0	4 (10)	0	0
Degrell et al. (39)	17 Right	51	1/16	100	2.0	2 (12)	0	0
Darki et al. (36)	4 Right	64	0/4	100	8.5	NA	0	0

AAOCA, anomalous aortic origin of a coronary artery; BMS, bare metal stent; DES, drug eluting stent.

Aubry P et al. FCVM. 2021.

Algorithme pour anomalie de connexion aortique (ACA) ≥ 15 ans



* Optionnel.

** Stratégie de revascularisation à adapter en cas de maladie coronaire associée.

*** Activité sportive d'intensité élevée selon la classification des recommandations européennes.

DAI : défibrillateur automatique implantable. ECG : électrocardiogramme. IRM : imagerie par résonance magnétique.

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GROUPE HOSPITALIER BICHAT-CLAUDE BERNARD

anoCor
Anomalies Coronaires Congénitales

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Groupe multidisciplinaire ANOCOR

Anomalies Coronaires Congénitales

Ce site est destiné aux professionnels de santé et aux patients, ainsi qu'à leur entourage, souhaitant obtenir des informations sur les Anomalies Coronaires Congénitales (ANOCOR). Les formes anatomiques sont très nombreuses, allant de la banale anomalie sans conséquence clinique aux anomalies pouvant être responsables de symptômes cardiaques graves dont l'arrêt cardiaque. Même si les techniques d'imagerie, surtout radiologiques, permettent le diagnostic de ces anomalies rares, leur compréhension reste incomplète et leur prise en charge n'est pas encore parfaitement codifiée. Le site ANOCOR a pour objectifs d'aider les professionnels de santé dans leur démarche de recherche et de transmettre aux patients nos connaissances actuelles. Bonne navigation.