

# ELECTRA



1<sup>È</sup>mes journées françaises  
pratiques de rythmologie  
& de stimulation cardiaque

4-5 DÉCEMBRE 2021

HOTEL VILLA M.  
MARSEILLE | FRANCE

## PM conventionnel : implante / implante pas? (Cas clinique)

### COMITÉ D'ORGANISATION

Frédéric FOSSATI, Lille  
Maxime GUENOUN, Marseille  
Arnaud LAZARUS, Paris  
Nicolas LELLOUCHE, Créteil  
Jacques MANSOURATI, Brest  
Jérôme TAÏEB, Aix-en-Provence

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**Dr Mathieu MONTROY**

Rythmologue Interventionnel

Lyon – Hôpital de la Croix Rousse

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**SAU CLINIQUE POUR *SYNCOPE À L'EMPORTE PIÈCE***

➤ **FDRCV** : aucun

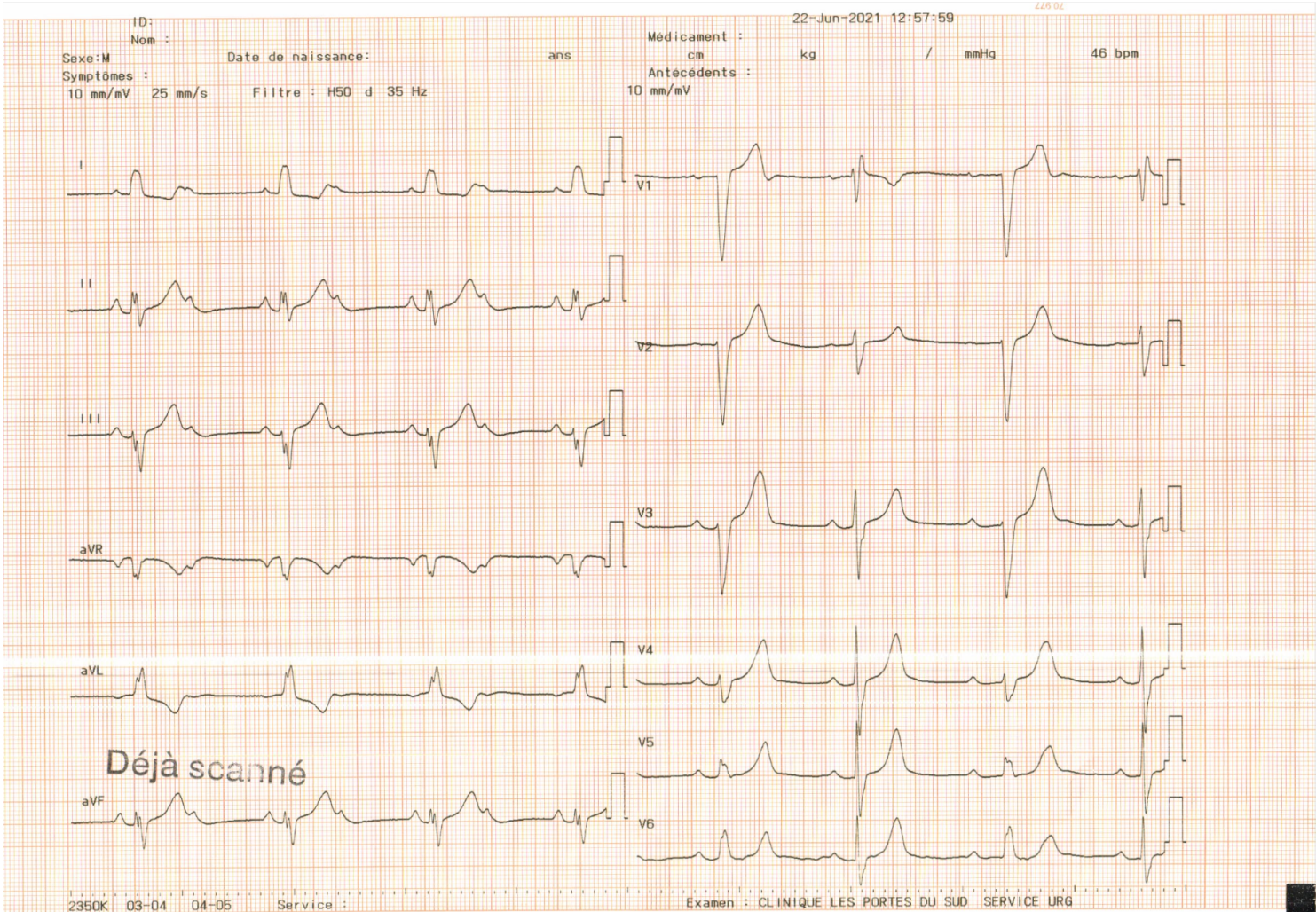
➤ **Pas d'ATCD cardiovasculaire** ni d'ATCDC extra cardiovasculaire

➤ **Histoire de la maladie :**

- 21/06/21 : *crise d'angoisse* de plusieurs heures de résolution spontanée dans la nuit
- 22/06/21 : *sensation de mort imminente* le matin puis *syncope à l'emporte pièce* à midi chez des amis avec *traumatisme facial*
- Prise en charge SP -> SAU clinique

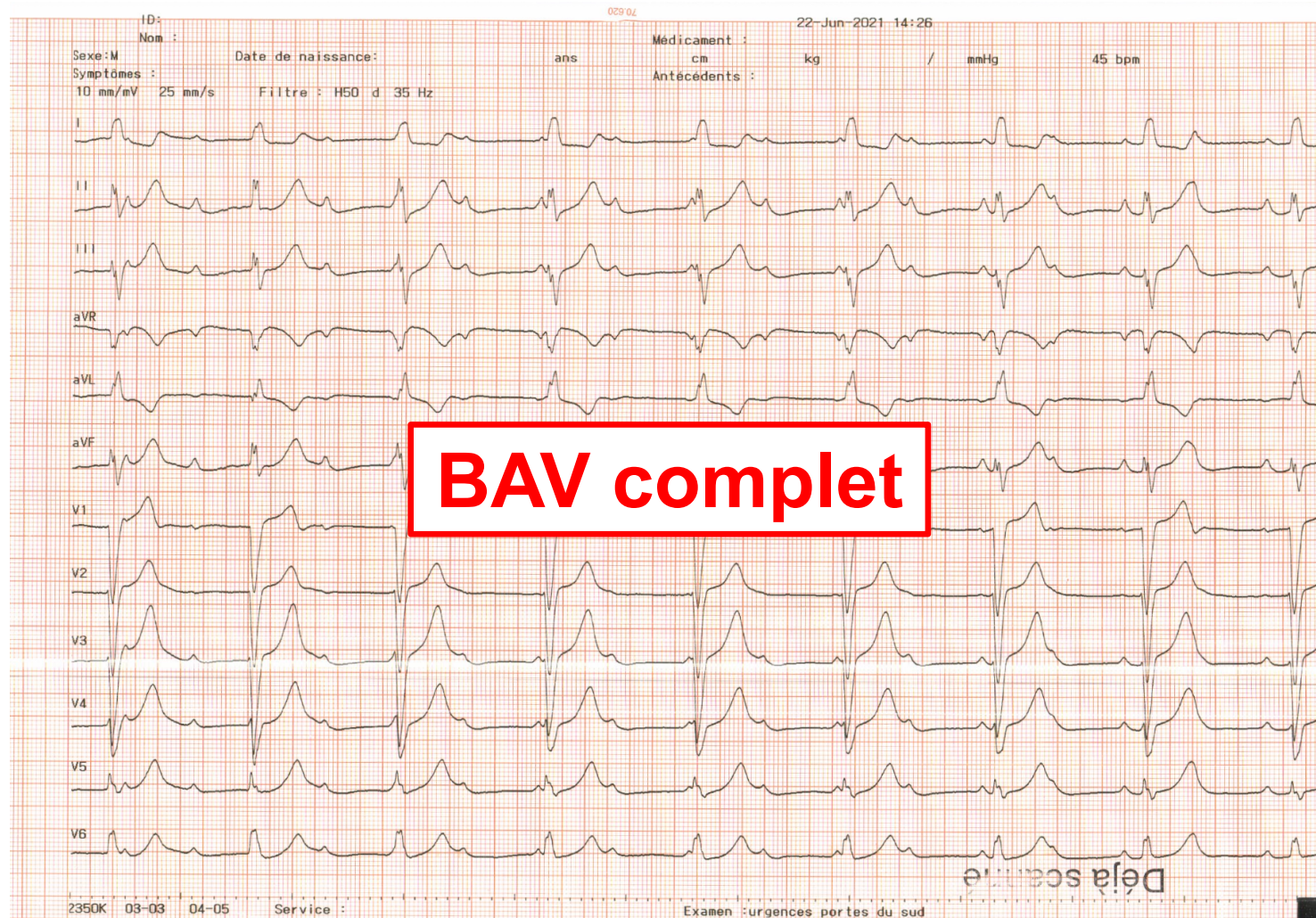
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ECG 1 AU SAU



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ECG 2 AU SAU



➤ **Biologie :**

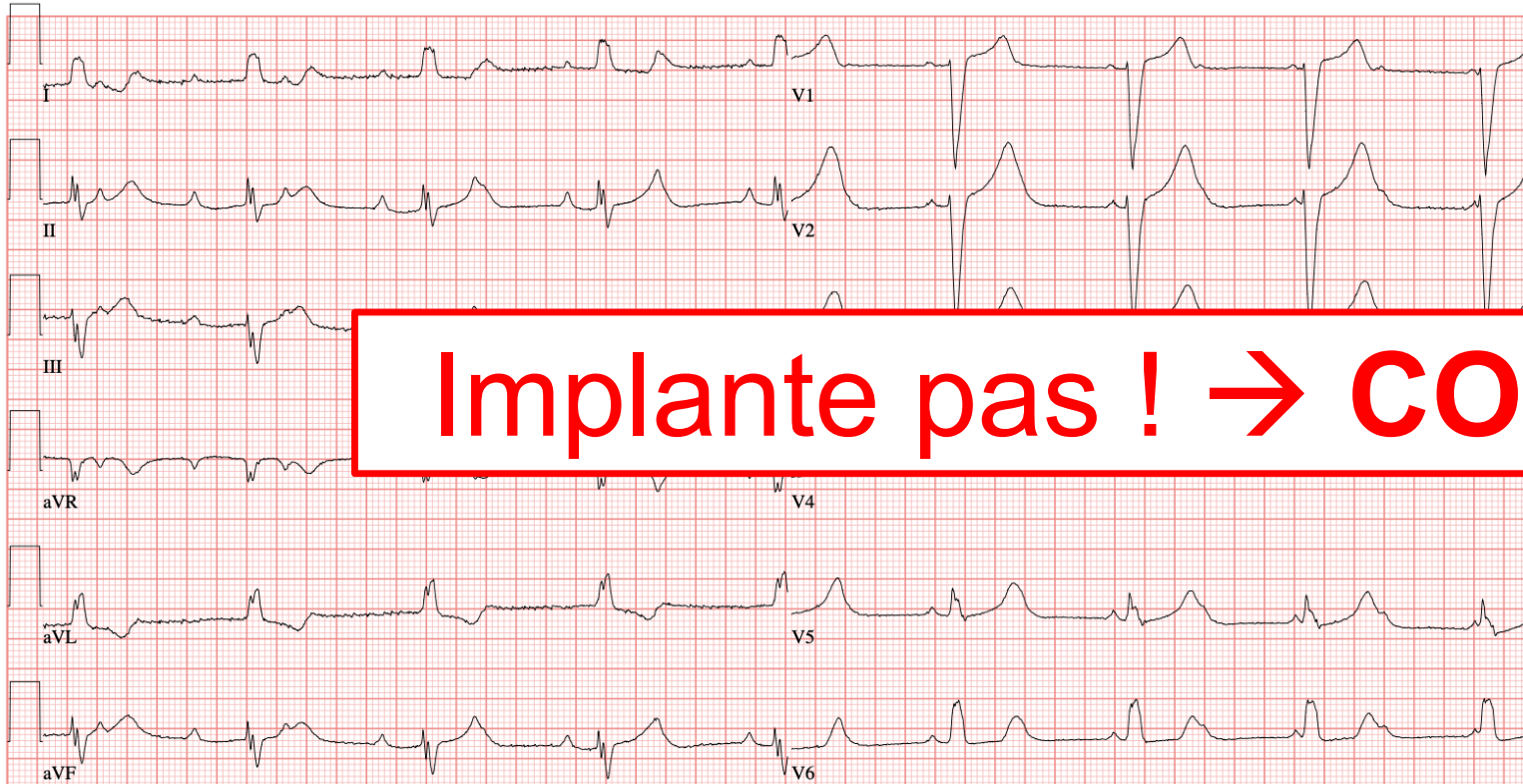
- Leucocytes : 7G/L (4-10)
- CRP : 7mg/L (0-5)
- Créatinémie : 61  $\mu$ mol/L
- Kaliémie : 4,6 mmol/L (3,6-4,8)
- ASAT : 102 U/L (<35)
- Troponine T HS : 861 ng/L (< 14)

➤ **Prise en charge :**

- ISUPREL
- Transfert USIC pour pose de PM

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ECG À L'USIC



**Implante pas ! -> CORO**

➤ **Évaluation clinique :**

- Asymptomatique
- **Stable** hémodynamiquement sous ISUPREL

**Examen paraclinique :**

- G : BAV complet
- ETT : normale

➤ **Biologie :**

- Troponine T HS : 13 276 ng/L

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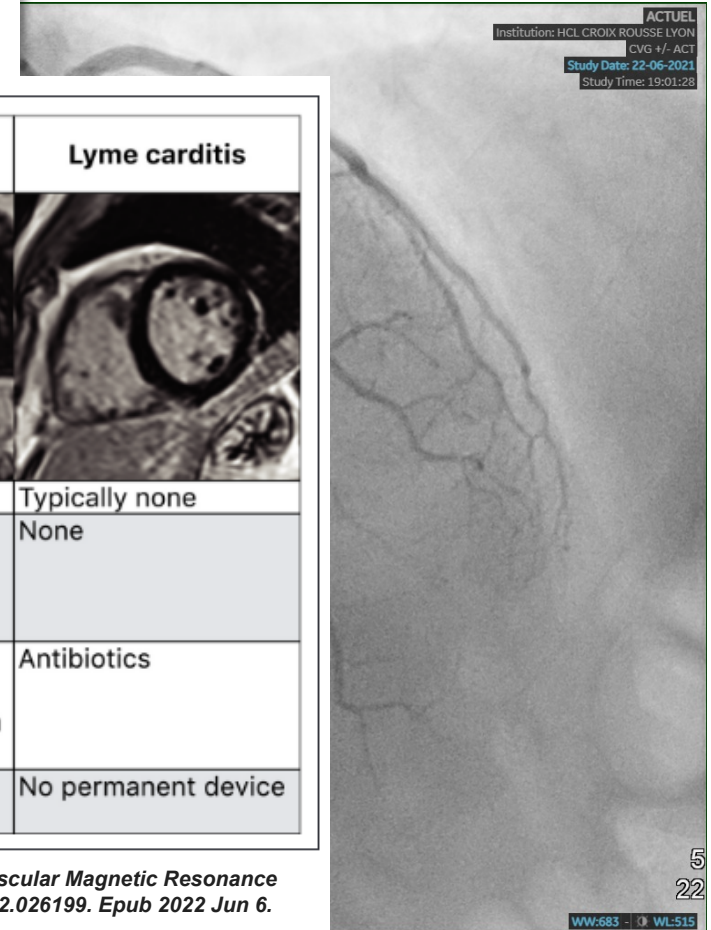
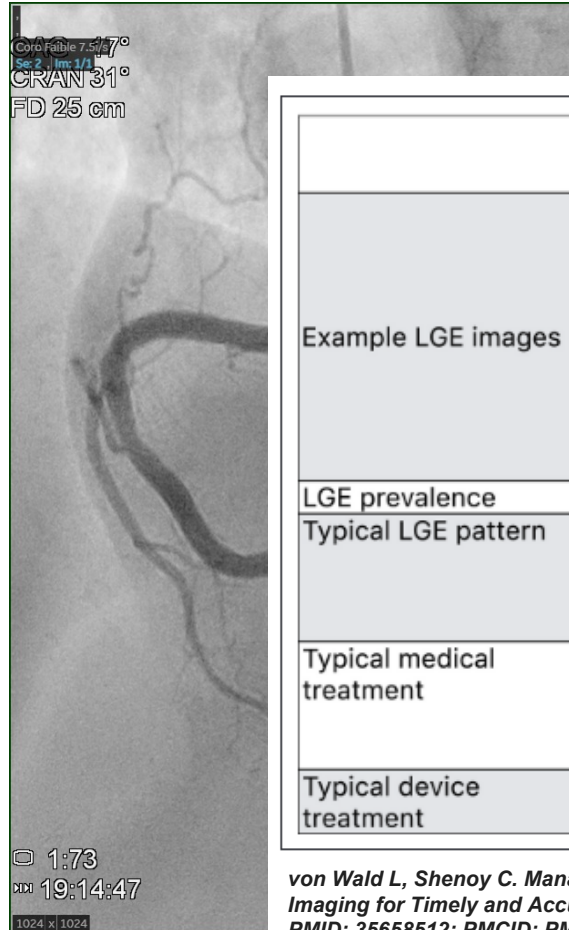
## CORONAROGRAPHIE (J1)



Hôpitaux de Lyon

HOPITAL DE LA CROIX-ROUSSE

UNITE D'IMMUNOLOGIE ET DE CARDIOLOGIE INTERVENTIONNELLE



	Cardiac sarcoidosis	LMNA cardiomyopathy	Ischemic cardiomyopathy	Lyme carditis
Example LGE images				
LGE prevalence	100%	~60%	~100%	Typically none
Typical LGE pattern	Subepicardial or transmural, multifocal, septal-predominant	Midmyocardial, involving the septal and the inferior segments	Subendocardial or transmural, involving a coronary artery territory	None
Typical medical treatment	Immunosuppression and GDMT for HF/systolic dysfunction	GDMT for HF/systolic dysfunction	GDMT for HF/systolic dysfunction and the secondary prevention of CAD	Antibiotics
Typical device treatment	ICD	ICD	Permanent pacemaker	No permanent device

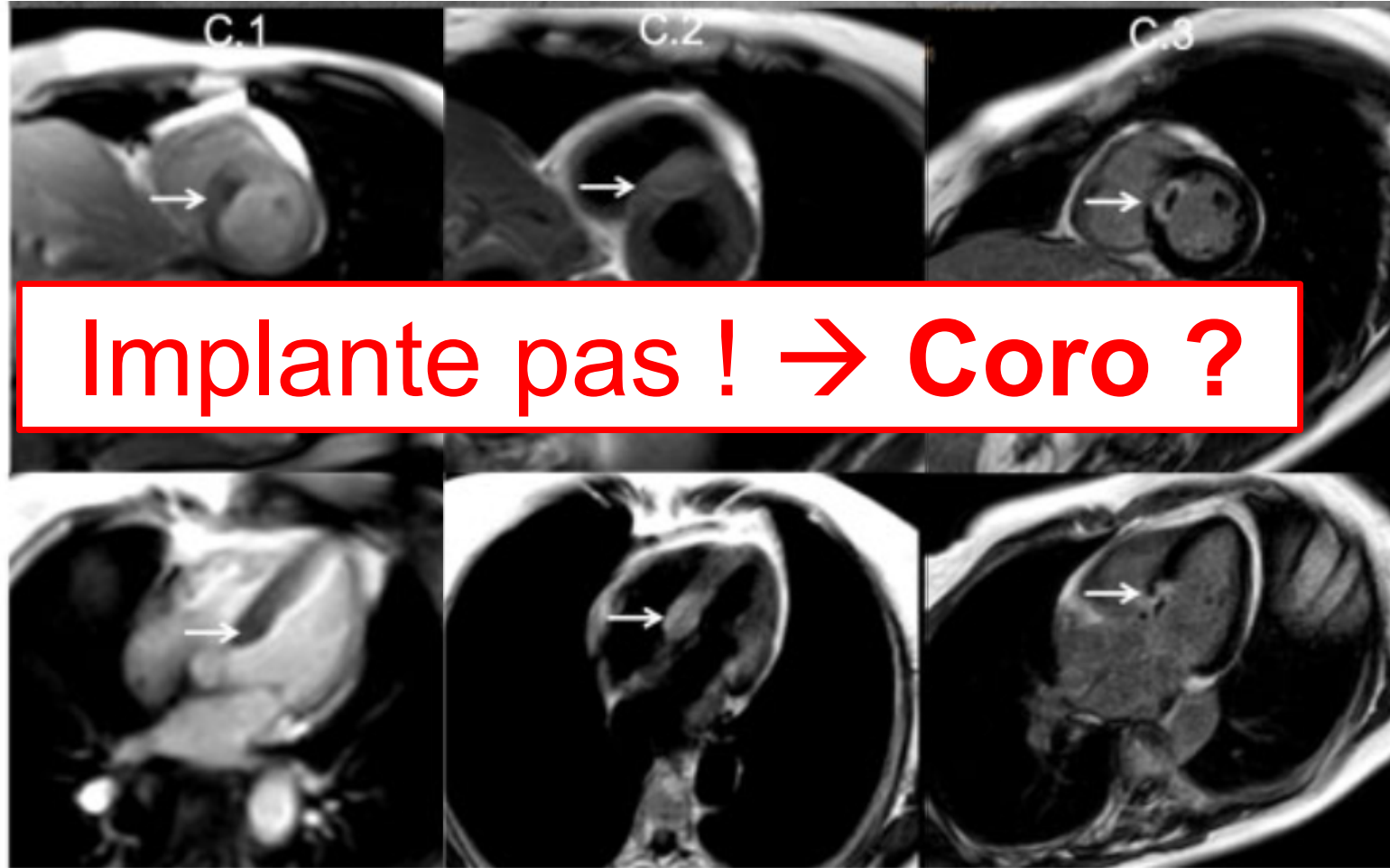
von Wald L, Shenoy C. Managing Patients With Advanced Atrioventricular Block: The Essential Role of Cardiovascular Magnetic Resonance Imaging for Timely and Accurate Diagnosis. *J Am Heart Assoc.* 2022 Jun 7;11(11):e026199. doi: 10.1161/JAHA.122.026199. Epub 2022 Jun 6. PMID: 35658512; PMCID: PMC9238691.

1024 x 1024

WW:683 - WL:515

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IRM MYOCARDIQUE (J3)



Short axis view

**Implante pas ! → Coro ?**

Four chamber view

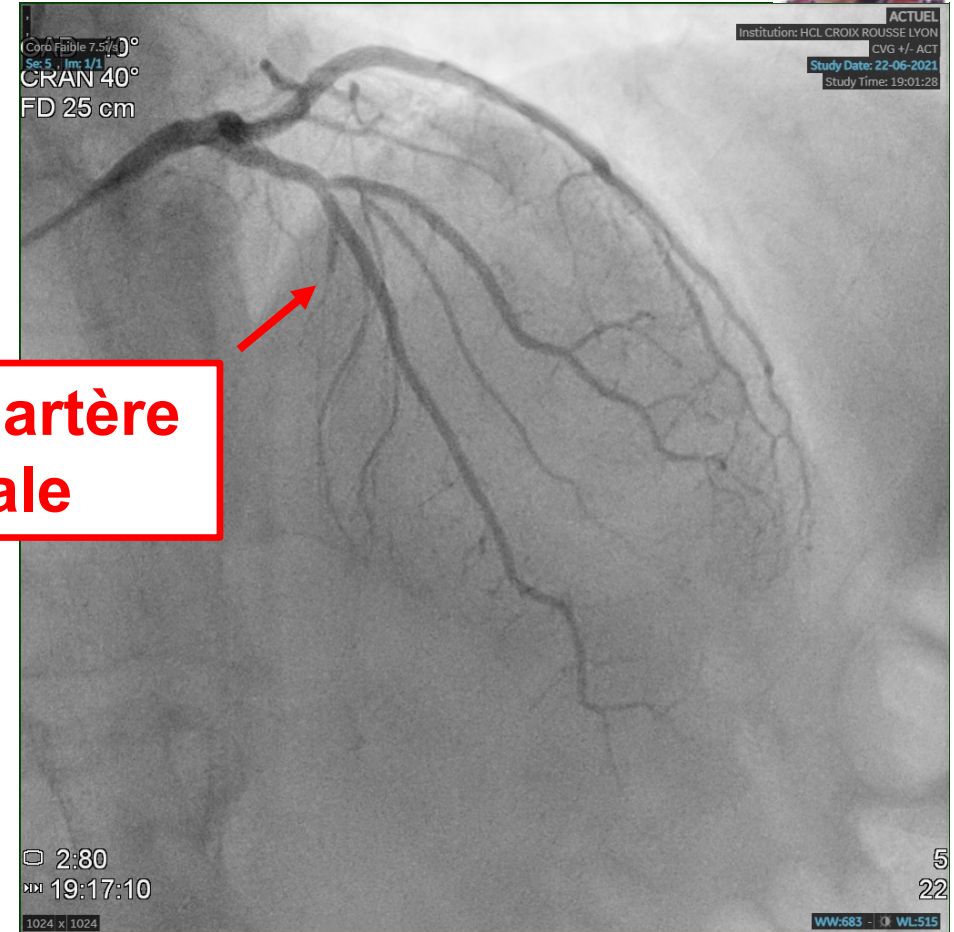
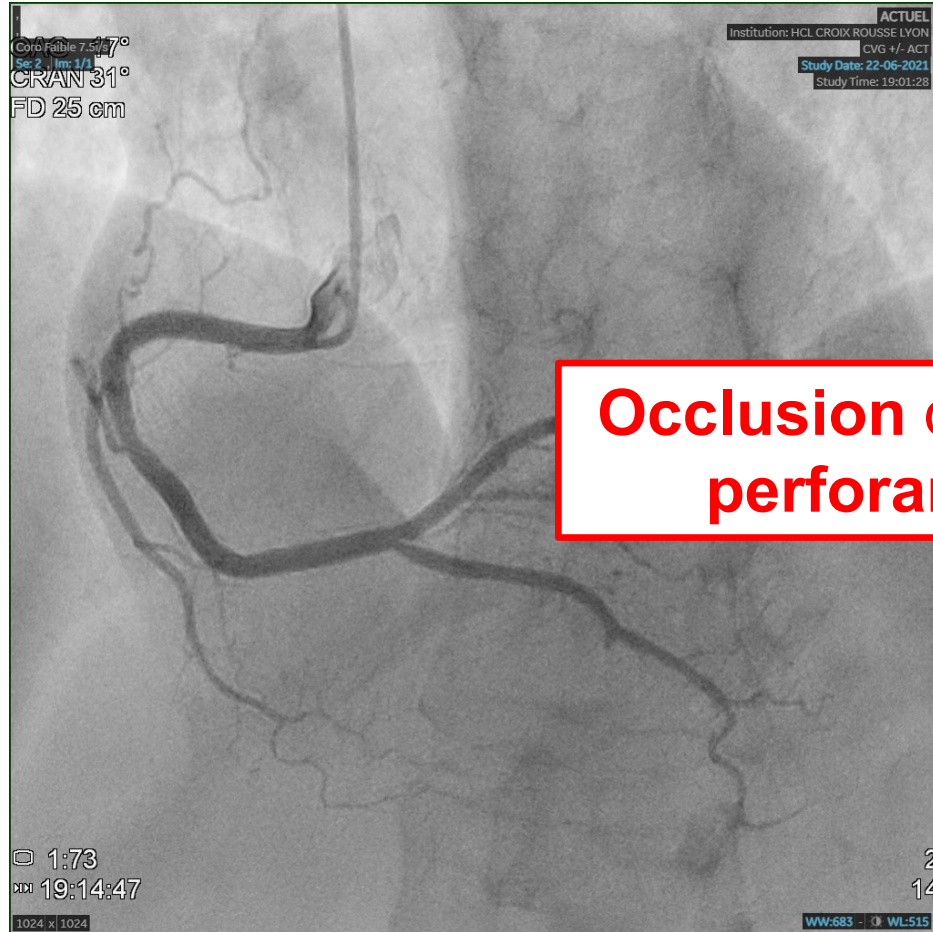
Rest perfusion

T2 mapping

T1 LGE

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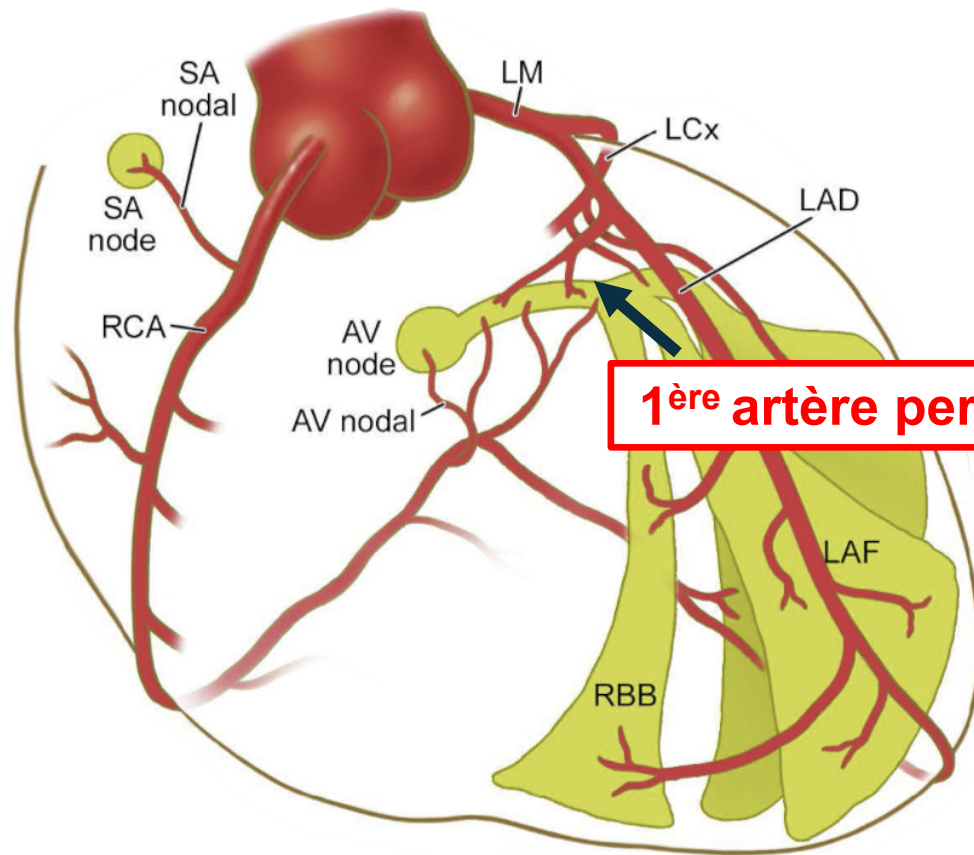
RELECTURE DE LA CORONAROGRAPHIE



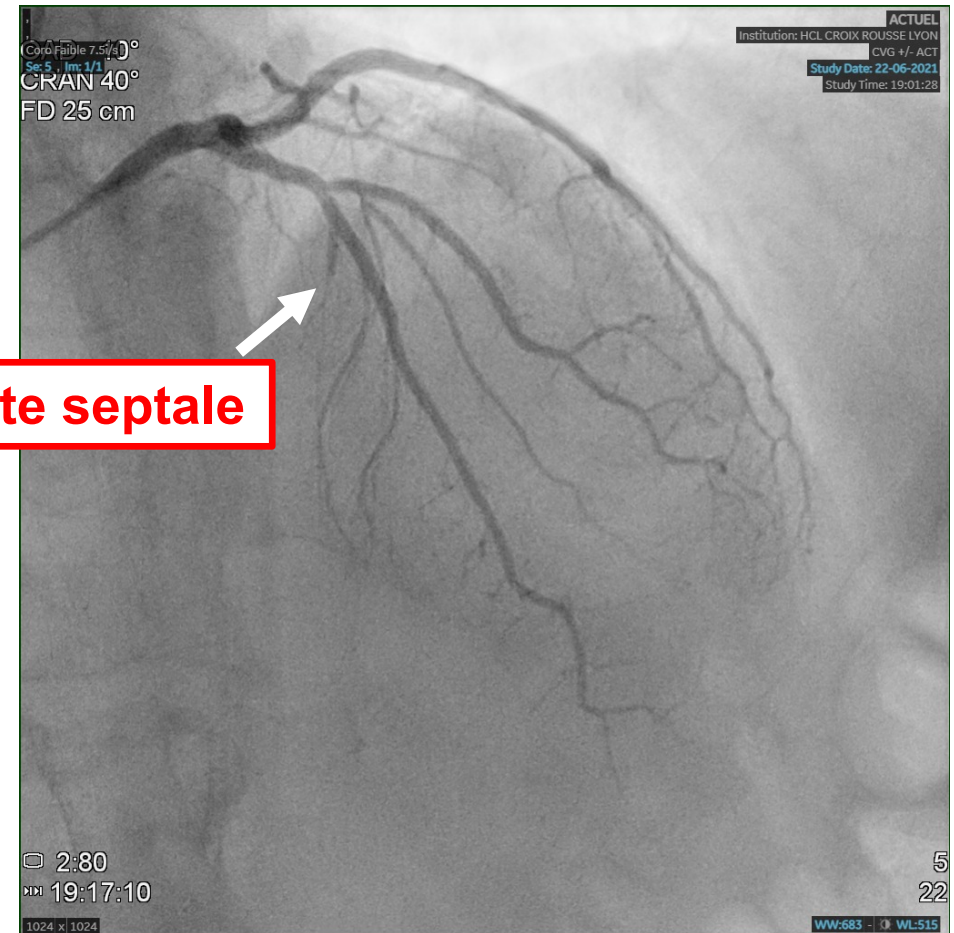
**Occlusion de la 1<sup>ère</sup> artère perforante septale**

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## VASCULARISATION DES VOIES DE CONDUCTION CARDIAQUE

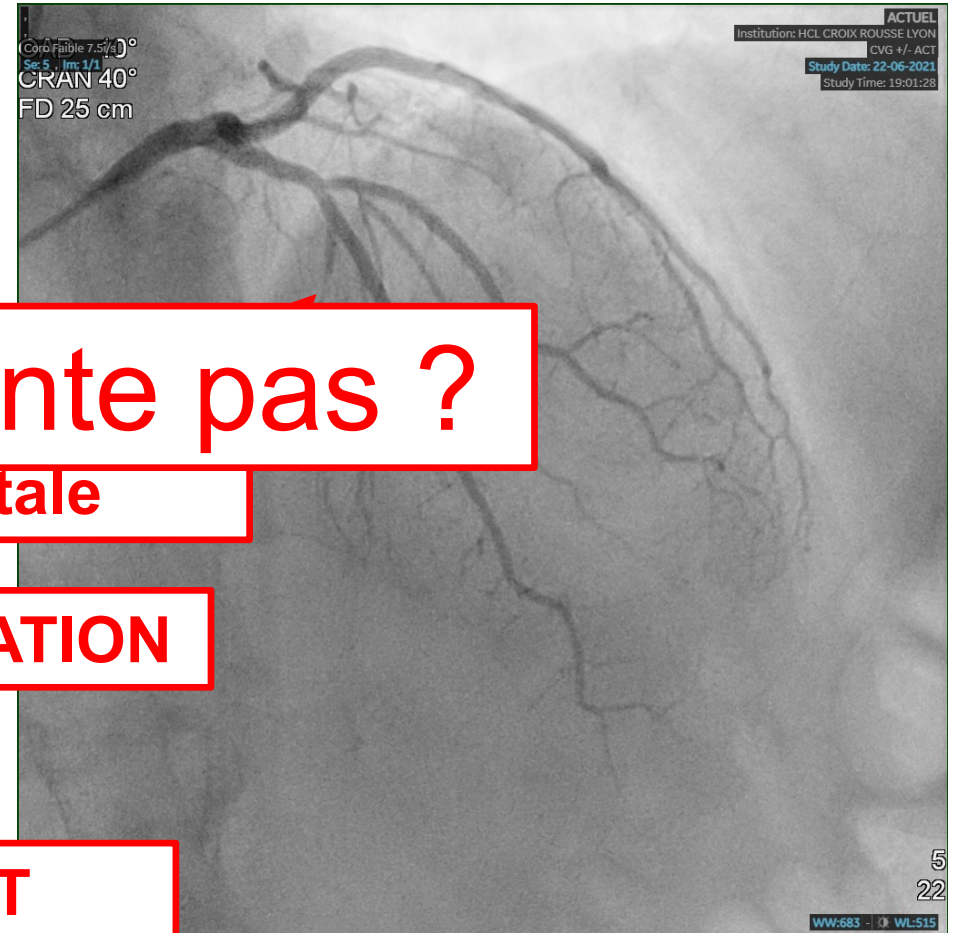
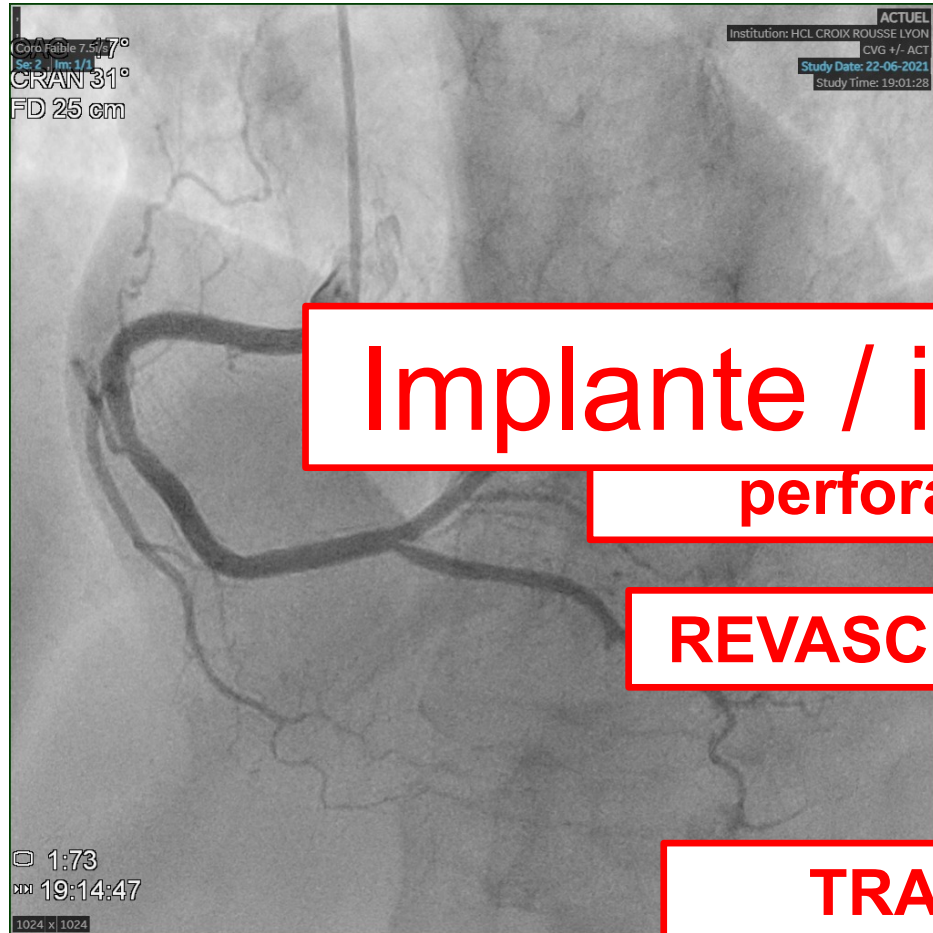


**1<sup>ère</sup> artère perforante septale**



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RELECTURE DE LA CORONAROGRAPHIE



Implante / implante pas ?

perforante septale

REVASCULARISATION

?  
↓  
NON

TRAITEMENT  
MÉDICAL

## RECOMMENDATIONS ESC 2021 STIMULATION CARDIAQUE

### Recommendations for pacing for atrioventricular block

Recommendations	Class <sup>a</sup>	Level <sup>b</sup>
Pacing is indicated in patients in SR with permanent or paroxysmal third- or second-degree type 2, infranodal 2:1, or high-degree AVB, irrespective of symptoms. <sup>c 9–12</sup>	<b>I</b>	<b>C</b>

### Recommendations for cardiac pacing after acute myocardial infarction

Recommendations	Class <sup>a</sup>	Level <sup>b</sup>
Implantation of a permanent pacemaker is indicated with the same recommendations as in a general population (section 5.2) when AVB does not resolve within a <u>waiting period of at least 5 days after MI.</u>	<b>I</b>	<b>C</b>
In selected patients with AVB in the context of anterior wall MI and acute HF, early device implantation (CRT-D/CRT-P) may be considered. <sup>471</sup>	<b>IIb</b>	<b>C</b>
Pacing is not recommended if AVB resolves after revascularization or spontaneously. <sup>454–456,458</sup>	<b>III</b>	<b>B</b>

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**ESC**

European Society of Cardiology

European Heart Journal (2021) **00**, 1–94

doi:10.1093/eurheartj/ehab364

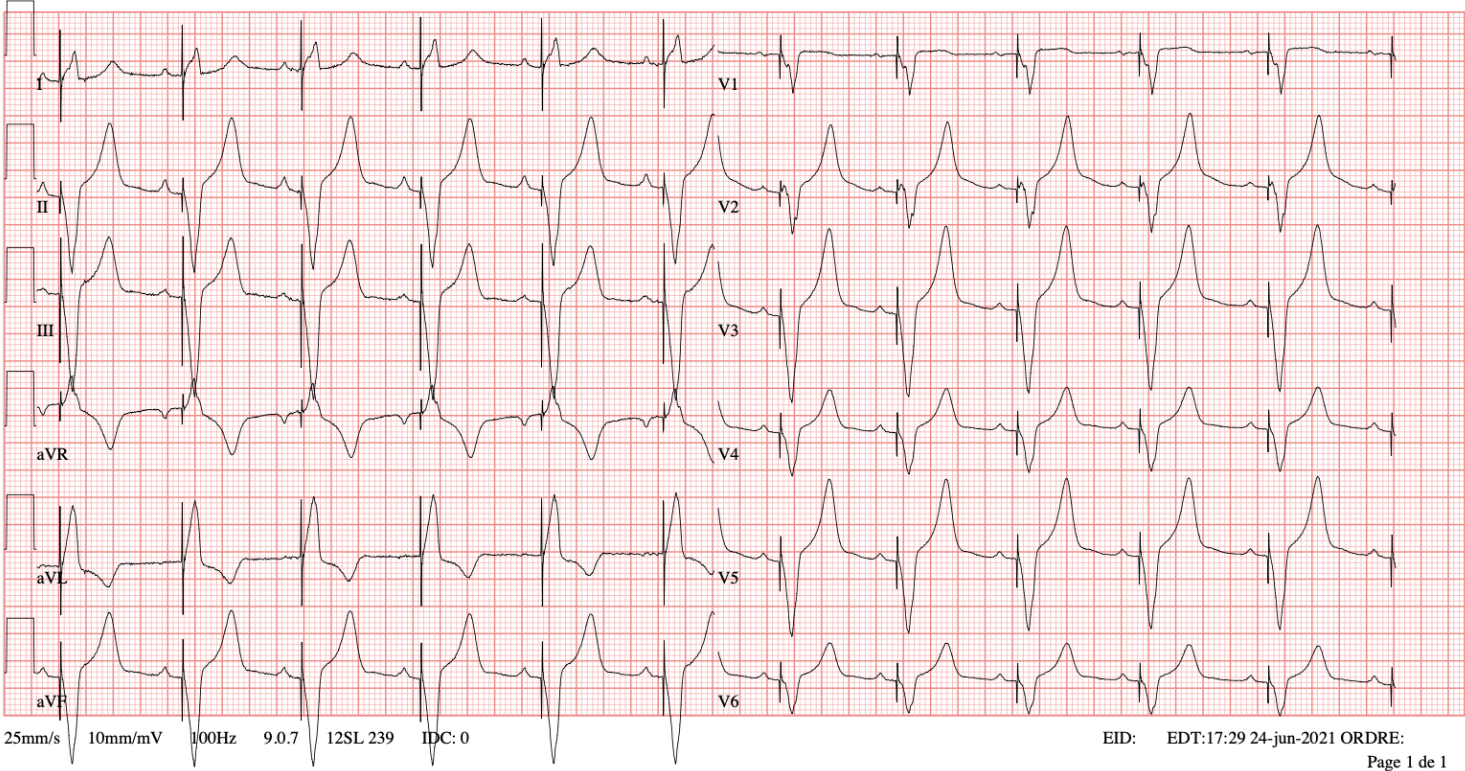
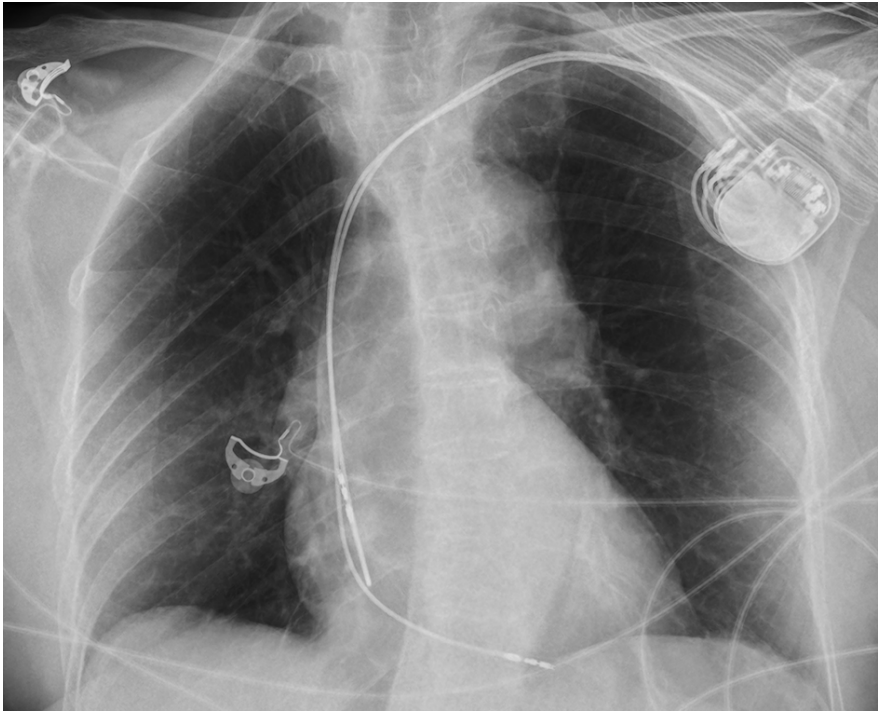
AVB = atrioventricular block; CRT-D = defibrillator with cardiac resynchronization therapy; CRT-P = cardiac resynchronization therapy-pacemaker; MI = myocardial infarction.

<sup>a</sup>Class of recommendation.

<sup>b</sup>Level of evidence.

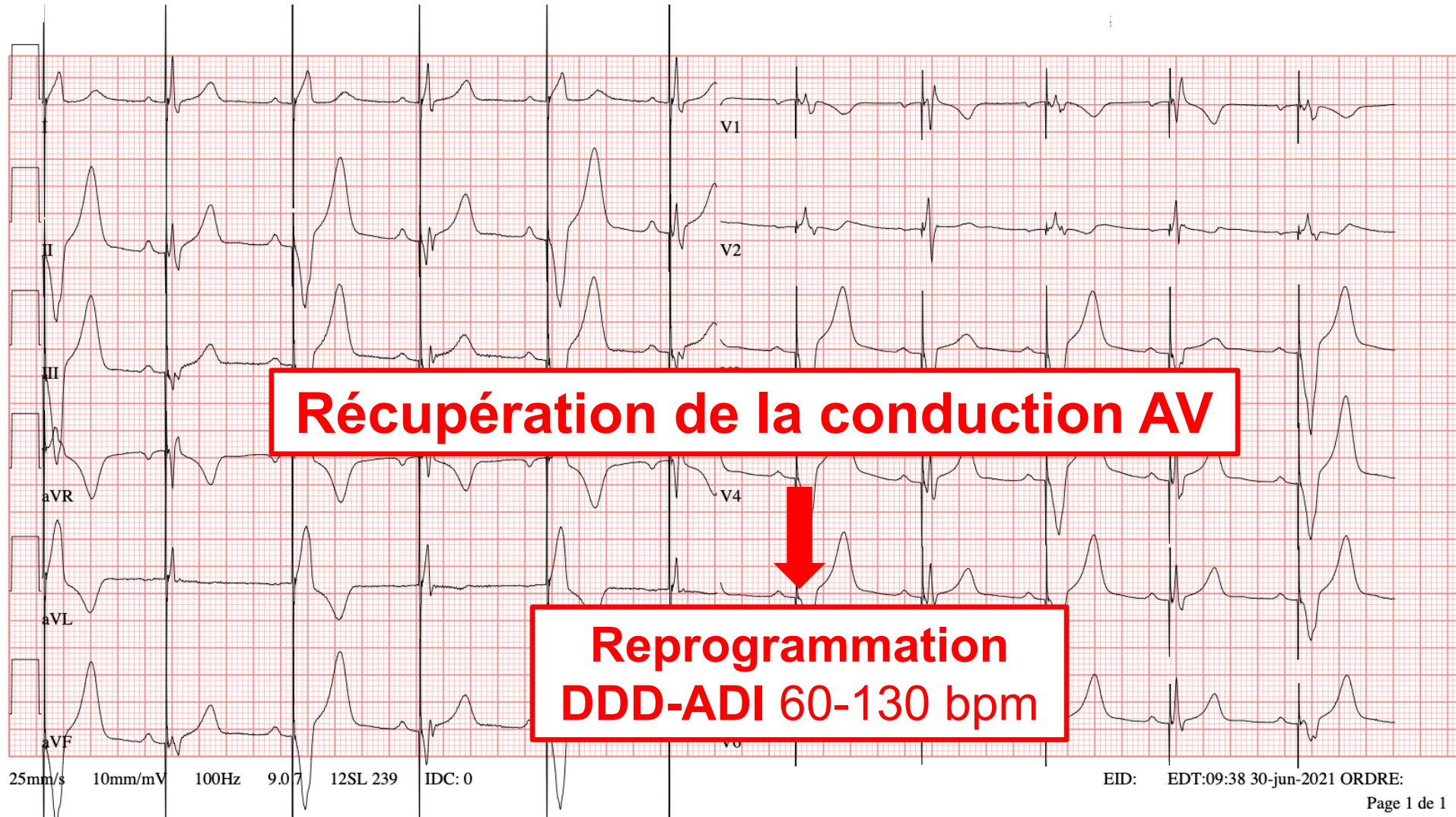
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IMPLANTE ! BIOTRONIK EDORAT 8 DR T DDD 60-130 BPM



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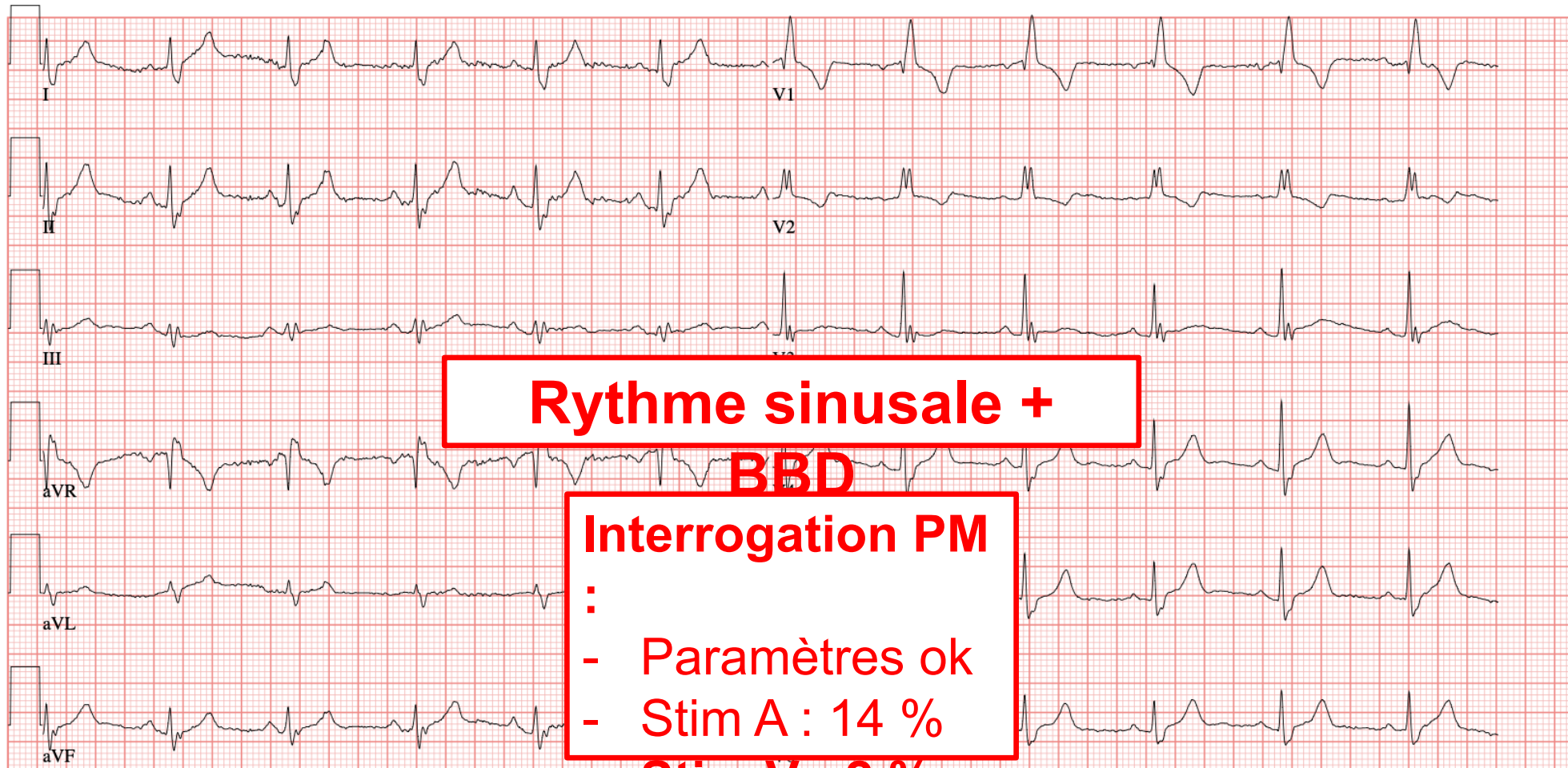
ECG (J9 SCA)



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ECG CONSULTATION POST OP (3 MOIS)

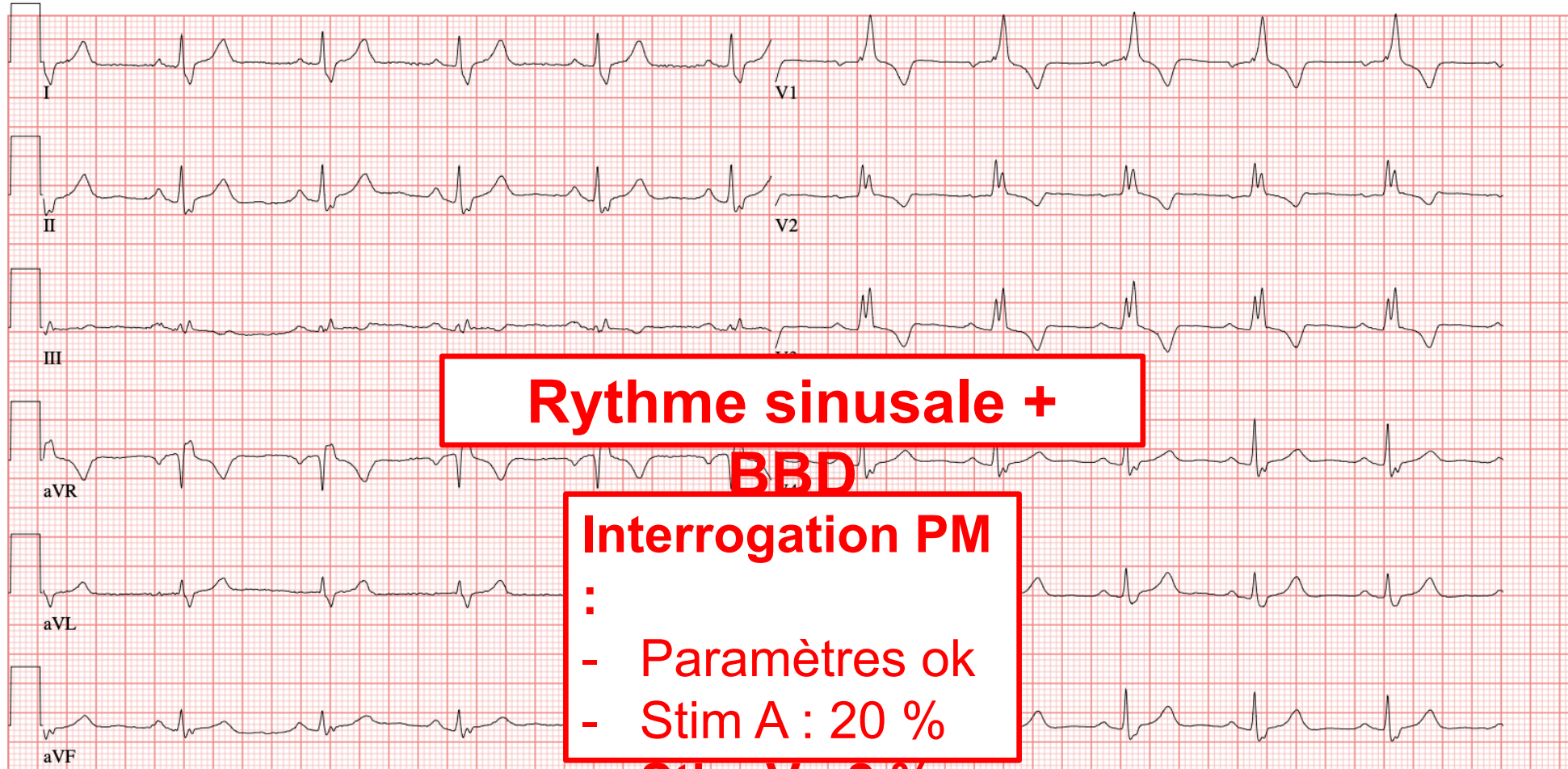
Fréq. vent.	71	bpm	Rythme sinusal normal
Intervalle PR	164	ms	Bloc de branche droit complet (BBD)
Durée QRS	116	ms	ECG anormal
QT/QTc	406/441	ms	Aucun ECG précédent disponible
Axes P-R-T	68 44 55		



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ECG DERNIER SUIVI (4 ANS)

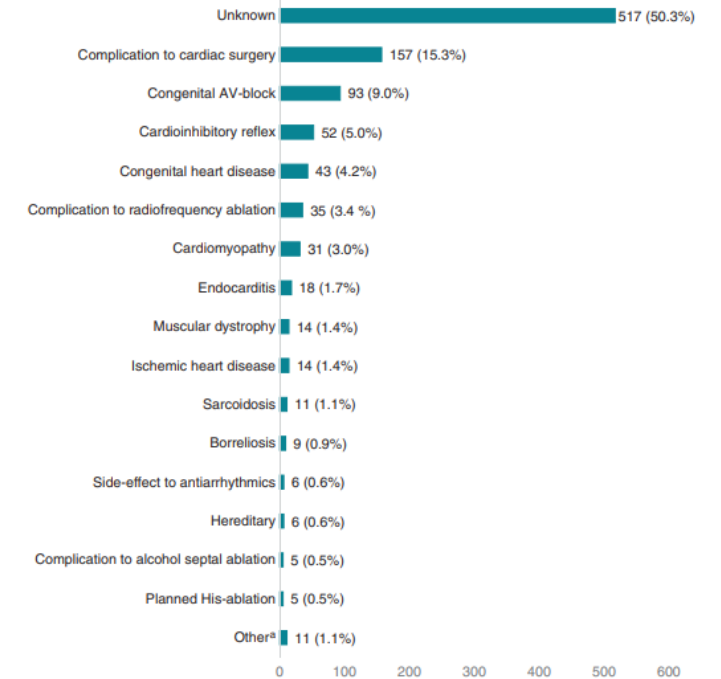
Fréq. vent.	66	bpm	Rythme sinusal normal
Intervalle PR	184	ms	Bloc de branche droit complet (BBD)
Durée QRS	132	ms	ECG anormal
QT/QTc	422/442	ms	Aucun ECG précédent disponible
Axes P-R-T	64 53	37	



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CONCLUSION

UN TRAIN  
PEUT EN CACHER  
UN AUTRE



**Figure 2** Identified aetiologies of AV block in patients <50 years (n = 1027). <sup>a</sup>Amyloidosis (n = 2), myocarditis (n = 2), severe right ventricular dilation (n = 2), cardiac tumour (n = 1), Kearn-Sayre syndrome (n = 1), rheumatic fever (n = 1), side-effect to radiation therapy (n = 1), and graft vs. host reaction (n = 1). AV, atrioventricular.

Johnni Rudbeck-Resdal, et al. EP Europace, Volume 21, Issue 11, November 2019

➤ Intérêt d'un bilan étiologique pour les BAV chez les patients « jeunes »



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# MERCI POUR VOTRE ATTENTION !

## IMAGE FOCUS

doi:10.1093/ehjci/jeab141

Online publish-ahead-of-print 23 July 2021

**Cardiac magnetic resonance diagnosis of septal acute myocardial infarction secondary to first septal perforator occlusion causing complete atrioventricular block**

**Marc Bonnet \*, Mathieu Montoy, Thibaut Thenard, Pierre Lantelme, and Brahim Harbaoui **

Cardiology Department, Hôpital Croix-Rousse and Hôpital Lyon Sud, Hospices Civils de Lyon, Grande Rue de la Croix-Rousse, Lyon 69004, France

\* Corresponding author. Tel: (+33)688124411. E-mail: marc.bonnet@chu-lyon.fr

