

CNCH 2022 Tous droits réservés Toute



IDM complexe

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Mr S, 53 ans

Diabète type 2

Obésité IMC 30 Kg/m²

Dyslipidémie

Hypothyroïdie

Douleur thoracique

STEMI inférieur

DDC: BRILIQUE, ASPIRINE, HNF

H+2 transfert direct en salle de cathétérisme

À l'arrivée : instabilité hémodynamique

ECG tachy sinusale, sus ST inférieur

Hypotension, désaturation, choc cardiogénique

Prochaine étape?



Stabilisation
hémodynamique



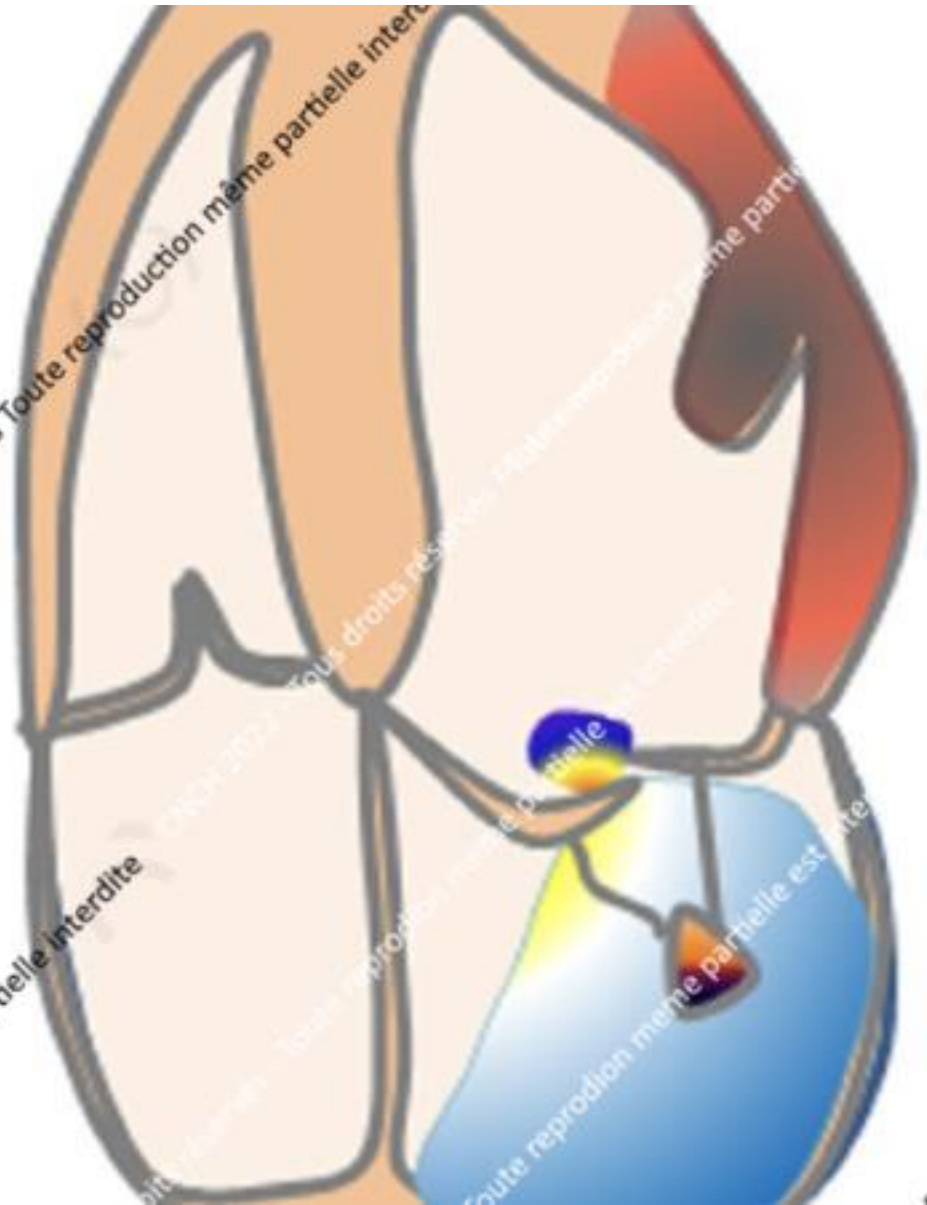
Poursuite avec
coronarographie



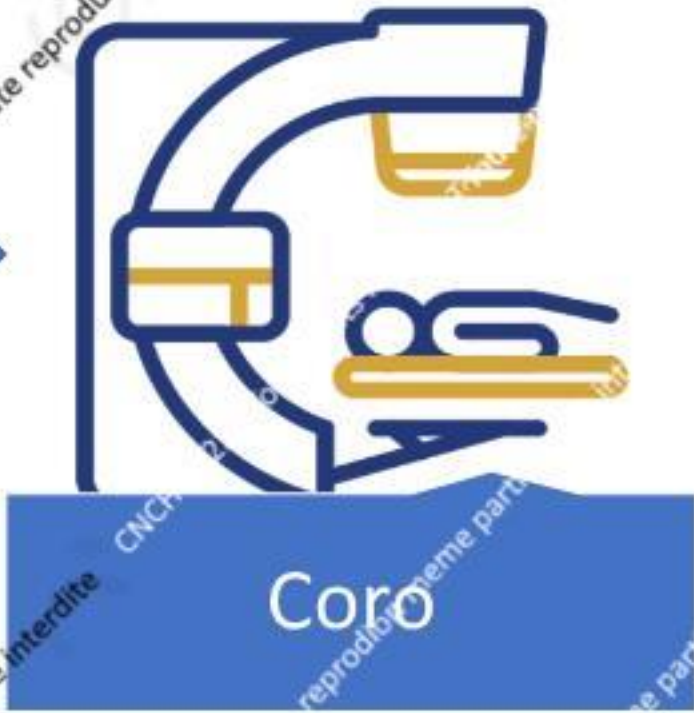
Réalisation d'une
ETT



- IM sévère par rupture de pilier postéro médian
- FEVG conservée
- Bonne fonction VD



Urgence vitale



Prochaine étape?



CORO - ATC?
Transfert direct CHU?
pVAD?
IABP? ECMO?

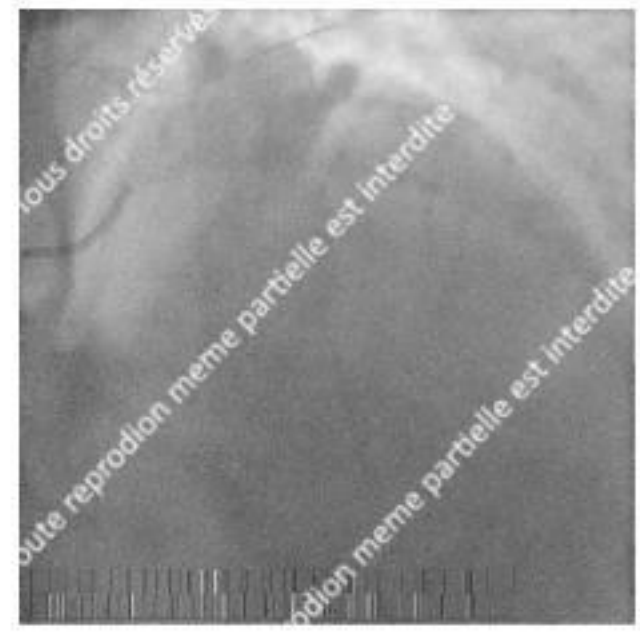
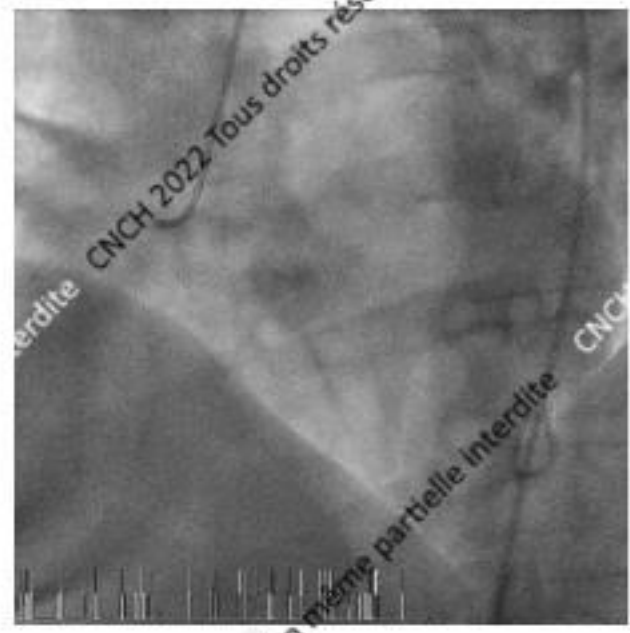
1^{ère} décision

IABP et réalisation coronarographie

Question? ACT ou pas?

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IABP → CORO
Occlusion CD1- lésions IVA Mg1



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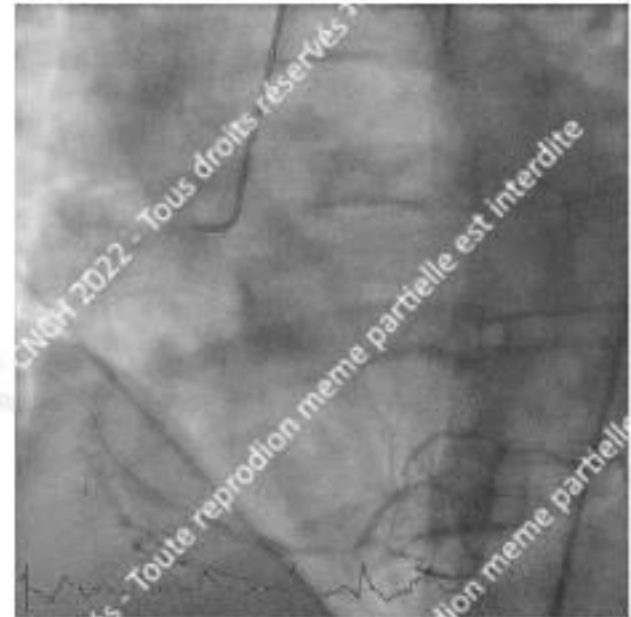
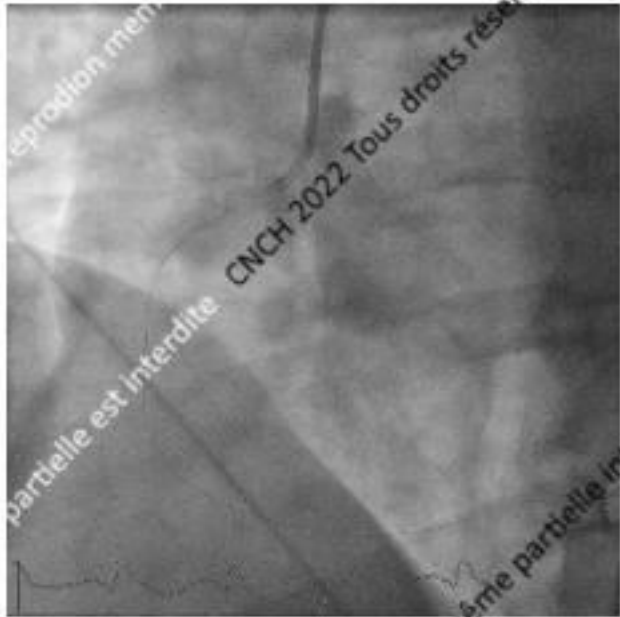
Angioplastie ou pas?

3 avis chirurgicaux différents...



2eme décision

Angioplastie de la CD – 2 stents



ECMO?

Stabilité hémodynamique précaire
Durée transfert salle coro - bloc opératoire

3^{ème} décision

ECMO et puis transfert

H+2: PEC en salle de cor
IABP + ACT CD IOT et ventilation mécanique

H+4 ECMO - transfert centre tertiaire

H+ 9 Chirurgie cardiaque en urgence
EUROSCORE 15,8%, RVM

IM ischémique par rupture de pilier

Complication rare des SCA (le plus souvent ST+)

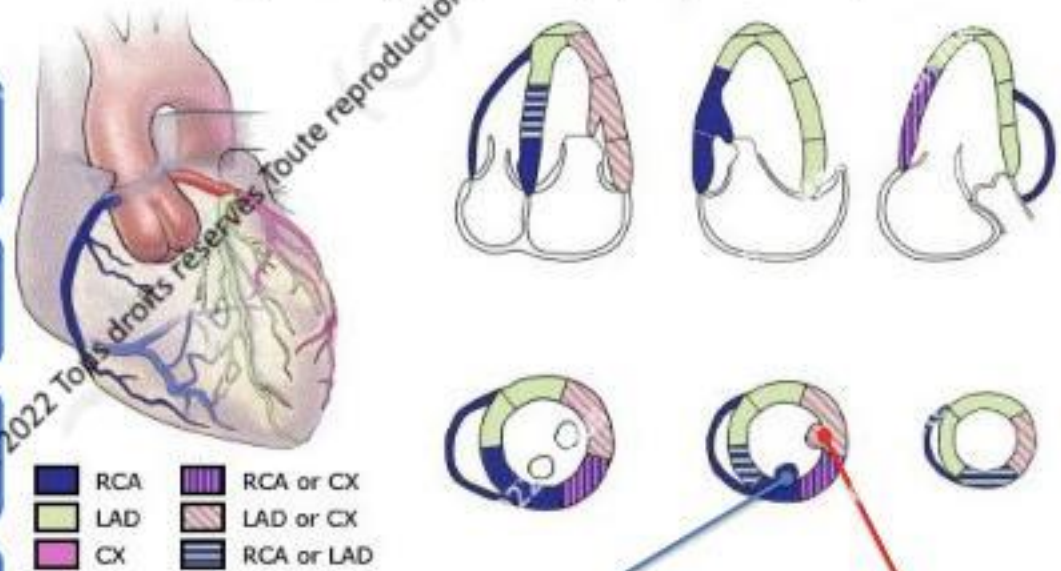
12-17 post IDM, 0,5-5%

L'étendue de la lésion ischémique est souvent modeste

OAP et choc cardiogénique, décès

urgence vitale

coronary anatomy of post-MI papillary muscle rupture



Rupture usually involves postero-medial papillary muscle
- Supplied solely by the posterior descending artery. This artery is generally a branch of the RCA, but occasionally can be supplied by the LCX.

less often antero-lateral papillary muscle
- This has dual blood supply from LAD & LCX, which protects against ischemia.

IM ischémique par rupture de pilier

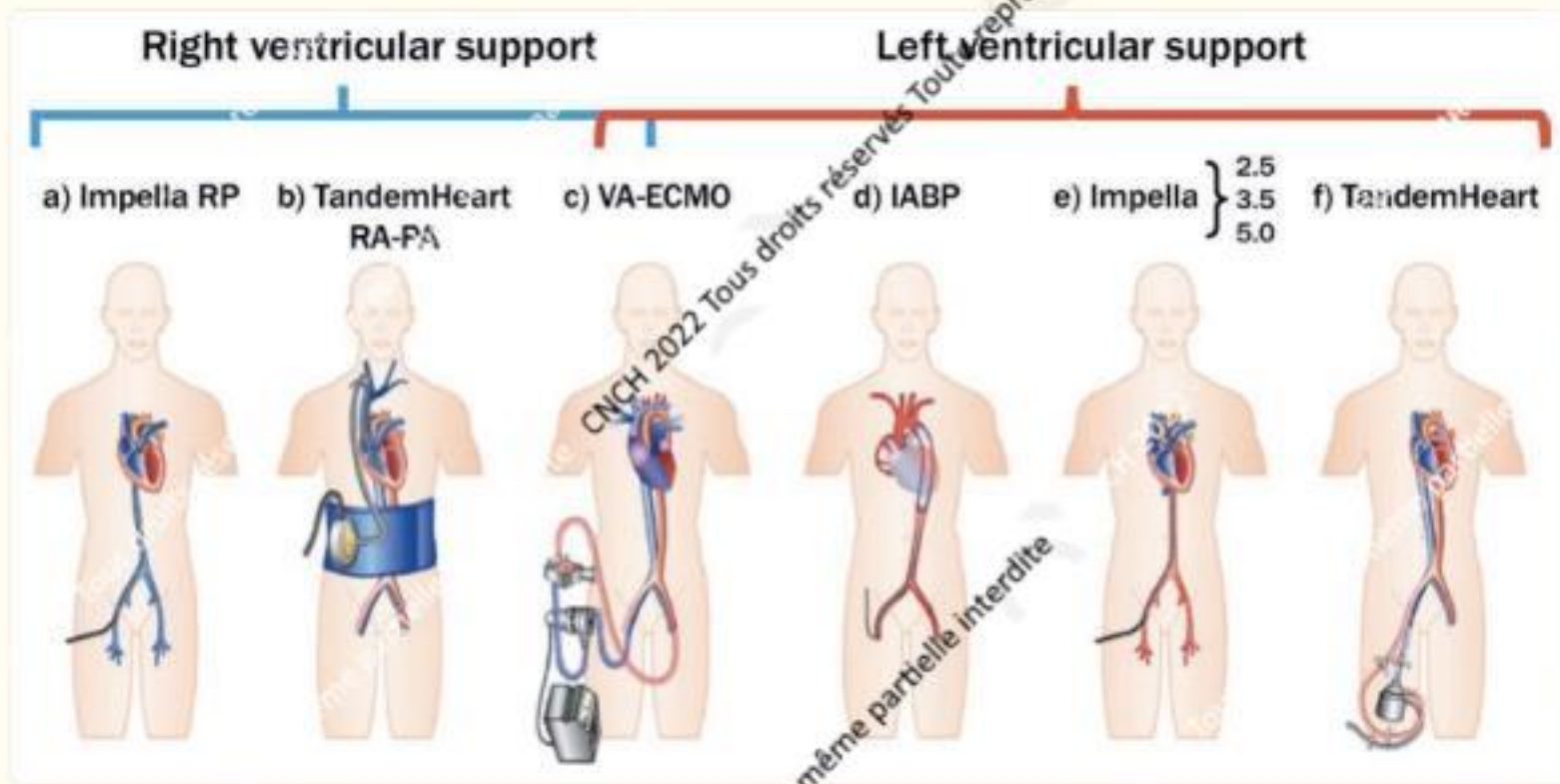
Diagnostic: ETT gold standard/ ETO

Traitement à la phase initiale: support hémodynamique, amines, assistance circulatoire

IABP réduction de la postcharge, diurétiques

Traitement chirurgical (RVM / stasie) mortalité 20-25%

Quelle assistance circulatoire?



ESC 2017 IDM

Recommendations	Class ^a	Level ^b
Immediate PCI is indicated for patients with cardiogenic shock if coronary anatomy is suitable. If coronary anatomy is not suitable for PCI, or PCI has failed, emergency CABG is recommended. ²⁴⁸	I	B
Invasive blood pressure monitoring with an arterial line is recommended.	I	C
Immediate Doppler echocardiography is indicated to assess ventricular and valvular functions, loading conditions, and to detect mechanical complications.	I	C
It is indicated that mechanical complications are treated as early as possible after discussion by the Heart Team.	I	C

more frequent in the posteromedial papillary muscle because of its single artery blood supply.^{53,54} Papillary muscle rupture usually presents as sudden haemodynamic deterioration with acute dyspnoea, pulmonary oedema, and/or cardiogenic shock. A systolic murmur is frequently underappreciated. Emergency echocardiography is diagnostic. Immediate treatment is based on afterload reduction to reduce regurgitant volume and pulmonary congestion. Intravenous diuretic and vasodilator/inotropic support, as well as IABP, may stabilize patients in preparation for angiography and surgery. Emergency surgery is the treatment of choice although it carries a high operative mortality (20–25%). Valve replacement is often required, but cases of successful repair by papillary muscle suture have been increasingly reported and appear to be a better option in experienced hands.⁵⁵

Recos ass cardiogér

Table 4. Indications for pVAD in CS.

Device	Indication	Evidence
IABP	<p>may be used in patients with mechanical complications post-AMI</p>	IABP-SHOCK II ²⁴⁻²⁶
AFP	<p>Impella CP may be used as a short-term therapy in CS, stage C and D with potentially reversible underlying cause/transplant/VAD candidates</p>	Small randomized study and cohort studies ^{4,27-29}
VA-ECMO	<p>May be used as a short-term therapy in CS stage C, D, and E, particularly in patients with combined respiratory insufficiency with potentially reversible underlying cause/transplant/VAD candidates</p> <p>May be used for selected patients in refractory cardiac arrest</p>	Prospective and retrospective cohort studies ³⁰⁻³²

AFP: microaxial flow pump; AMI: acute myocardial infarction; CS: cardiogenic shock; IABP: intra-aortic balloon pump; VAD: ventricular assist device; VA-ECMO: veno-arterial extracorporeal membrane oxygenation. ^aAccording to SCAI CS classification.³³

Assistance	E
CPLA	Clas
Impella	
ECLS	

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IABP + ECMO

IABP plus ECMO—Is one and one more t

[Sebastian Nuding](#) and [Karl Werdan](#)^{1#}

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Conclusion

This study showed that ECMO combined with IABP could be more effective in improving survival in patients with CS than ECMO alone.

ECMO |

Prognosis of patients with cardiogenic shock or after cardiac a substantially lower high mortality. Therefore, all hope is pinned like intra-aortic balloon pump (IABP), venoarterial extracorp and others (1-4). The Extracorporeal Life Support (ECLS) Or

JOURNAL ARTICLE

IABP and VA-ECMO is associated with better outcome than VA-ECMO alone in the treatment of cardiogenic shock in STEMI

F Van Den

Front. Cardiovasc. Med., 07 July 2022

Sec. Cardiovascular Therapeutics

<https://doi.org/10.3389/fcvm.2022.917>

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European

ehaa945.1

Published

Comparison of the Efficacy of ECMO With

and [Jian Tang](#)^{*}

[†] Department of Cardiology, The First College of Clinical Medical Science, China Three Gorges University and Yichang Central People's Hospital, Yichang, China

^{*} Hubei Key Laboratory of Cardiology, Department of Cardiology, Cardiovascular Research Institute, Renmin Hospital, Wuhan University, Wuhan, China

Objective: Studies on extracorporeal membrane oxygenation (ECMO) with and without an intra-aortic balloon pump (IABP) for cardiogenic shock (CS) have been published, but there have been no meta-analyses that compare

PCI ? CABG ?

COR	LOE	RECOMMENDATIONS	Class	Level ^D
1	A	1. In patients with STEMI and ischemic symptoms for <12 hours, PCI should be performed to improve survival (1-5).		
1	B-R	2. In patients with STEMI and cardiogenic shock or hemodynamic instability, PCI or CABG (when PCI is not feasible) is indicated to improve survival, irrespective of the time delay from MI onset (6,7).		B
1	3-NR	3. In patients with STEMI who have mechanical complications (e.g., ventricular septal rupture, mitral valve insufficiency because of papillary muscle infarction or rupture, or free wall rupture), CABG is recommended at the time of surgery, with the goal of improving survival (8,9).		C
1	C-LD	4. In patients with STEMI and evidence of failed reperfusion after fibrinolytic therapy, rescue PCI of the infarct artery should be performed to improve clinical outcomes (10-13).		
2a	B-r	5. In patients with STEMI who are treated with fibrinolytic therapy, angiography within 3 to 24 hours with the intent to perform PCI is reasonable to improve clinical outcomes (14-20).		

mechanical complications.

It is indicated that mechanical complications are treated as early as possible after discussion by the Heart Team.

I

C

RVM vs plastie?

- Controverse
- Réimplantation de muq
nécrose étendue

Percutaneous mitral valve
papillary muscle rupture

[Jeffrey Tyler, MD,](#) [Ryan Narbutas](#)

[▶ Author information](#) [▶ Article notes](#)

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SUCCESSFUL USE OF MITRACLIP FOR TREATMENT OF ACUTE MITRAL REGURGITATION DUE TO PAPILLARY MUSCLE RUPTURE: A CASE REPORT

Complex Clinical Cases

Antonio Lewis, Alejandro Sarmiento, Shruti Shettigar, Dave Heeransh, Manojna Nimmagadda, Jose Sleiman, Eduardo Javier Perez, Emad Hakemi, and Craig Asher

[Eur Heart J Case Rep.](#) 2019 Mar; 3(1): ytz001.

Published online 2019 Feb 6. doi: [10.1093/ehjcr/ytz001](https://doi.org/10.1093/ehjcr/ytz001)

PMCID: PMC6439366

PMID: [31020246](https://pubmed.ncbi.nlm.nih.gov/31020246/)

Edge-to-edge mitral valve repair for acute mitral valve regurgitation due to papillary muscle rupture: a case report

[Konstantinos Papadopoulos,](#) [Michael Chrissoheris,](#) [Ioulia Nikolaou,](#) and [Konstantinos Spargias](#)

Timothy C Tan, Handling Editor

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NOUVEAUX

J1 -7 ECMO AV - RVM bioprothèse /dialyse/amines/ pose PM choc hémorragique

J7 thrombose de valve, reintervention RVM

J10 Impella axillaire pour décharge VG

J22 retrait ECMO

J23 retrait Impella

J24 extubation

J30 sevrage amines

J34 chirurgie parage Scarpa, axillaire

J55 BO rupture de faux anévrisme Scarpa et choc hémorragique modéré

J56 sevrage dialyse

J60 FEVG 45%, bon VD, RVM RAS, persistance IR

Particularité du cas

Rupture de pilier dans la phase aiguë de l'IDM

Diagnostic précoce – urgence vitale

Absence d'un algorithme/protocole : choc cardiogénique et complication mécanique, timing et choix de pAVD

Stratégie thérapeutique rapide, coordination - **Heart Team**

Une vie sauvée ...



Merci