

# Les malaises sont de retour !!

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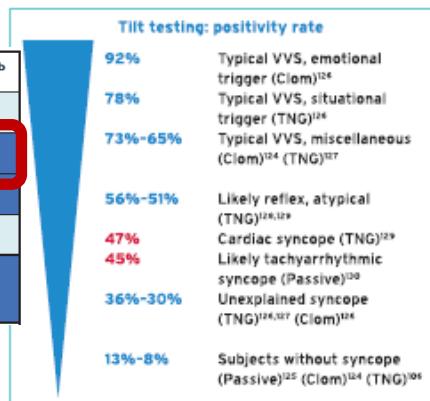
**Hôpital  
Pitié-Salpêtrière  
AP-HP**

**2002:** Homme de 18 ans

- ✓ syncopes avec prodromes
- ✓ Antécédents: 0

## Tilt- test

Recommendations	Class <sup>a</sup>	Level <sup>b</sup>
<b>Indications</b>		
Tilt testing should be considered in patients with suspected reflex syncope, OH, POTS, or PPS. <sup>23,24,105–109,111–117</sup>	IIa	B
Tilt testing may be considered to educate patients to recognize symptoms and learn physical manoeuvres. <sup>117–121</sup>		
<b>Diagnostic criteria</b>		
Reflex syncope, OH, POTS, or PPS should be considered likely if tilt testing reproduces symptoms along with the characteristic circulatory pattern of these conditions. <sup>23,24,105–109,111–117</sup>	IIa	B



## Holter implantable

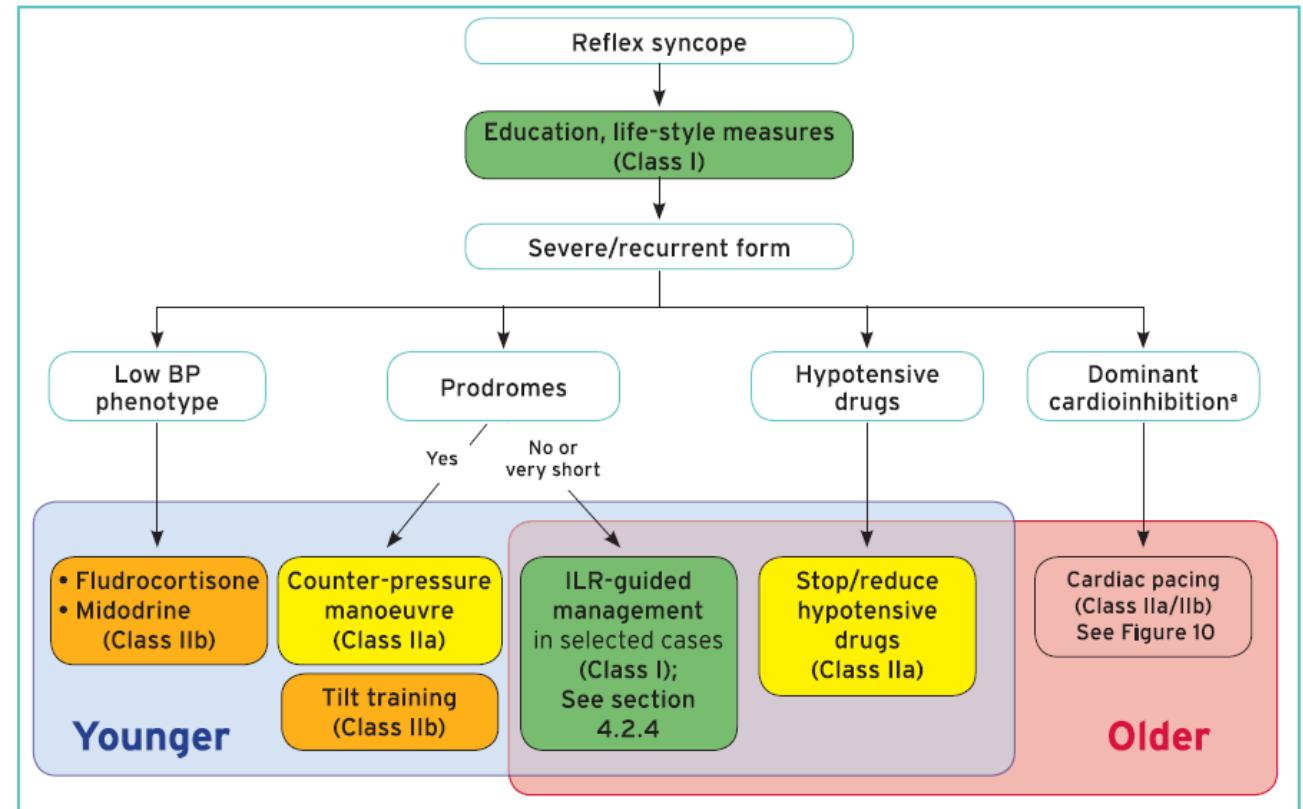
Indications	I	C
Immediate in-hospital monitoring (in bed or by telemetry) is indicated in high-risk patients (defined in Table 6).	I	C
Holter monitoring should be considered in patients who have frequent syncope or presyncope ( $\geq 1$ episode per week). <sup>161</sup>	IIa	B
External loop recorders should be considered, early after the index event, in patients who have an inter-symptom interval $\leq 4$ weeks. <sup>162,166,168,201</sup>	IIa	B
ILR is indicated in an early phase of evaluation in patients with recurrent syncope of uncertain origin, absence of high-risk criteria (listed in Table 6), and a high likelihood of recurrence within the battery life of the device. <sup>175,176,181–184,202</sup> , Supplementary Data Table 5	I	A
ILR is indicated in patients with high-risk criteria (listed in Table 6) in whom a comprehensive evaluation did not demonstrate a cause of syncope or lead to a specific treatment, and who do not have conventional indications for primary prevention ICD or pacemaker indication. <sup>174,180,187,188,195</sup> , Supplementary Data Tables 5 and 6	I	A
ILR should be considered in patients with suspected or certain reflex syncope presenting with frequent or severe syncopal episodes. <sup>184–186</sup>	IIa	B
ILR may be considered in patients in whom epilepsy was suspected but the treatment has proven ineffective. <sup>157,189–191</sup> , Supplementary Data Table 7	IIb	B
ILR may be considered in patients with unexplained falls. <sup>191–194</sup> , Supplementary Data Table 8	IIb	B

# Syncopes vasovagales

**Table 5** Clinical features that can suggest a diagnosis on initial evaluation

## Reflex syncope

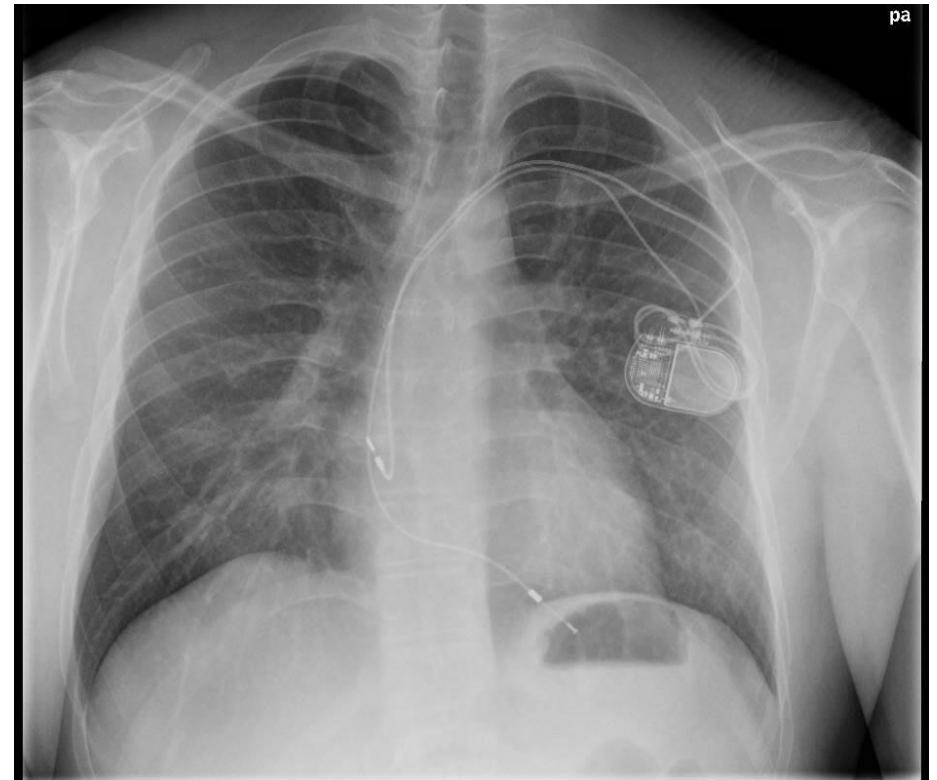
- Long history of recurrent syncope, in particular occurring before the age of 40 years
- After unpleasant sight, sound, smell, or pain
- Prolonged standing
- During meal
- Being in crowded and/or hot places
- Autonomic activation before syncope: pallor, sweating, and/or nausea/vomiting
- With head rotation or pressure on carotid sinus (as in tumours, shaving, tight collars)
- Absence of heart disease



# Réponse cardio-inhibitrice sévère

syncopes vagales cardio inhibitrices  
(convulsions, syncopes, pauses > 20 secondes)

Récurrentes après mesures hygiéno-diététiques



**2020:** 35 ans

- CPM en 2010
- Contrôle du PM:

stimulation ventriculaire: 6%

Sonde Ventriculaire:

impédance: 117 à 150 ohms (N 200-2000)  
détection à 2,1 mv  
seuil de stimulation > 3,5 V



## Complication des PM/DAI: sonde endocavitaire

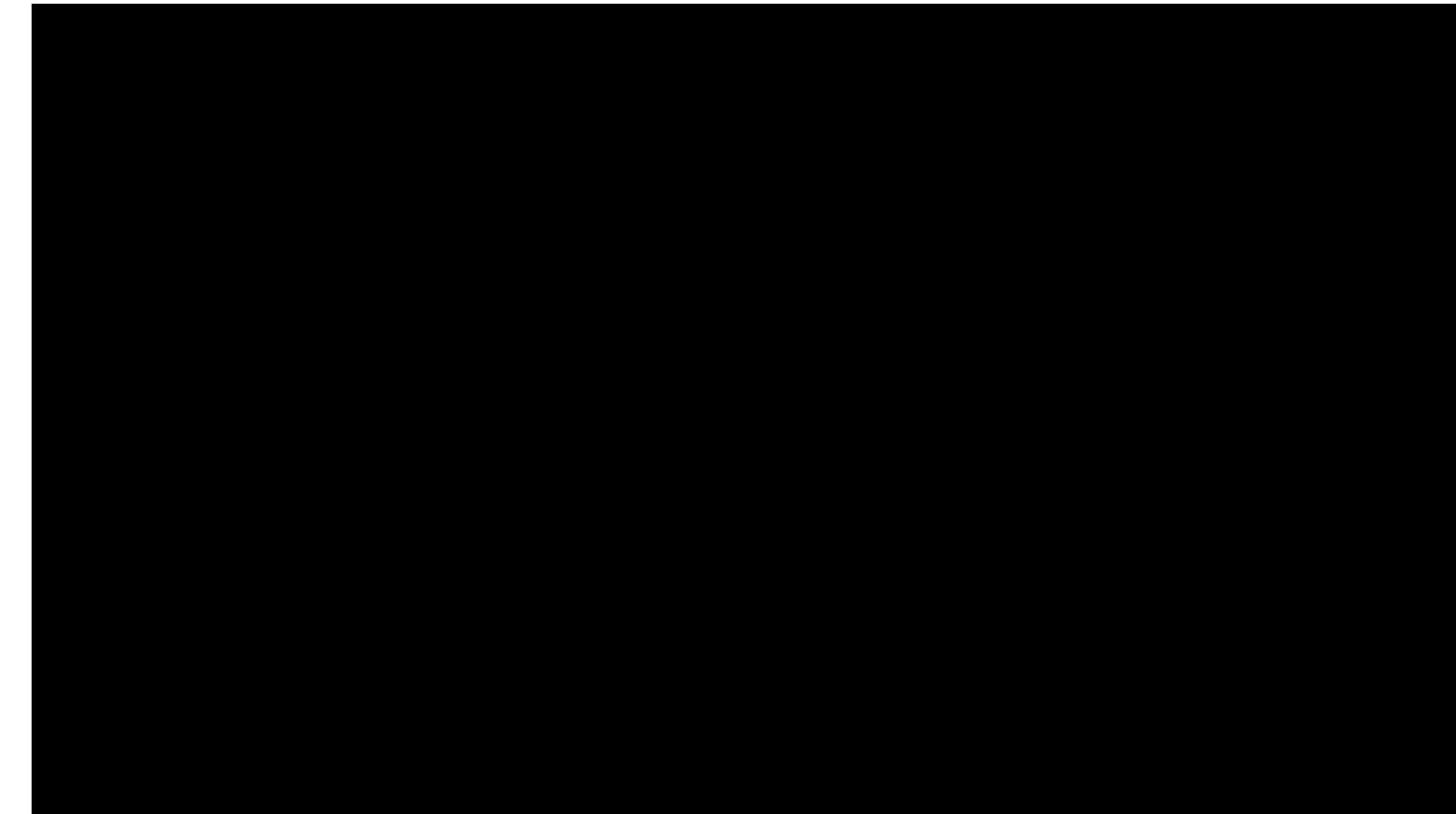
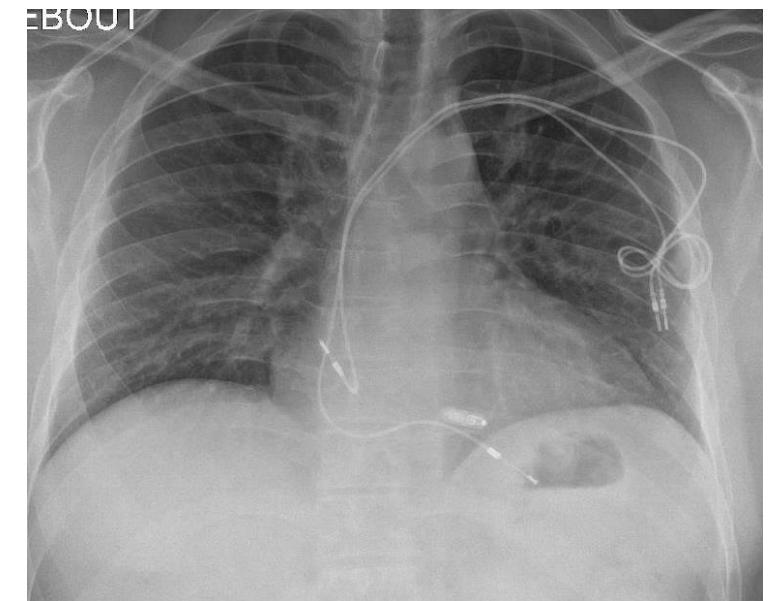
**Table 12 Complications of pacemaker and cardiac resynchronization therapy implantation**

Incidence of complications after CIED therapy	%
Lead-related reintervention <sup>354,639,690,692,695,700,701</sup>	1.0–5.9
(including dislodgement, malposition, subclavian crush syndrome, etc.)	
CIED-related infections, <12 months <sup>354,639,641,645,685,695,702</sup>	0.7–1.7
Superficial infection <sup>354</sup>	1.2
Pocket infections <sup>354</sup>	0.4
Systemic infections <sup>354</sup>	0.5
CIED-related infections, >12 months <sup>702–709</sup>	1.1–4.6
Pocket infections <sup>702</sup>	1.3
Systemic infections <sup>702,705</sup>	0.5–1.2
Pneumothorax <sup>354,658,690,692,700,701,707</sup>	0.5–2.2
Haemothorax <sup>695</sup>	0.1
Brachial plexus injury <sup>695</sup>	<0.1
Cardiac perforation <sup>354,663,690,692,695</sup>	0.3–0.7
Coronary sinus dissection/perforation <sup>710,288</sup>	0.7–2.1
Revision due to pain/discomfort <sup>354,690</sup>	0.1–0.4
Diaphragmatic stimulation requiring reintervention <sup>711,712,665,713</sup>	0.5–5
Haematoma <sup>354,639,650,652,654,690,700,714,715</sup>	2.1–5.3
Tricuspid regurgitation <sup>716–718</sup>	5–15
Pacemaker syndrome <sup>146,701,719</sup>	1–20
Generator/lead problem <sup>354,639,690</sup>	0.1–1.5
Deep venous thrombosis (acute or chronic) <sup>354,720,721</sup>	0.1–2.6
Any complication <sup>354,639,690,692,695,707,722,723</sup>	5–15
Mortality (<30 days) <sup>354,694</sup>	0.8–1.4

CIED = cardiovascular implantable electronic device.

ESC 2021

# Stimulation cardiaque sans sonde



**2025:** 40 ans

- Récidive de malaises : non syncopaux , qq minutes, tous les 3 à 7 mois
- Contrôle du LPM:

Programmation VVI 60 /min (hystérésis 40 /min)

stimulation ventriculaire: < 1%

Paramètres de stimulation corrects



## Montre connectée



**Fibrillation atriale**

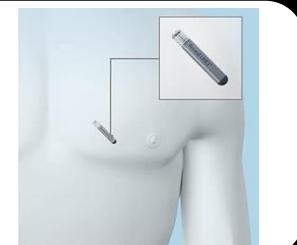
Fibrillation auriculaire — ❤ Moyenne de 118 BPM

Cet ECG indique des signes de FA et une fréquence cardiaque élevée.

Si ce résultat vous surprend ou si votre fréquence cardiaque reste élevée, consultez votre médecin prochainement.



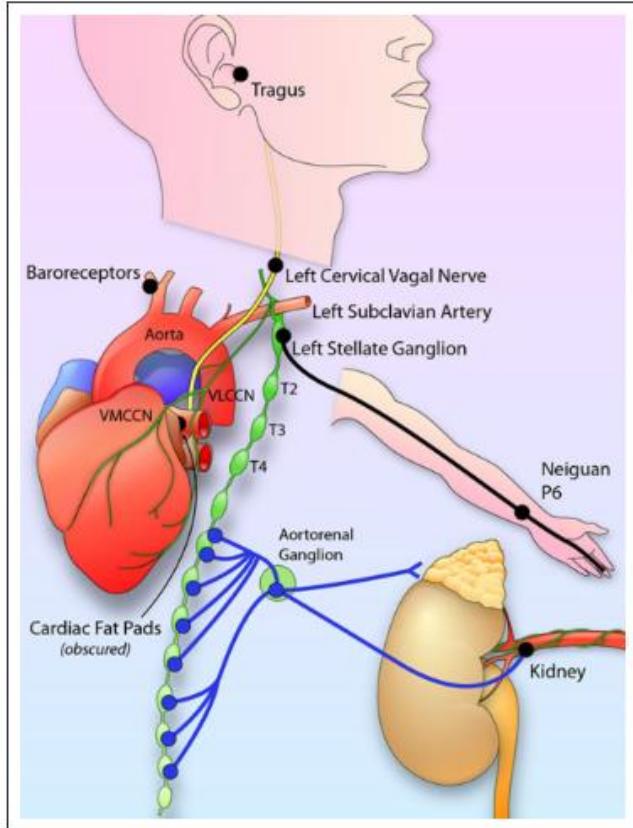
## Holter longue durée



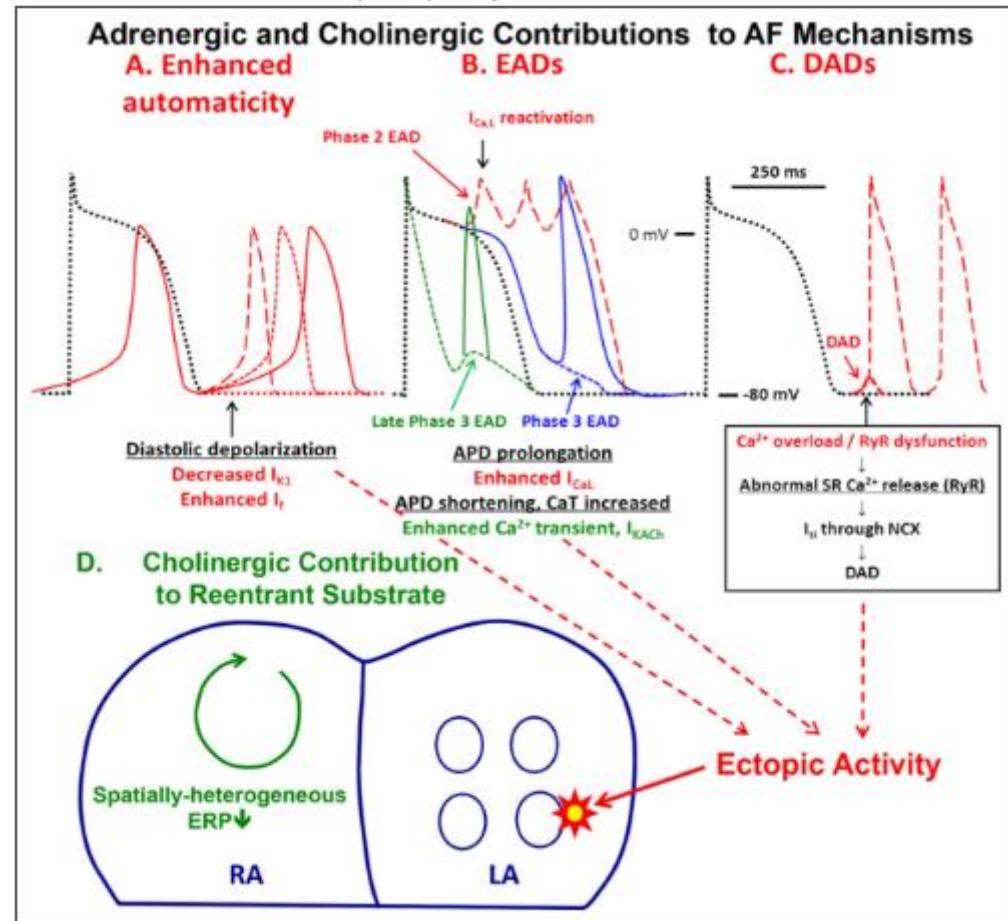
[www.pratico-r](http://www.pratico-r)



# SNA et Fibrillation atriale

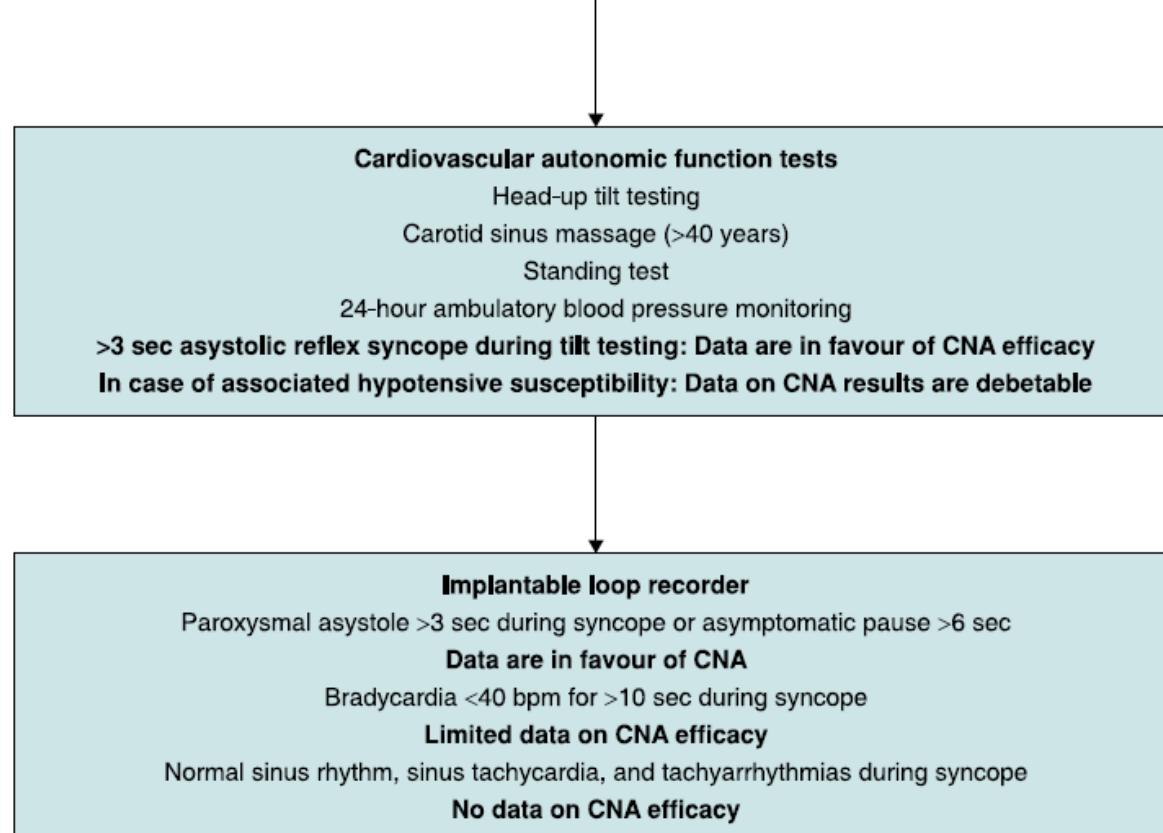


Chen et Al, Circulation research 2014



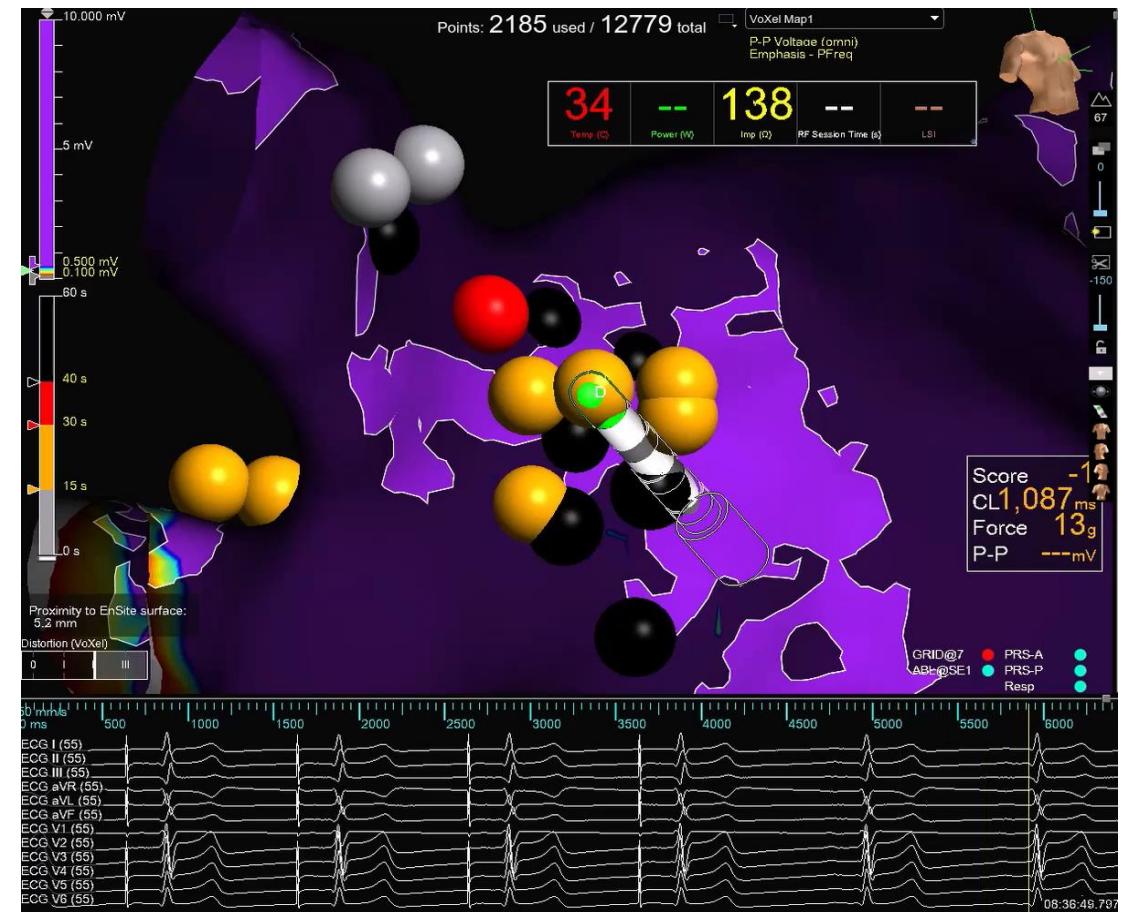
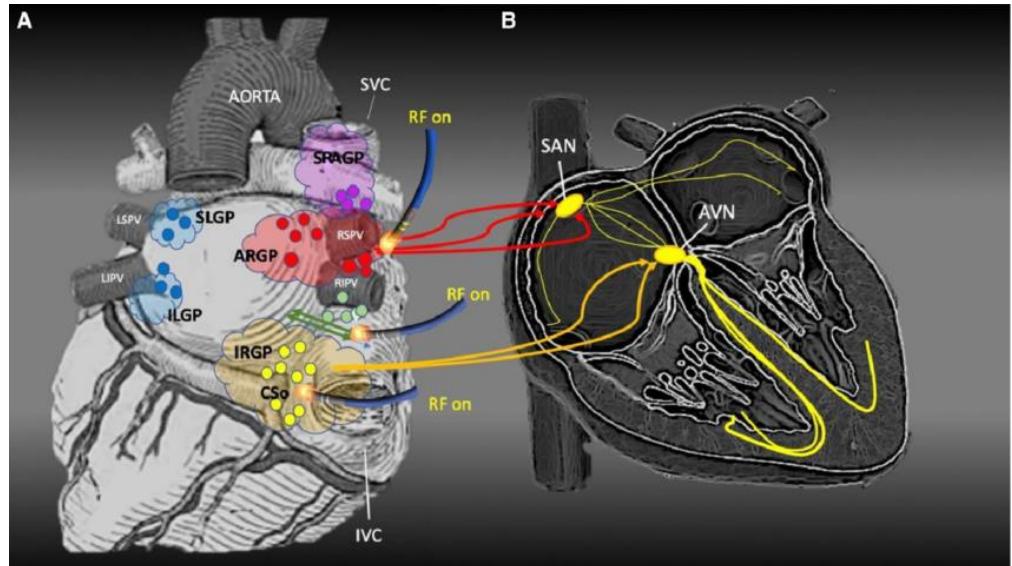
# Cardioneuroablation

**Adult patients (prefered <60 years) with presumable reflex syncope**  
(typical syncope triggers or syncope scenario, no clue of intrinsic SAN or AVN ECG abnormalities, no structural heart disease, failure of non-interventional conventional therapies in preventing syncope recurrence) severe, unpredicted, recurrent, or traumatic episodes requiring intervention  
**Potential candidate to assess for CNA**



**Cardioneuroablation for the treatment of reflex syncope and functional bradyarrhythmias: A Scientific Statement of the European Heart Rhythm Association (EHRA) of the ESC, the Heart Rhythm Society (HRS), the Asia Pacific Heart Rhythm Society (APHRS) and the Latin American Heart Rhythm Society (LAHRS)**

# Cardio-neuro-ablation



# Malaises et Syncopes vasovagales

- ✓ Evolution de la prise en charge
- ✓ Mesures hygiéno-diététiques +++
- ✓ Réponse cardio-inhibitrice:
  - holters implantables
  - dispositifs connectés
- ✓ Traitements interventionnels:
  - Pace maker (> 40 ans) sans sonde
  - cardioneuroablation (< 60 ans)

# Merci de votre attention

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