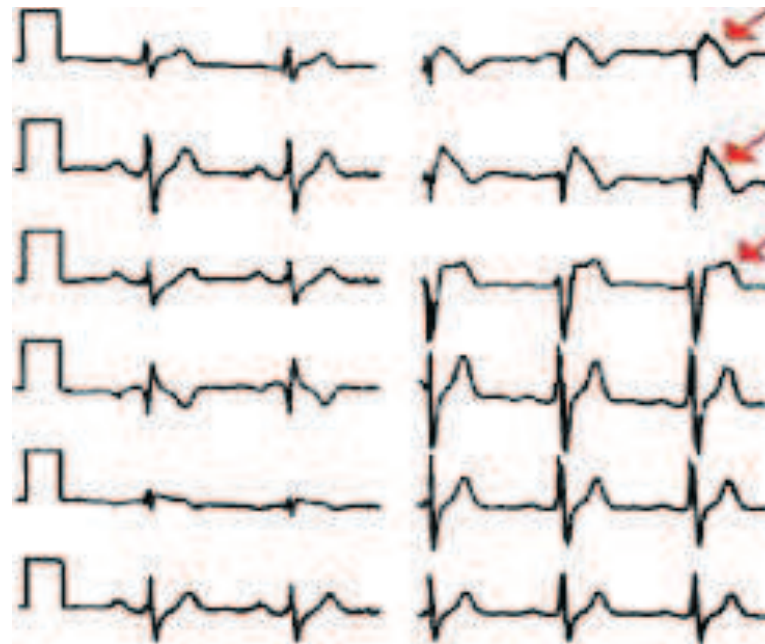


Brugada syndrome

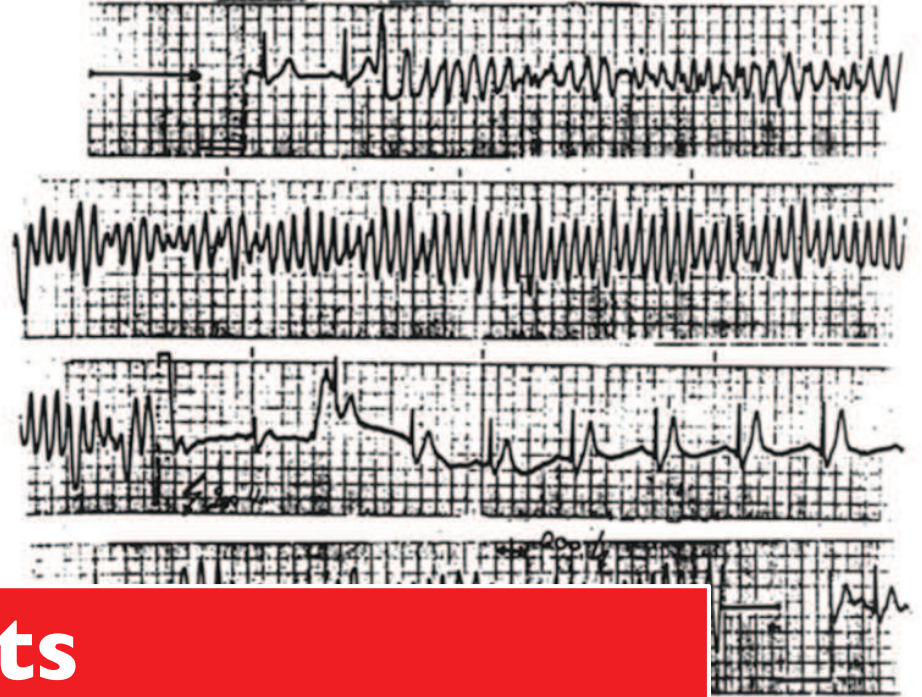
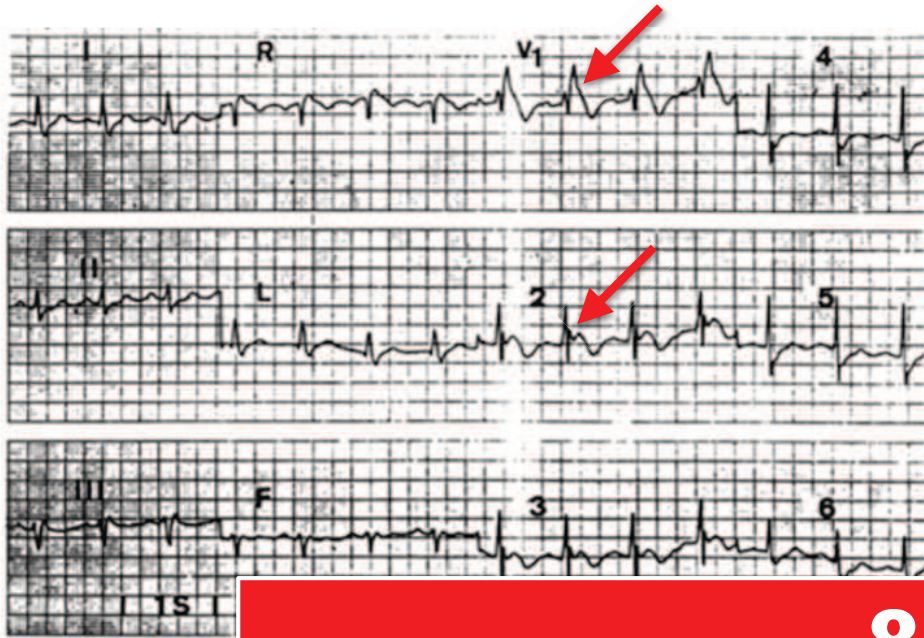
What to take to the ER ?



Adrien Carabelli

Novembre 2018

1996, “a distinct clinical and ECG Sd”

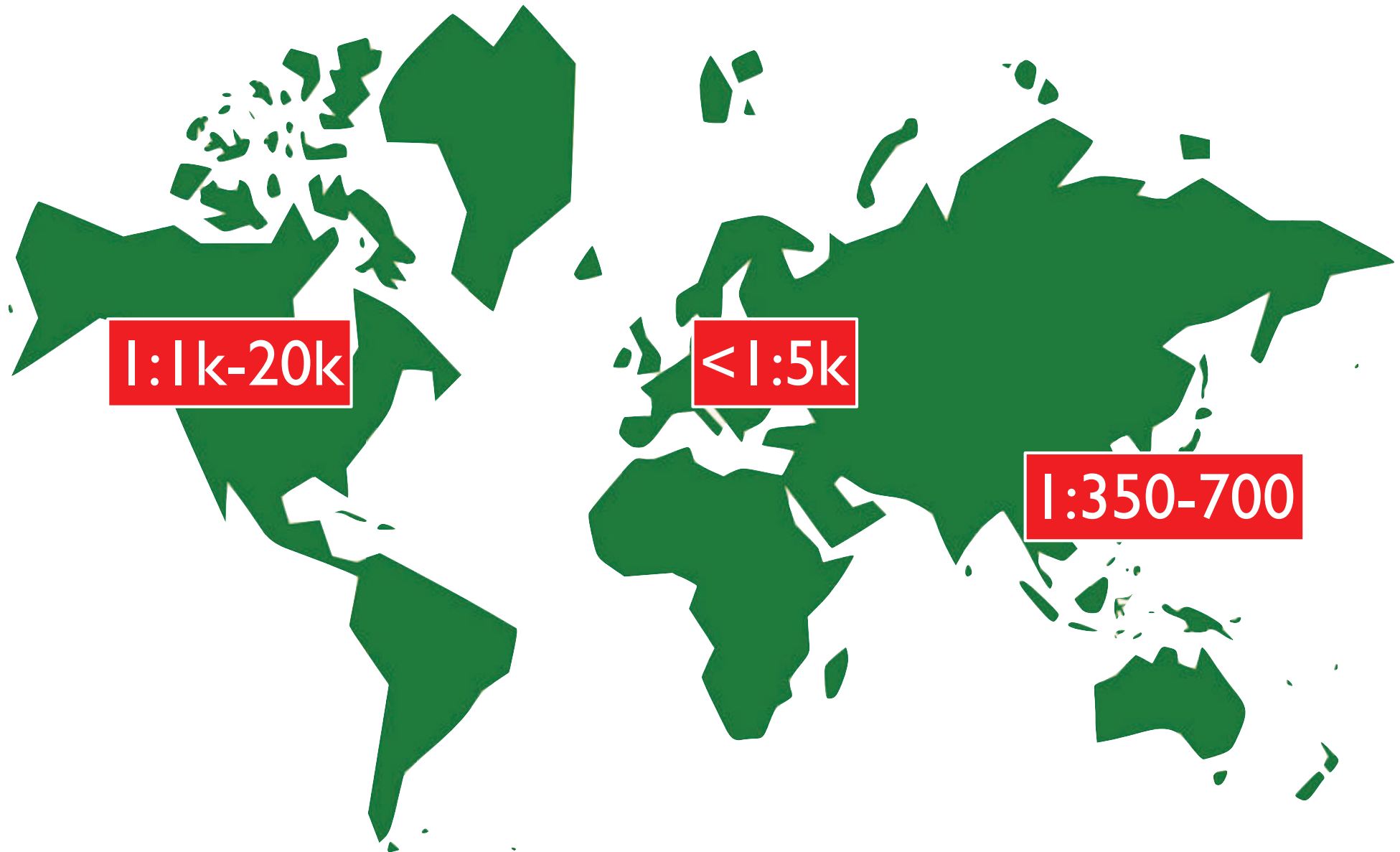


8 pts
recurrent episodes of aborted SCD

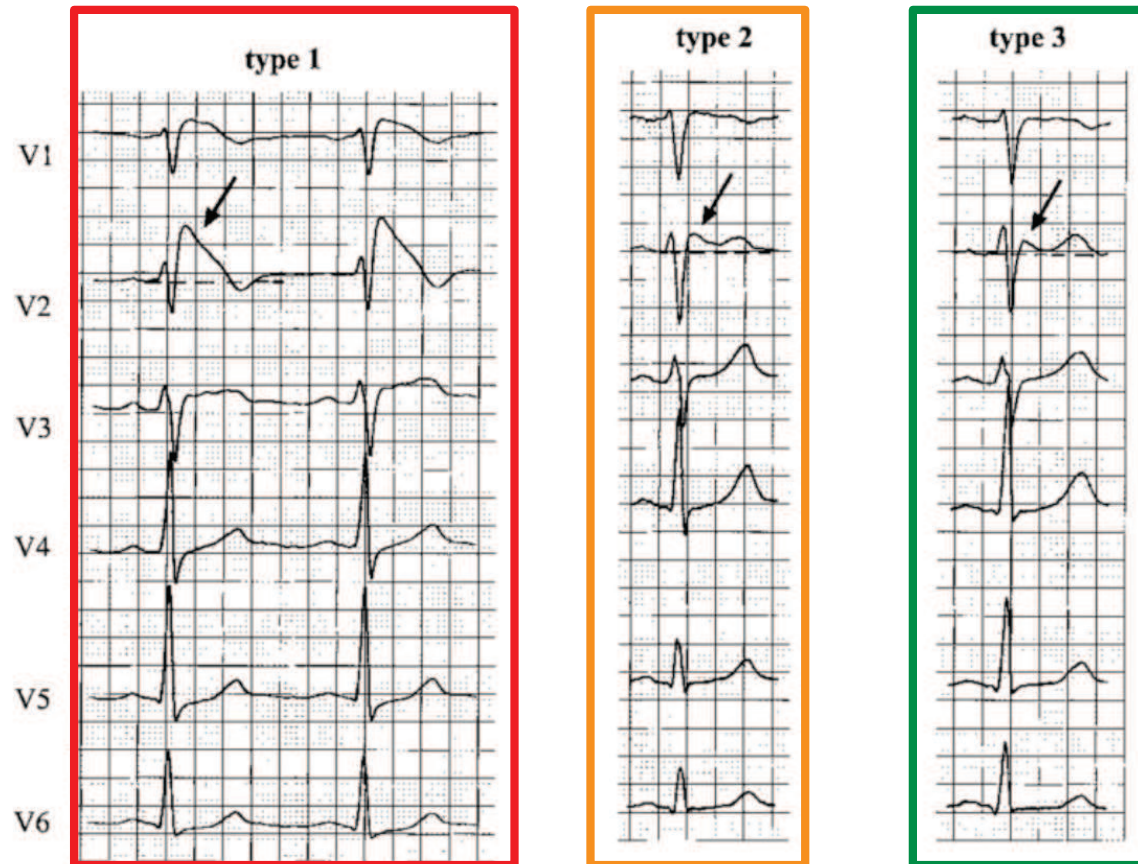
“RBB, persistent ST elevation V1-V2-V3”

“Not explainable by electrolytes disturbances, ischemia or structural heart disease”

Prevalence of Brugada syndrome

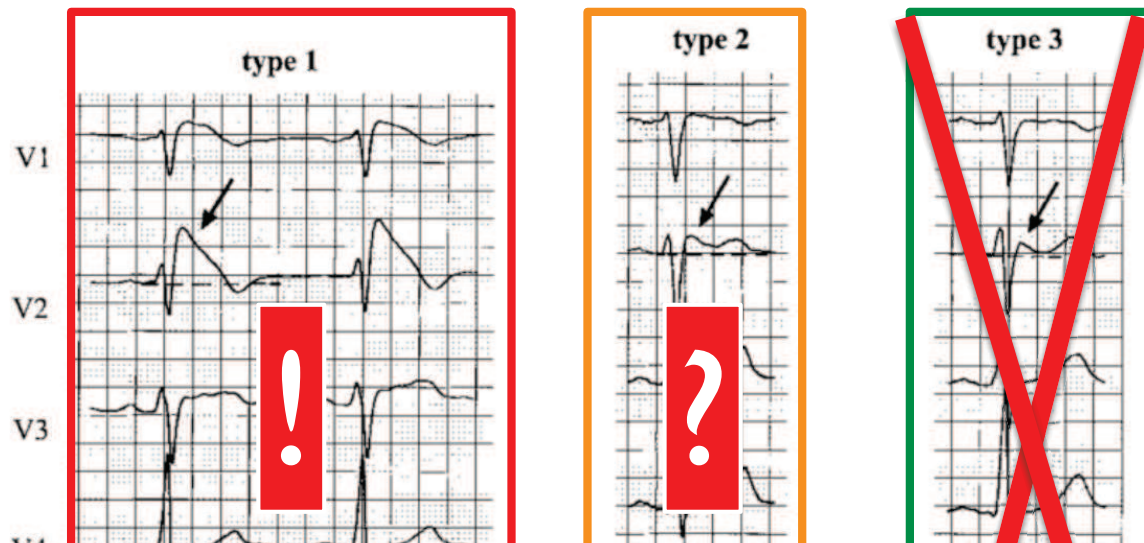


Brugada : which criteria ?



J	$\geq 2\text{mm}$	$\geq 2\text{mm}$	$\geq 2\text{mm}$
T	-	+	+
ST-T	coved	saddleback	saddleback
Terminal ST	\searrow	$\uparrow \geq 1\text{mm}$	$\uparrow < 1\text{mm}$

Brugada : which criteria ?



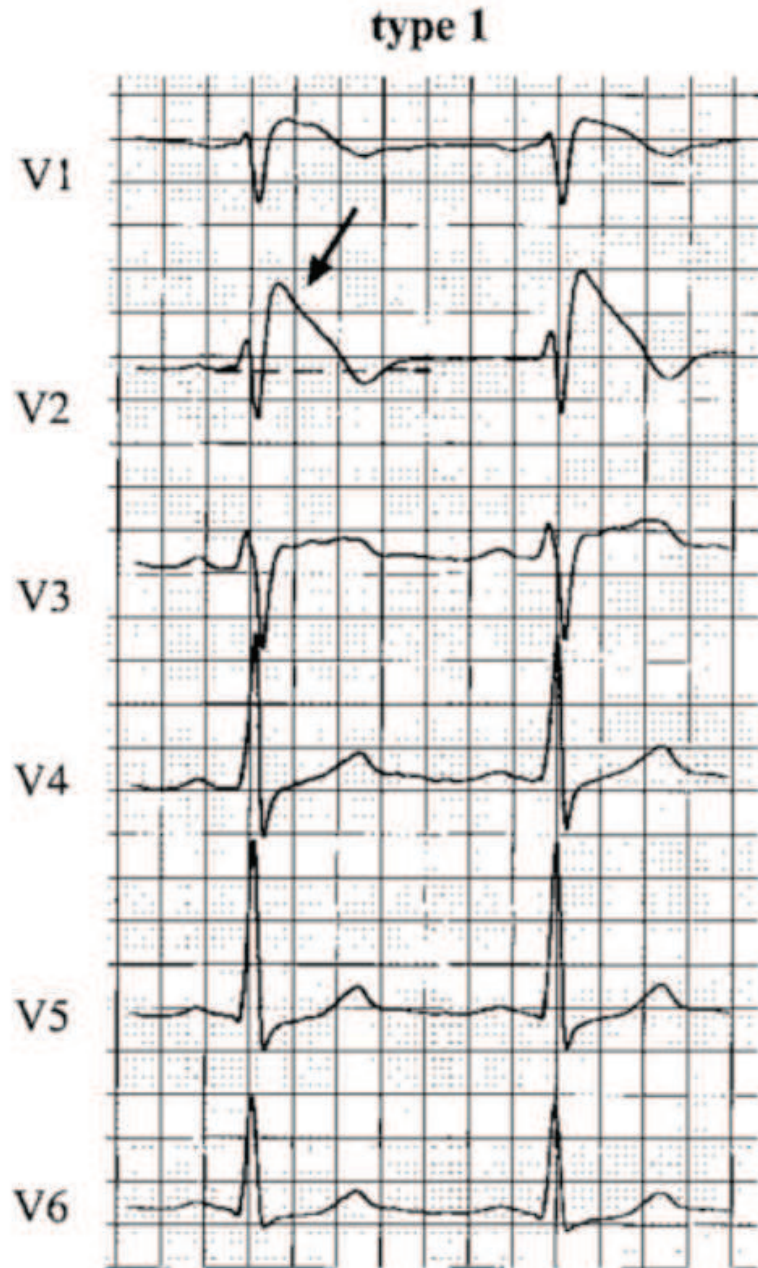
Type 1 is diagnostic of BrS

Type 2 *may rise suspicion* of BrS

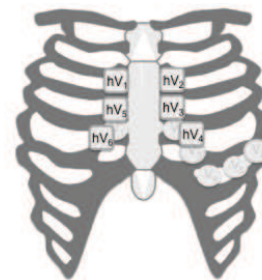
Type 3 is no longer considered in BrS

J	$\geq 2\text{mm}$	$\geq 2\text{mm}$	$\geq 2\text{mm}$
T	-	+	+
ST-T	coved	saddleback	saddleback
Terminal ST	\searrow	$\uparrow \geq 1\text{mm}$	$\uparrow < 1\text{mm}$

Brugada : which criteria ?



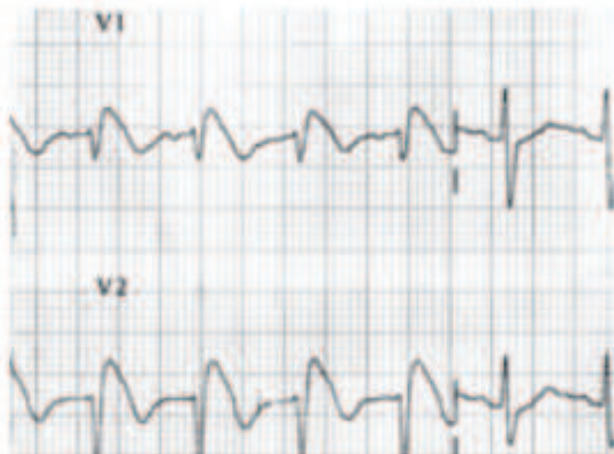
Brugada syndrome criteria
ST-segment \uparrow & type I morphology
 $\geq 2\text{mm}$
 ≥ 1 lead in V1, V2, positioned in the
2nd, 3rd, or 4th intercostal spaces
either spontaneously or after
provocative drug test



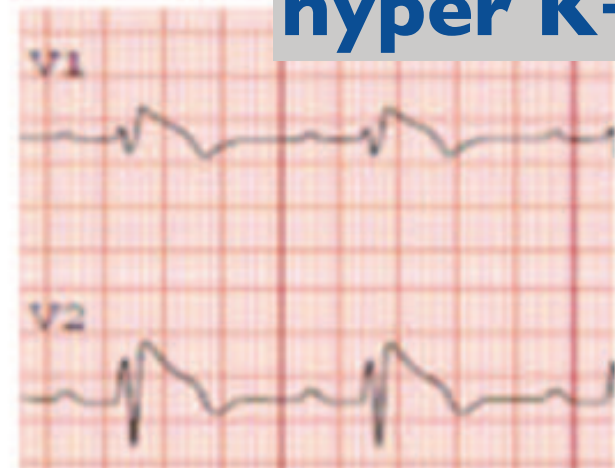
Brugada : ECG is not enough



Brugada : ECG is not enough



True Brugada syndrome



Brugada phenocopy

Brugada : ECG is not enough

Brugada phenocopy causes

Atypical right bundle branch block

Left ventricular hypertrophy

Myocarditis

Acute pericarditis

Acute myocardial ischemia or infarction

Prinzmetal's angina

Pulmonary embolism

Dissecting aortic aneurysm

Arrhythmogenic right ventricular cardiomyopathy

Mechanical compression of right ventricular outflow tract

True Various central and autonomic nervous system abnormalities

Duchenne muscular dystrophy

Hypokalemia

Hyperkalemia

Hypercalcemia

Hypothermia

Thiamine deficiency

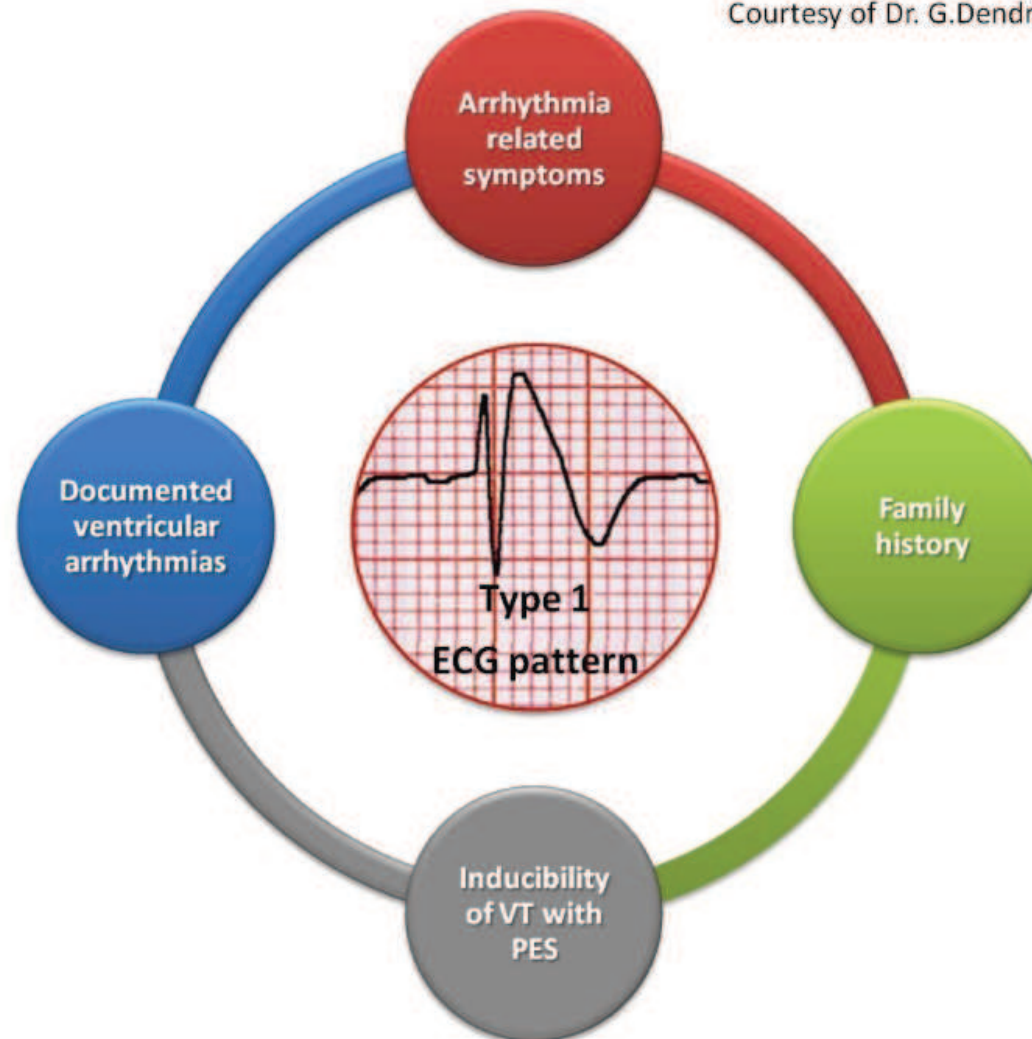
Fatty acid oxidation disorder



Brugada : ECG is not enough

Diagnosis of Brugada Syndrome

Courtesy of Dr. G.Dendramis



Brugada : symptoms and risk

Aborted SCD

13,5%/y

Syncope

3,2%/y

Asymptomatic

1,0%/y

2743 patients

13 studies

Brugada syndrome

Event =
SCD, VT/VF, app sck

Fauchier et al. IHJ 2013

Brugada : symptoms and risk

2743 patients

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Brugada syndrome

Event =

SCD, VT/VF, app sck

Fauchier et al. IHJ 2013

Aborted SCD

13,5%/y

Syncope

3,2%/y

Asymptomatic

1,0%/y

Spontaneous TI

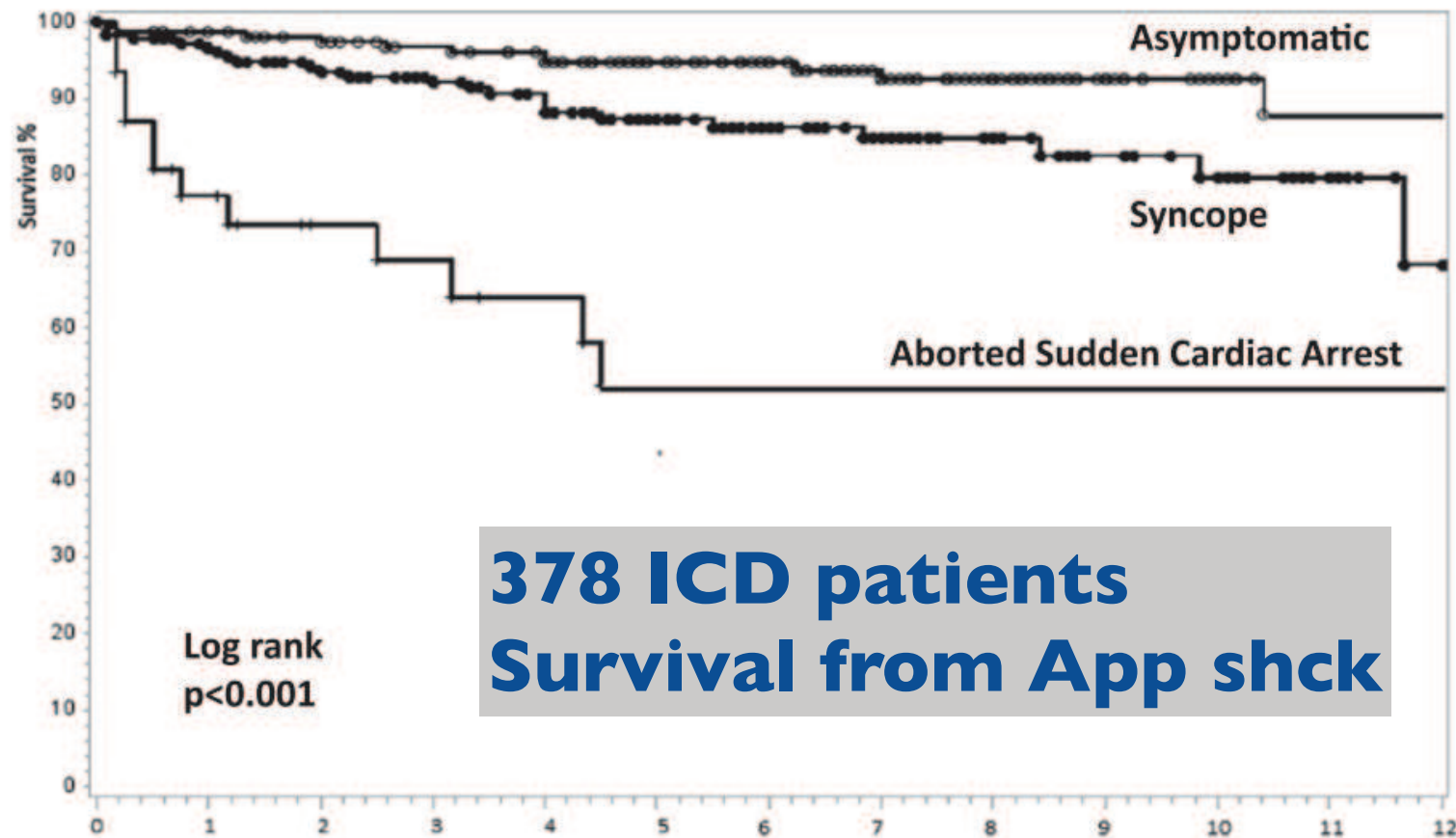
0,8%/y

Drug-induced TI

0,4%/y

Probst et al. Circ 2010

Brugada : symptoms and risk



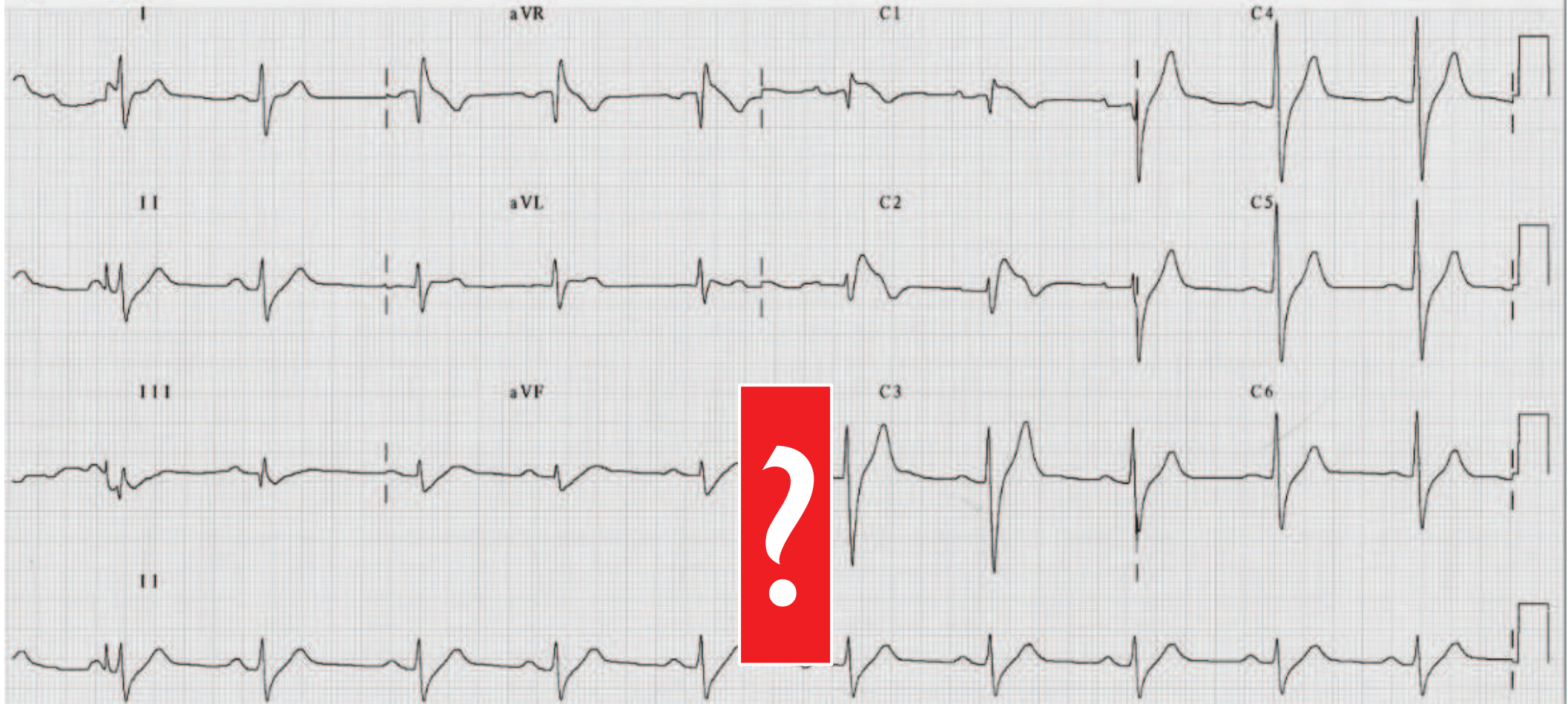
24% inapp shocks
16% lead failure

Brugada in the ER

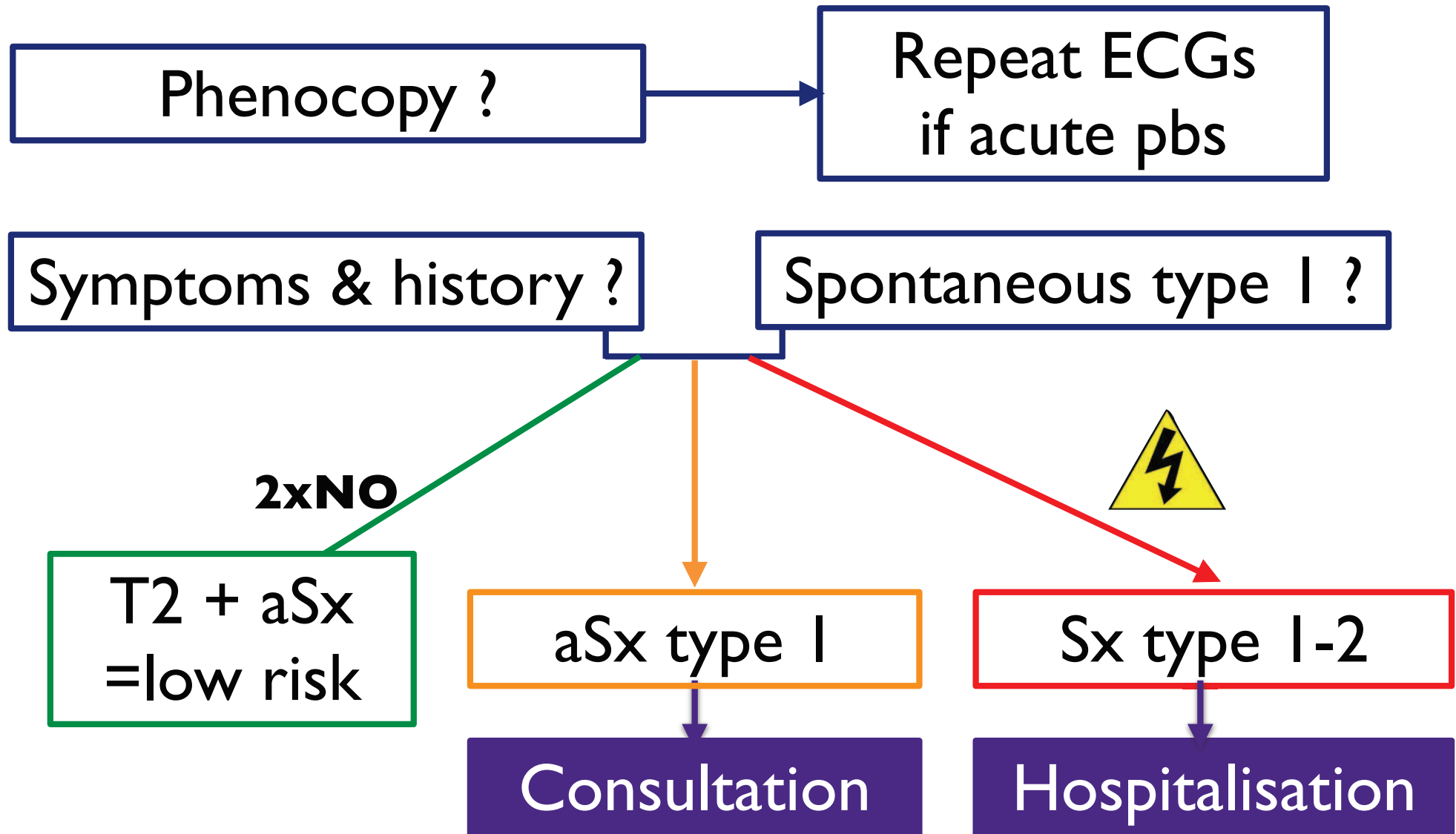
PR 214
QRSD 147
QT 395
QTc 398

--Axe--

P 60
QRS 242
T 29



Brugada in the ER



Brugada drugs

BrugadaDrugs.org

BrugadaDrugs.org

Safe drug use and the Brugada syndrome

Cher confrère,

En raison de la présence d'un syndrome de Brugada chez ce patient, je lui recommande d'éviter de prendre les médicaments suivant:

MEDICAMENTS STRICTEMENT CONTRE INDIQUES

Anti-arythmiques*: Ajmaline, Allapinine, Ethacizine, Flecainide, Pilsicainide, Procainamide, Propafenone

Psychotropes: Amitriptyline, Clomipramine, Desipramine, Lithium, Loxapine, Nortriptyline, Oxcarbazepine, Trifluoperazine

Anesthésiques / Analgésiques*: Bupivacaine, Procaine, Propofol

Autres médicaments: Acetylcholine, Alcohol (toxicity), Cannabis, Cocaine, Ergonovine

Patient letter

What to take... to the ER

1. Rare...

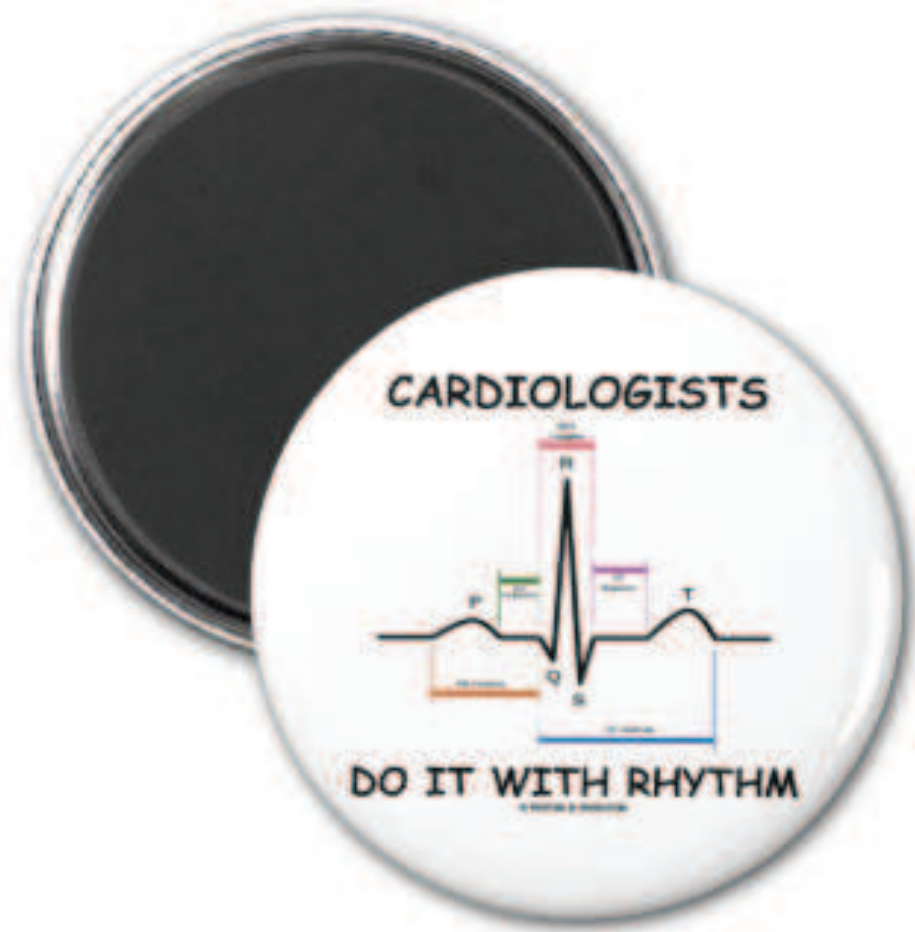
2. Type 3 is no longer part of the syndrome

3. Beware of phenocopies ! Repeat ECGs in any acute context

4. Higher risk : symptomatic and/or spontaneous type I

5. Lower risk : asymptomatic type 2

6. Suspected Brugada = drug avoidance (BrugadaDrugs)



Merci !

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