

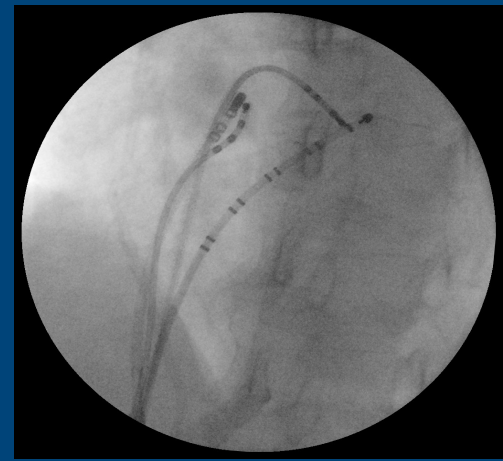


A rare case of flecainide poisoning complicated by cardiogenic shock

Clelia Guerra, MD

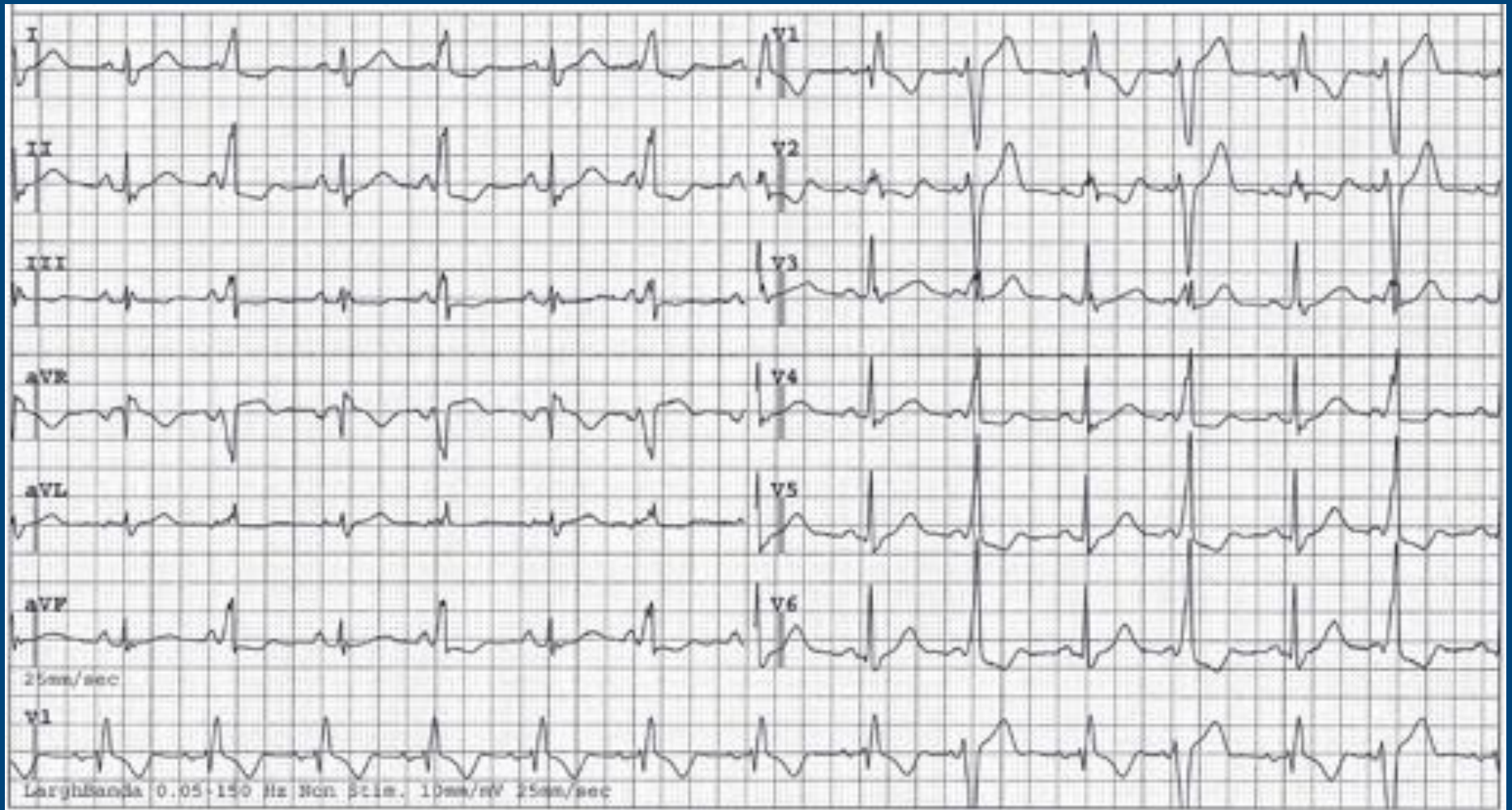
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Clinical history

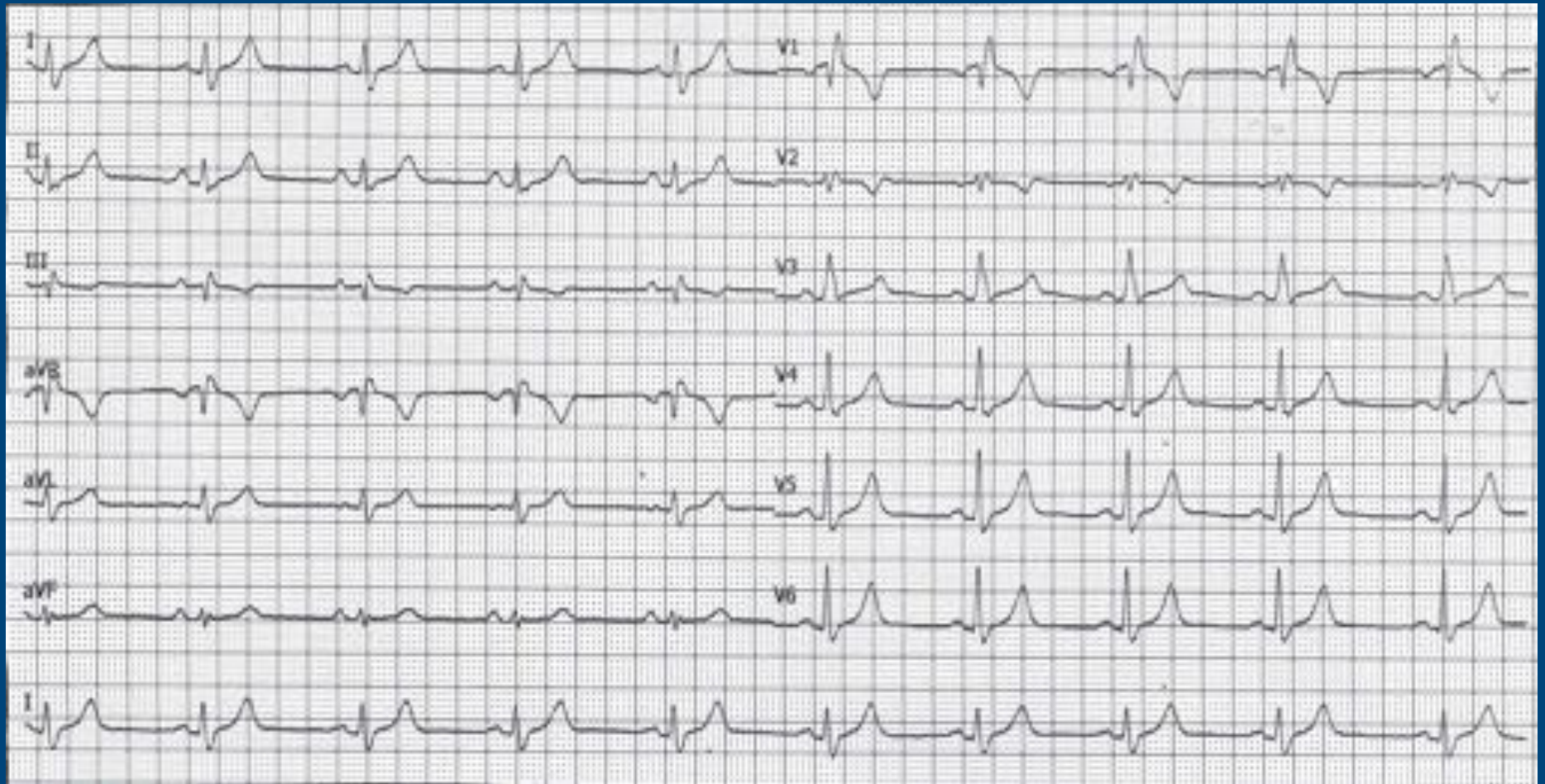


- Woman, 38 years old
 - **Congenital hydrocephalus** with slight reduction of mental abilities
 - **WPW syndrome** due to a parahisian AP, refractory to propafenone, amiodarone and flecainide
 - Successful cryoablation of the AP on Sep. 2014
 - Pharmacological therapy **discontinued** after ablation
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-

EKG before cryoablation



Baseline EKG (after cryoablation)

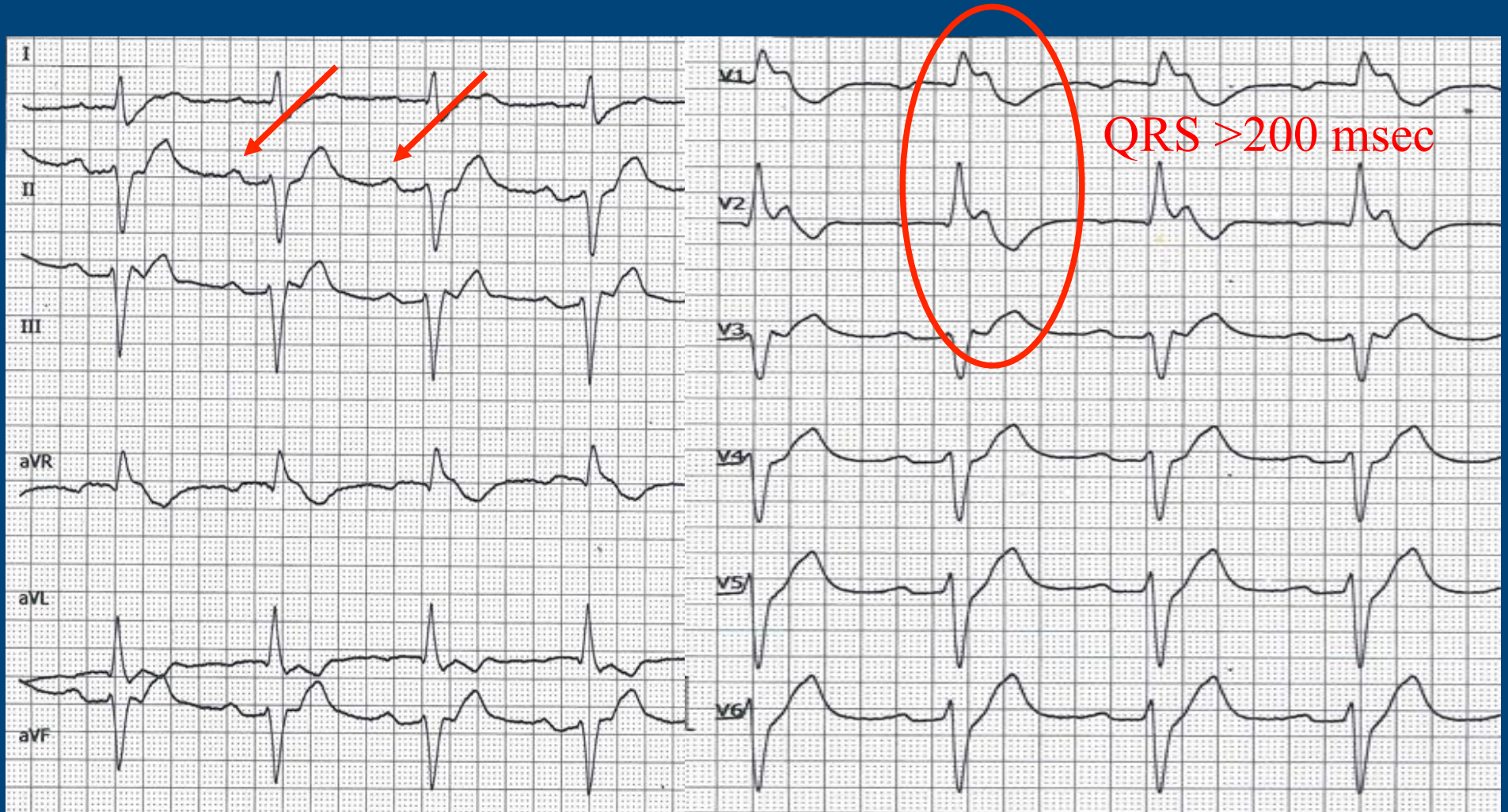


Admission to ER (April 2015)

- Patient **obnubilated**, no informations about drug assumption available
- **Hypotension** (SBP 60 mmHg)
- Routine laboratory tests unremarkable, including cTnI

- Severe biventricular dysfunction (**LVEF 35%**)
- Total CT scan excluded cerebral events or pulmonary embolism
- And...

EKG on admission:

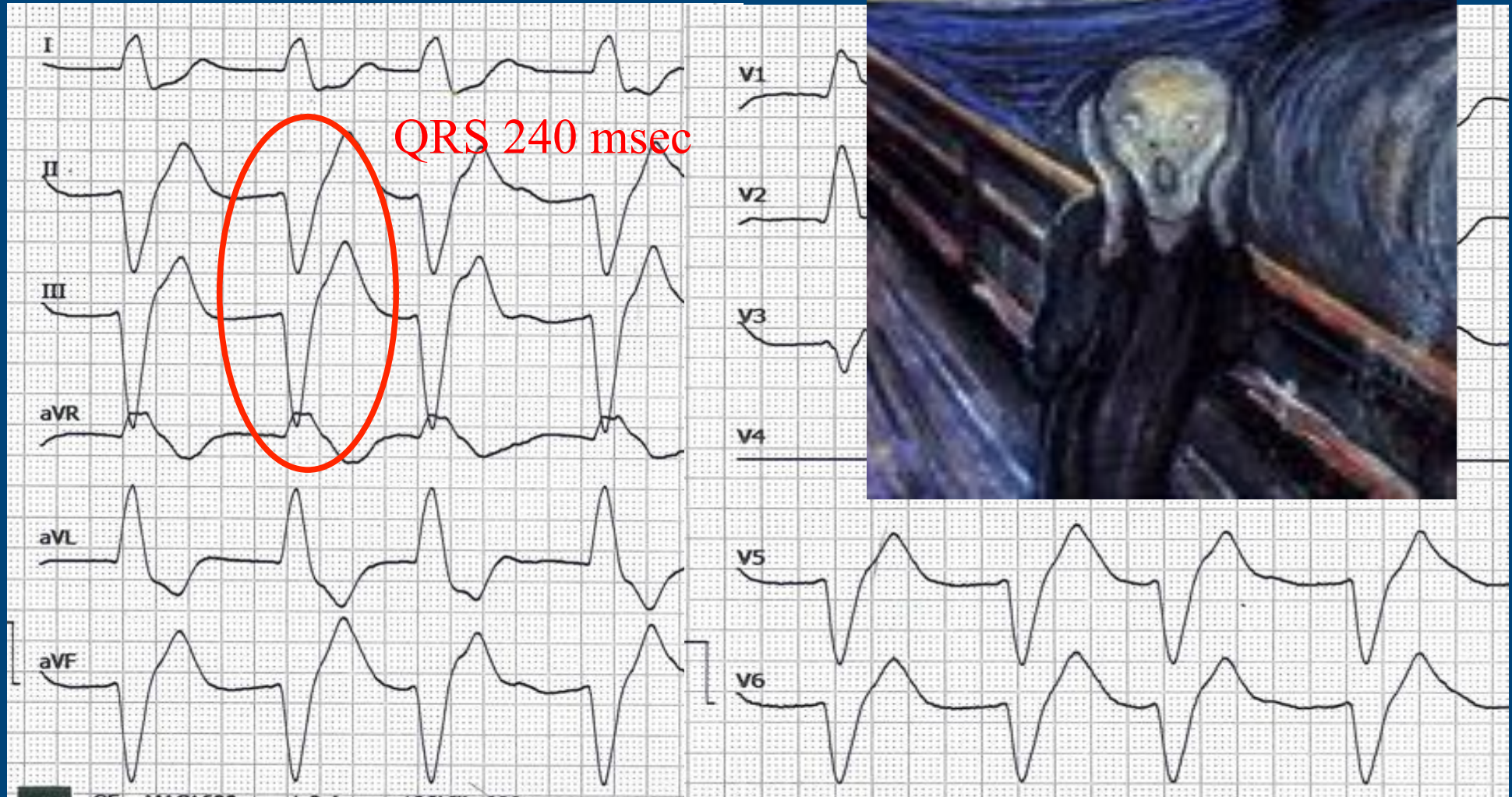


Support therapy started

- Fluid replacement and low doses of **inotropic** drugs (norepinephrine and dobutamine) with haemodynamic improvement
- Administration of activated **charcoal**
- Patient intubated and admitted to **ICU**



After 12 hours...



After 12 hours...

- No improvement in LVEF
 - Good response to inotropic therapy (PAS >100 mmHg) with rapid wash-out of arterial lactate, no signs of liver or renal failure
 - Routine toxicological screening negative (opioids, BDZ and TCAs)
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Previous treatment with
antiarrhythmic drugs

QRS widening

Cognitive
impairment

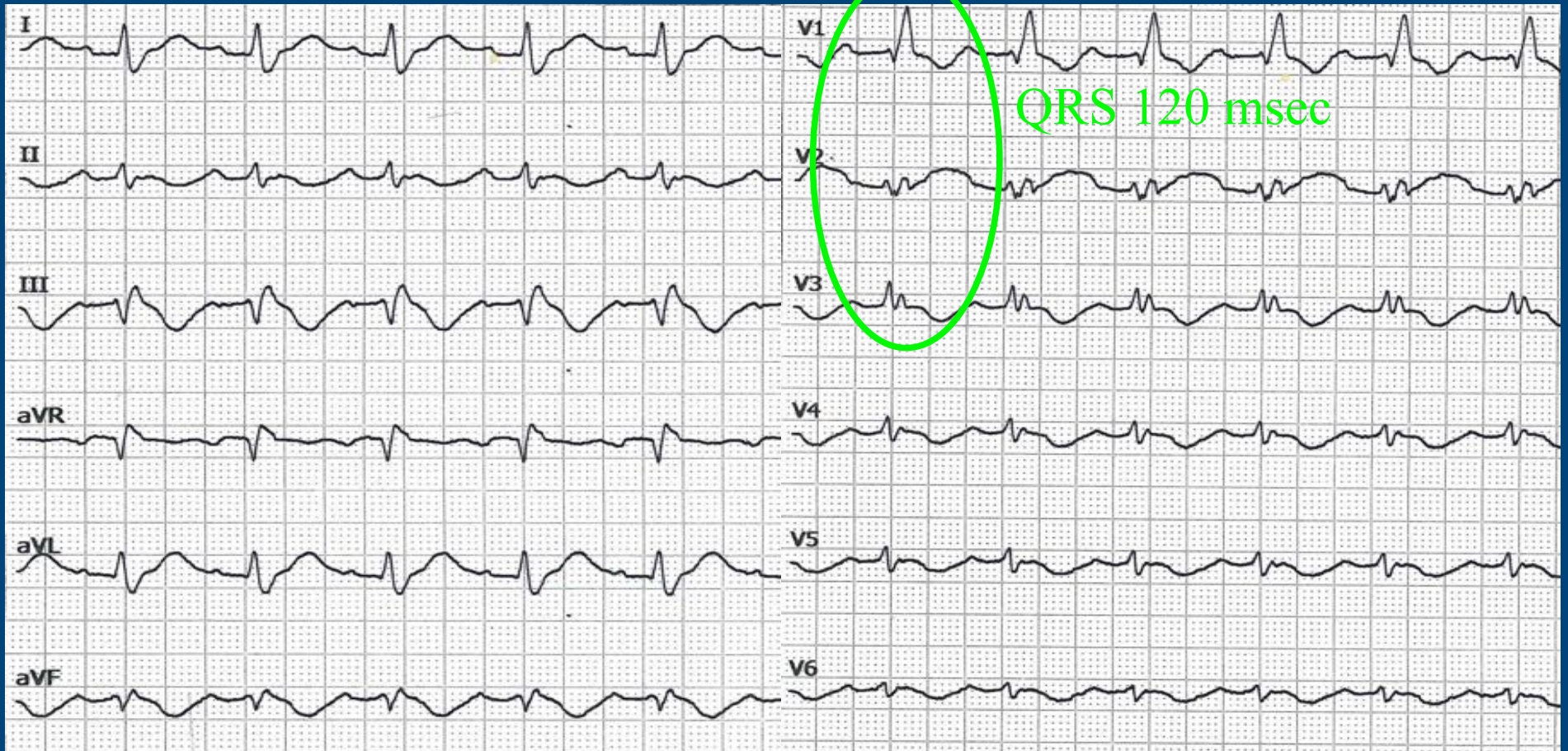
Cardiac dysfunction

FLECAINIDE?



Over the next 36 hours...

EKG returned near to baseline



Over the next 36 hours...

- Flecainide serum levels were **2000 ng/ml** at 12 hours and 1000 ng/ml at 26 hours from admission (NR 200-1000 ng/ml)
 - LVEF improved to **50%**
 - Inotropic drugs and ventilatory support were discontinued
 - After recovery, patient confessed inappropriate flecainide assumption and was referred for **psychiatric** consult.
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-

Flecainide: pharmacokinetics



- High oral bioavailability (85%)
- Large volume of distribution (5-13 L/kg)
- Peak serum concentrations up to 6 hours after ingestion
- No specific antidotes, **haemodialysis ineffective**



Acute intoxication is a **life threatening event**
(reported mortality rate 22%)

Literature review

Arrhythmogenic effect of flecainide toxicity

Pierre-Yves Courand¹, Franck Sibellas¹, Sylvain Ranc¹, Audrey Mullier²,
Gilbert Kirkorian¹, Eric Bonnefoy¹

Case Report

Open Access

Electrocardiographic changes in a rare case of flecainide poisoning: a case report

Andrea Rognoni*¹, Marzia Bertolazzi¹, Marzia Peron², Sergio Macciò¹,
Gemma Ternavasio Cameroni², Angelo Gratarola² and Giorgio Rognoni¹

A Life-Threatening Flecainide Overdose Treated with Intravenous Fat Emulsion

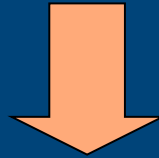
HEATHER ELLSWORTH, M.D.,*+ SAMUEL J. STELLPFLUG, M.D.,*+ JON B. COLE, M.D.,*+
JOSEPH A. DOLAN, M.D.,‡ and CARSON R. HARRIS, M.D.*+

Case Report

Irreversible third-degree heart block and pacemaker implant in a case
of flecainide toxicity

Take home message

Patient presenting cardiogenic shock & QRS widening



- Consider intoxication by **1c agents**
- Refer to closest poison centre for drug dosing



Flecainide poisoning

Negative inotropic effect



Management of haemodynamic
impairment

Flecainide poisoning

Arrhythmogenic effect



Consider hypertonic sodium
bicarbonate infusion



*Thank you
for your
attention!*
