



JUNCTIONAL ECTOPIC TACHYCARDIA DEGENERATED TO SERIOUS VENTRICULAR ARRHYTHMIAS IN A 3-MONTH-OLD INFANT

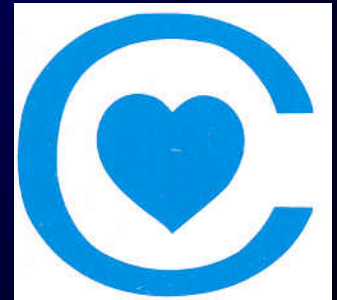
KATARZYNA BIEGANOWSKA

Department of Cardiology

The Children's Memorial Health Institute,

Department of Cardiac Arrhythmias

The Institute of Cardiology, Warsaw, Poland*



Junctional Ectopic Tachycardia

As congenital form was firstly described by Coumel et al. in 1976

Its clinical presentation is early and may be dramatic associated in up to 60% of cases with cardiomegaly and/or heart failure

Antiarrhythmic therapy, even in combination, is often ineffective

Secondary dilated cardiomyopathy, ventricular fibrillation and sudden cardiac death have also been reported

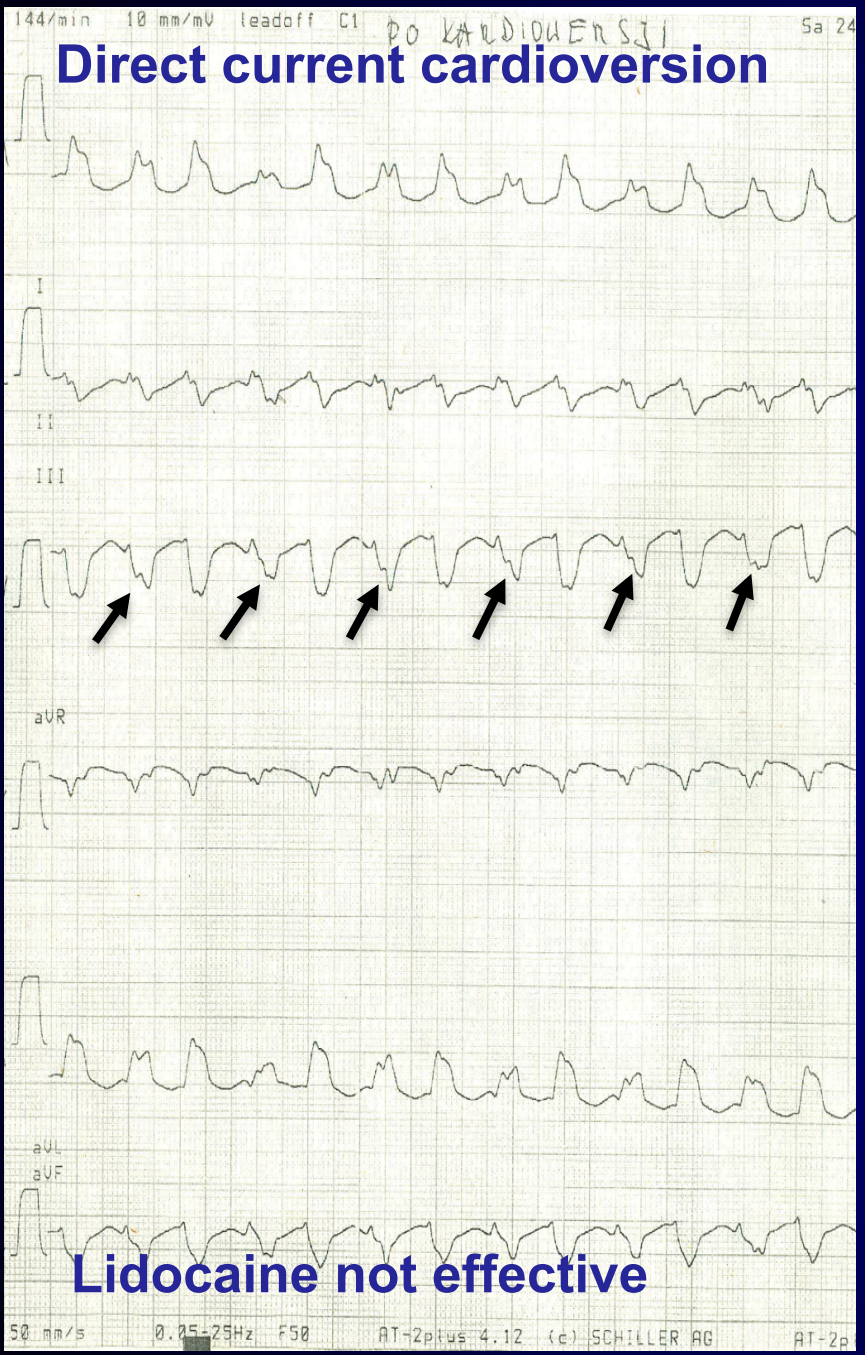
P.O.

Born from the first normal pregnancy by cesarean section with a body weight of 3500 g, as a healthy newborn

A age of 10 weeks he was admitted to his regional hospital due to dehydration from diarrhea and vomiting (infectious etiology probably), a week after was admitted again to the hospital because of vomiting. He was noted to have narrow and wide tachycardia from 140 to 300 bpm.

The infant was transferred to the nearest department of pediatric cardiology

He still had narrow and wide tachycardia from 140 to 300 bpm, with heart failure, echocardiographic left ventricular dysfunction was present



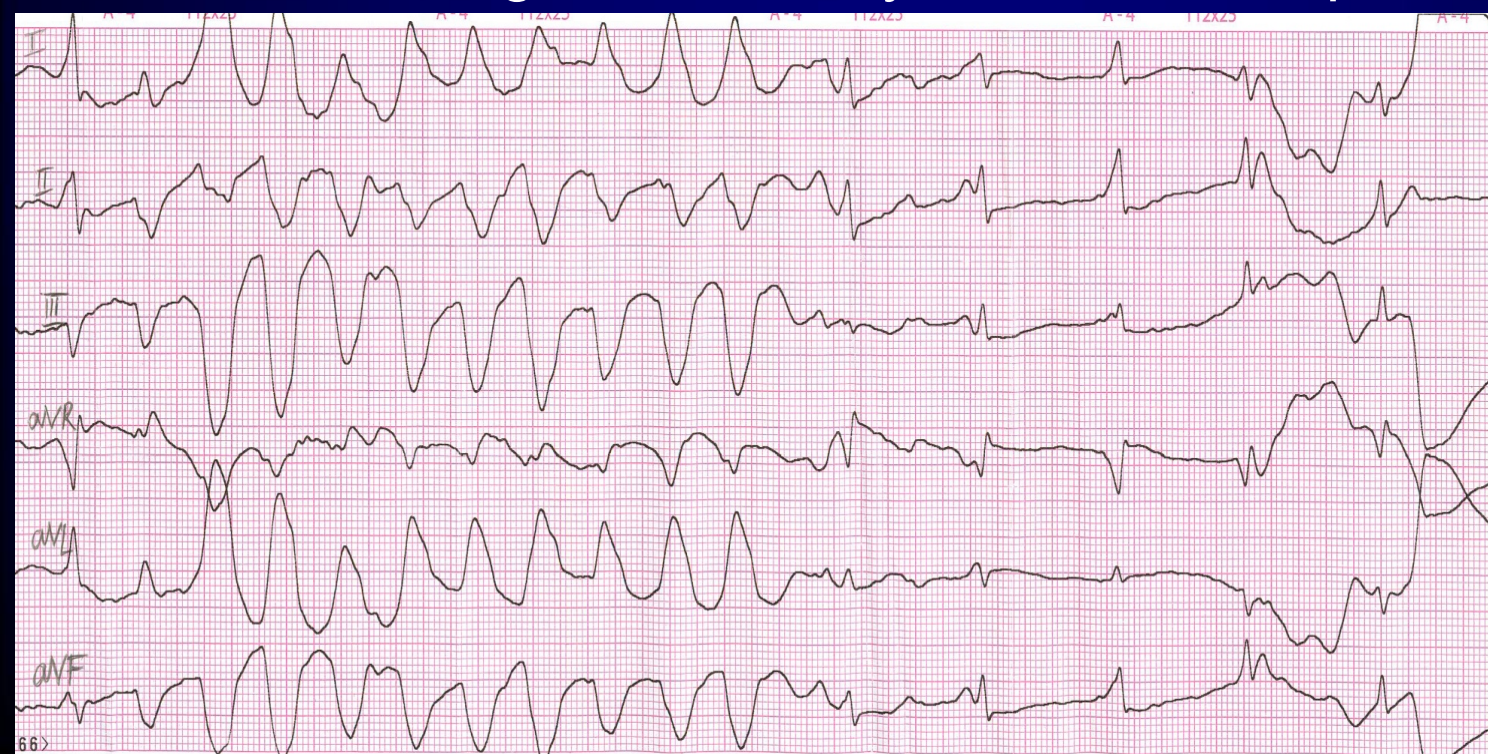
Lidocaine not effective

P.O.

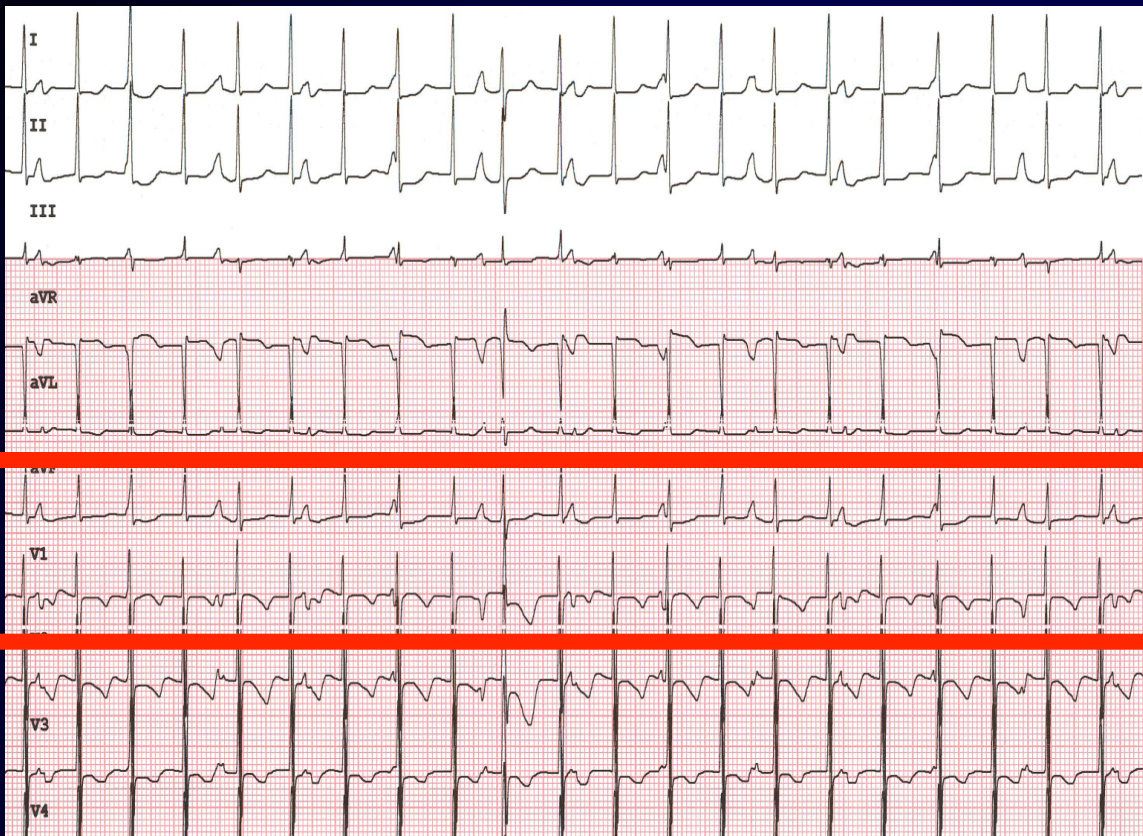
After one week on amiodarone and propranolol he was urgently transferred to our Cardiology Departement

Age 11 weeks, body weight 6,5 kg

At admition the infant restless, hemodynamically unstable, features of centralized circulation, liver + 4cm under the arch rib, irregular heart rhythm 120-300 bpm



ECG: JET with narrow QRS 120-140 bpm alternating with wide QRS tachycardia 250- 300 bpm.



P.O.

ECG

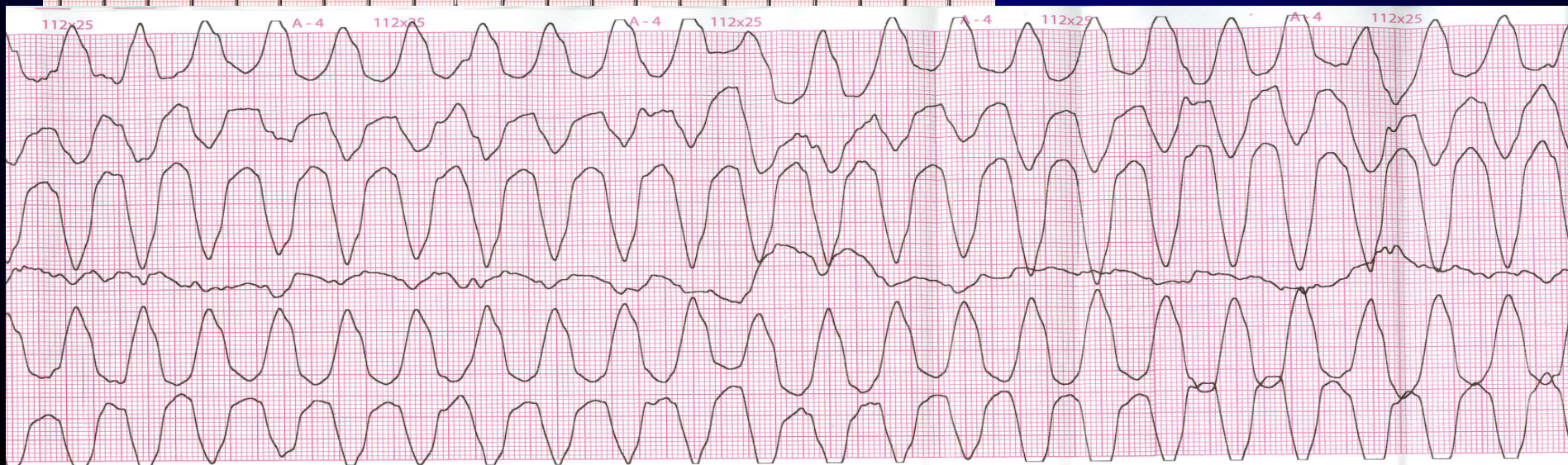
JET

P-P= 760 ms

R-R=440 ms

a-v dissociation

VT/VF R-R=480 ms



Patient Name: PIOTR

Recording Date: 2016-09-26

Patient No:

12:54:05 Couplet

(1 min HR = 168)

13:02:53 SVT HR = 289 bpm

(1 min HR = 251)

13:06:24 SVT HR = 289 bpm

(1 min HR = 255)

Patient Name: R

Recording Date: 2016-09-26

Patient No:

13:09:55 VT HR = 251 bpm

(1 min HR = 223)

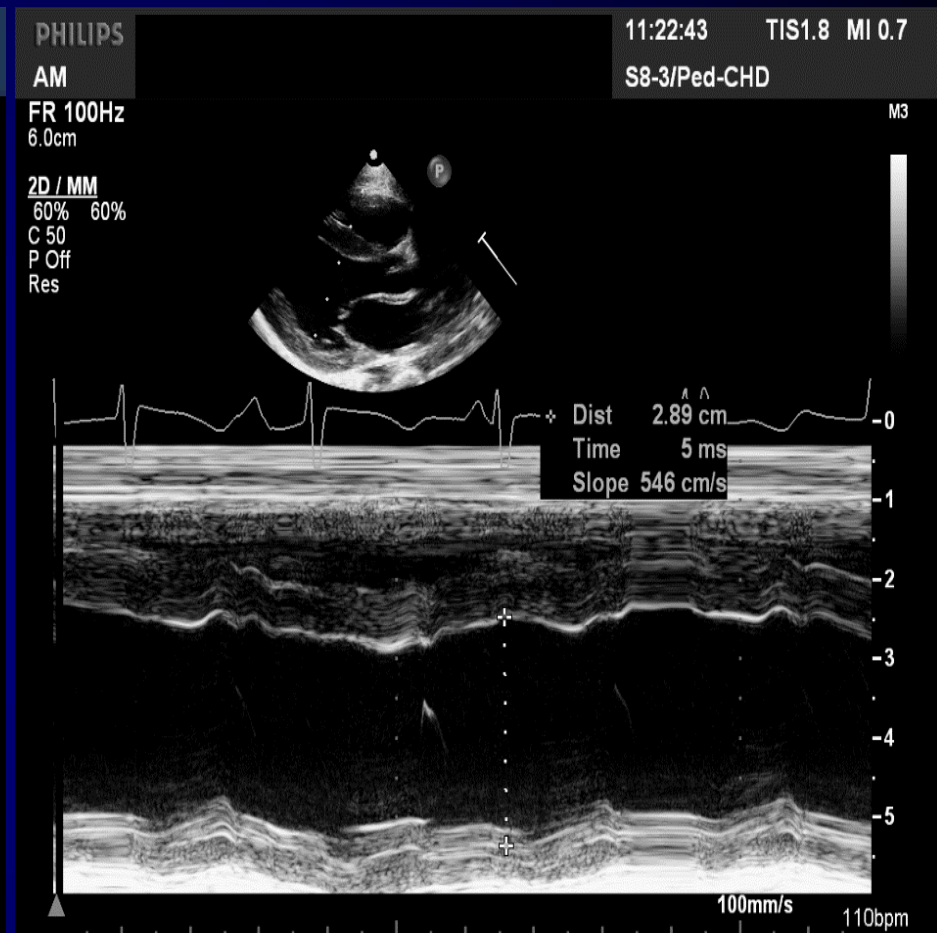
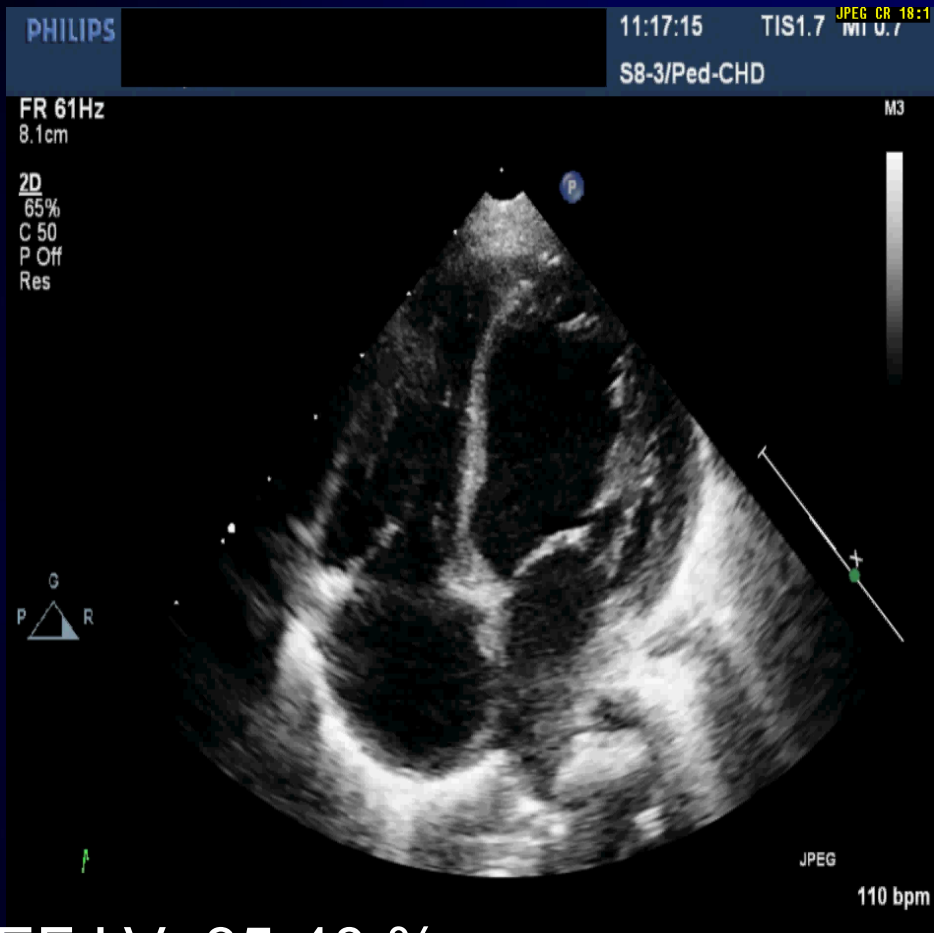
13:24:42 VT HR = 168 bpm

(1 min HR = 184)

13:36:45 VT HR = 135 bpm

(1 min HR = 199)

ECHO at addmition



EF LV=35-40 %

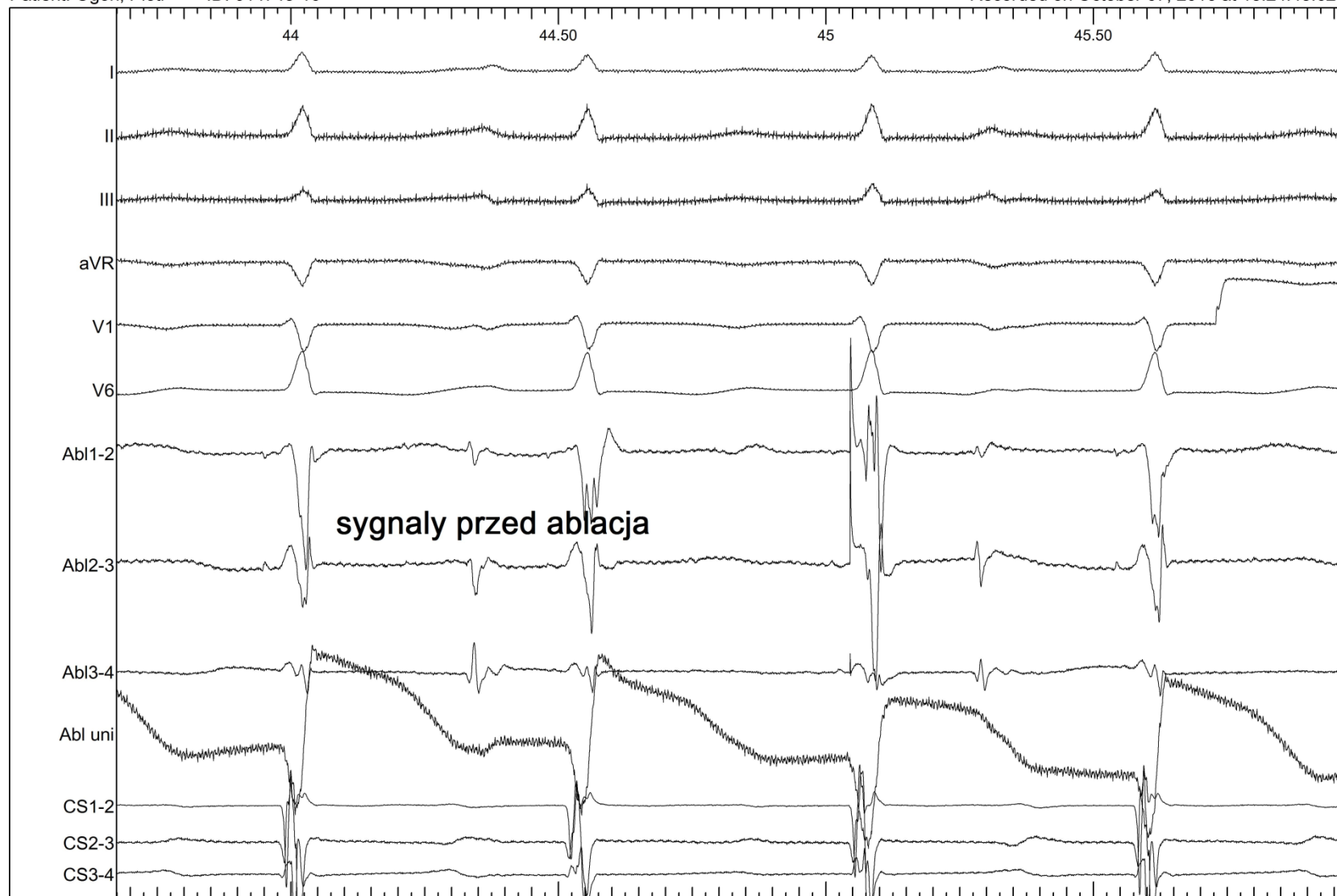
Because of electrical storm the infant was urgently transferred to the Intensive Care Unit for cooling and sedation
He was on propranolol

Because of increasing symptoms of heart failure and no effects of therapy we decided to do ablation – high risk procedure in the clinical state of the infant

EnSite system was used,

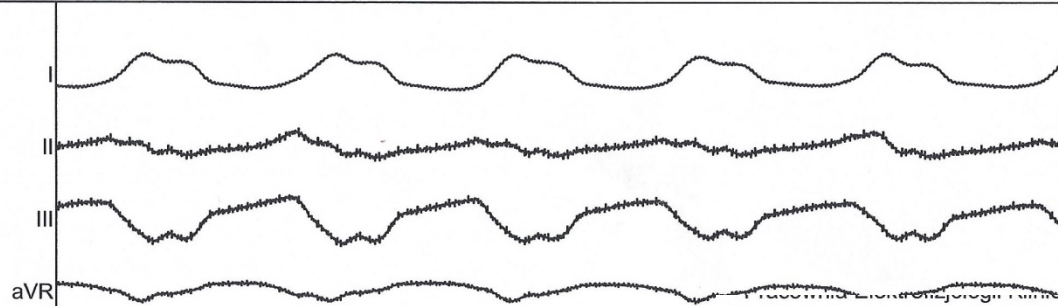
Diagnostic catheter 5F was inserted by jugular vein,
ablation 5F by femoral puncture

From the beginning of the procedure we had JET
115 to 210 bpm transversed wide QRS tachycardia.
It was induced by any pacing and spontaneously,
External defibrillation was used 2 x

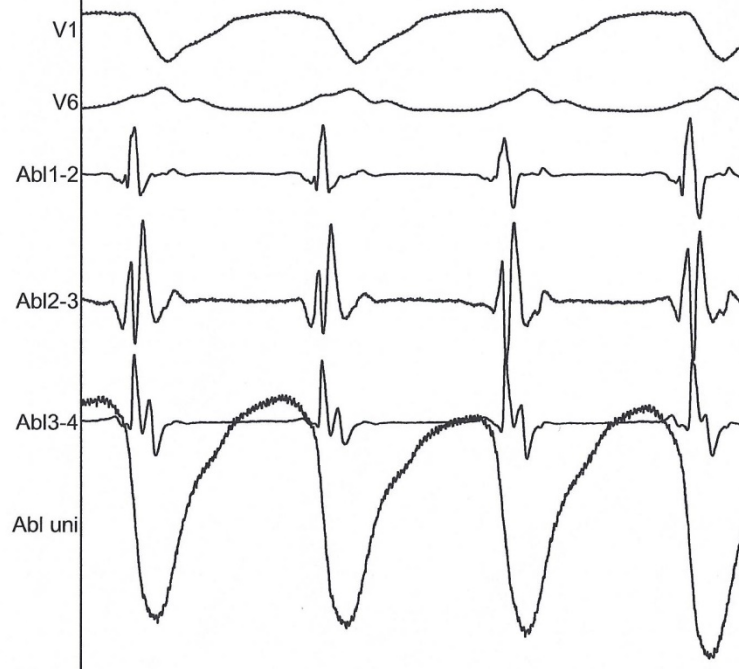




Recorded on October 07, 2016 at 13:17:57.576



Recorded on October 07, 2016 at 13:31:40.792



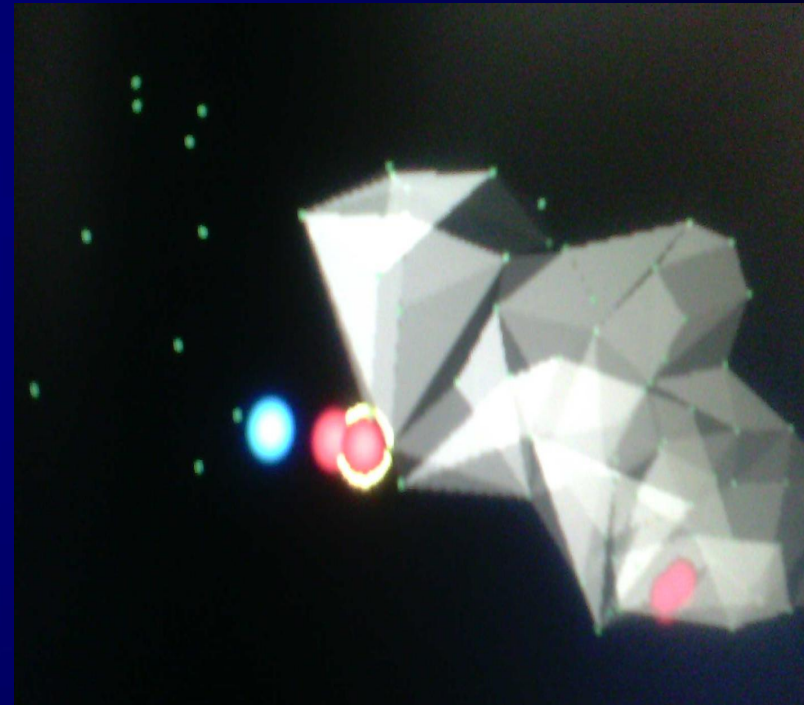
2 applications in RV were non effective

The first ablation proximal to His potential 10 sek slowed JET rate, we did the socond application in this place 60 sek power 30 W, temperature 55°C

Tachycardia stoped,
junctional bradycardia occured
Pacing of RV, then atrial was used.
VT was not induced

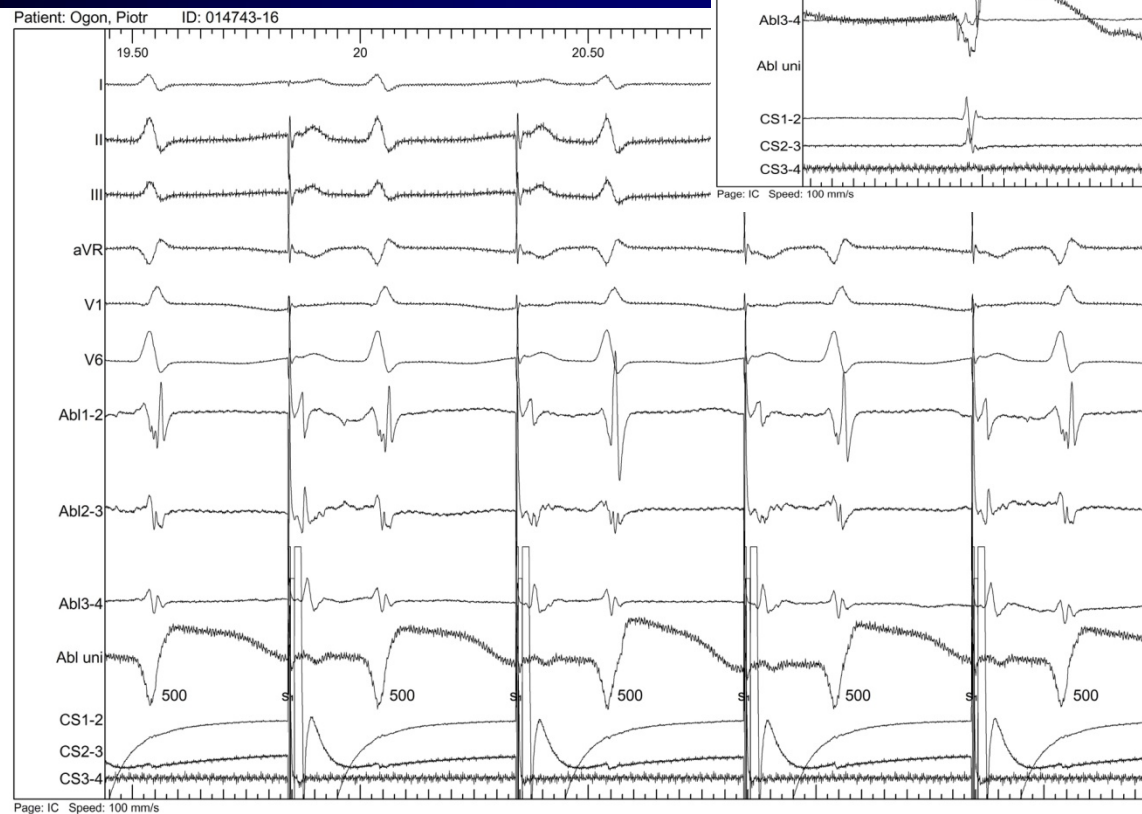
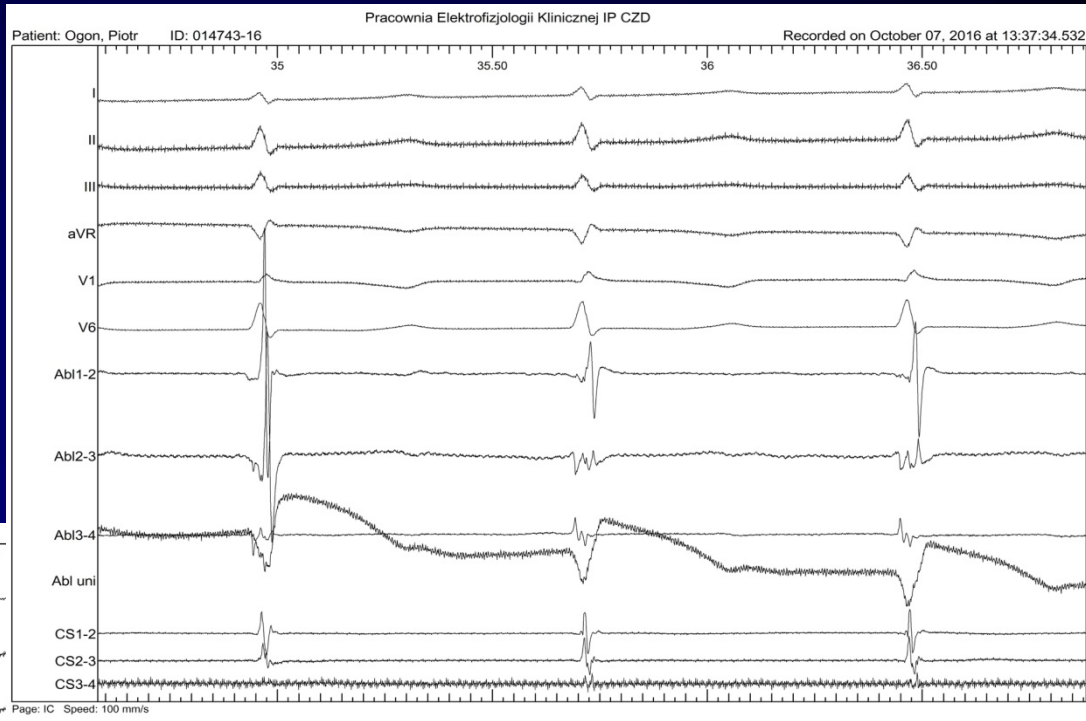
External pacing lasted 3 hours
then was slowed - we have
sinus rhythm

Propranolol was given



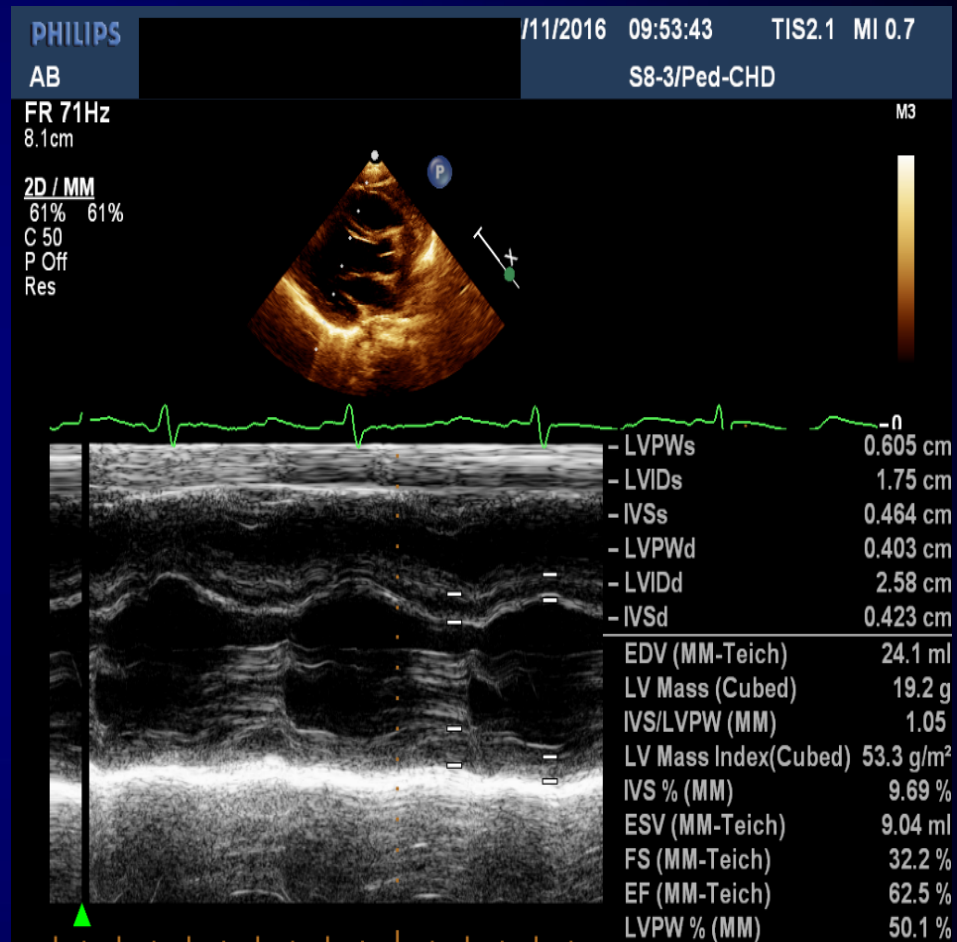
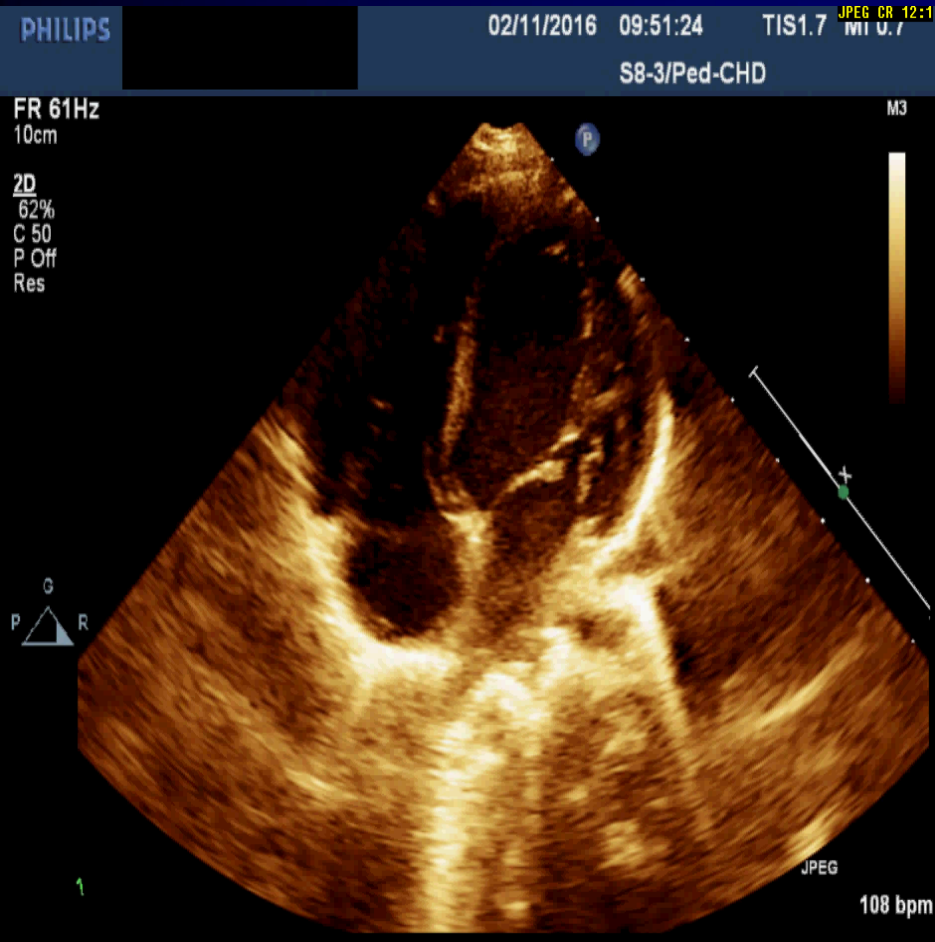
P.O.

Post ablation



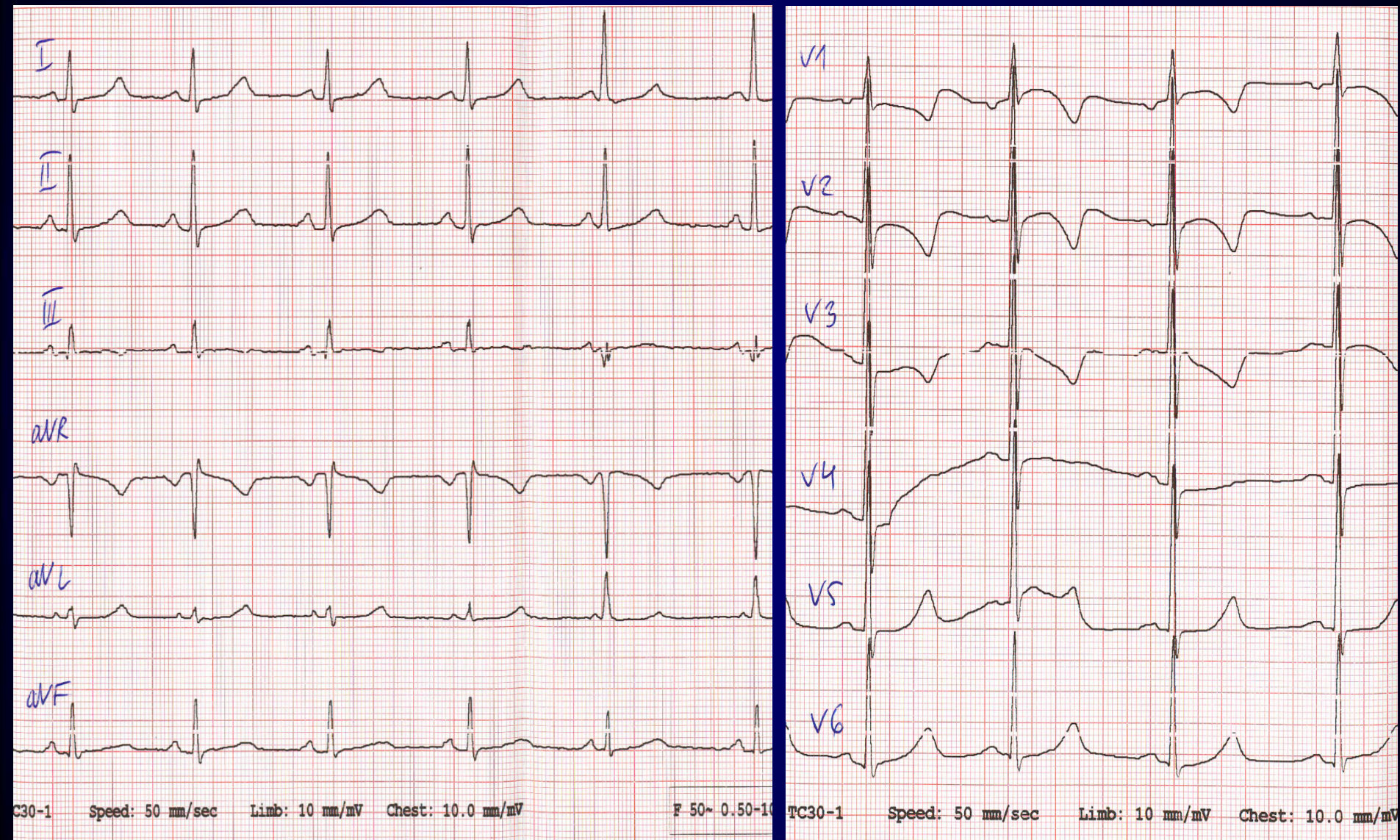
Atrial pacing

ECHO post ablation

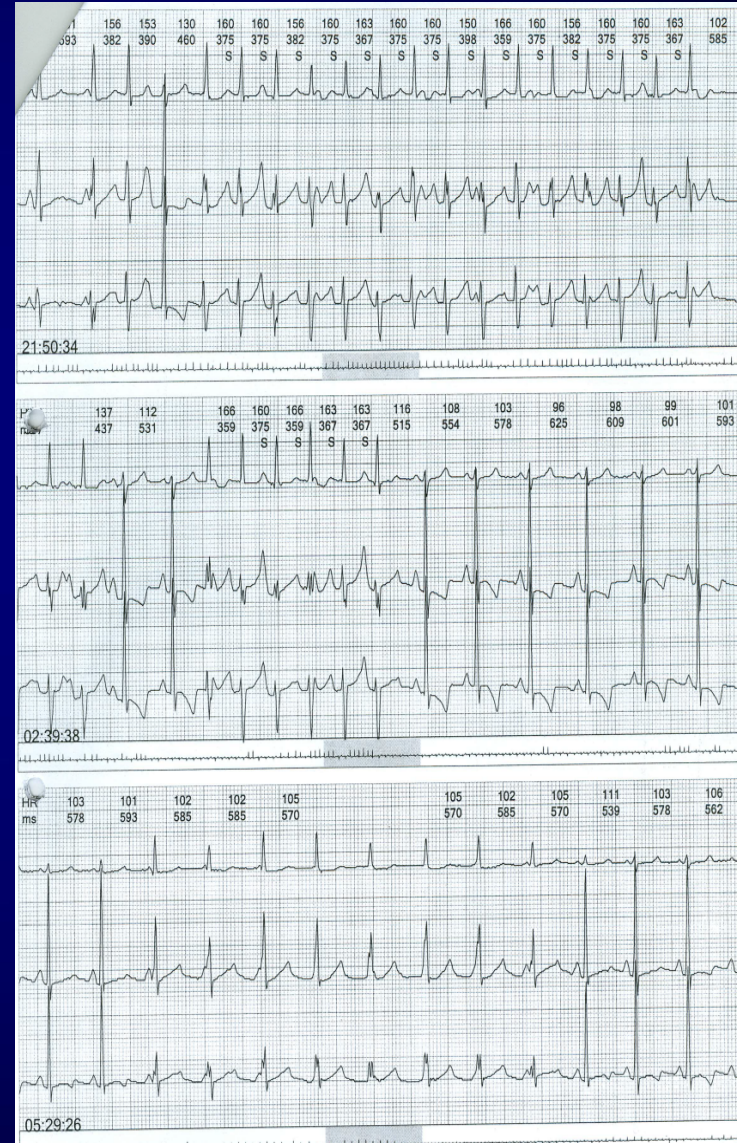
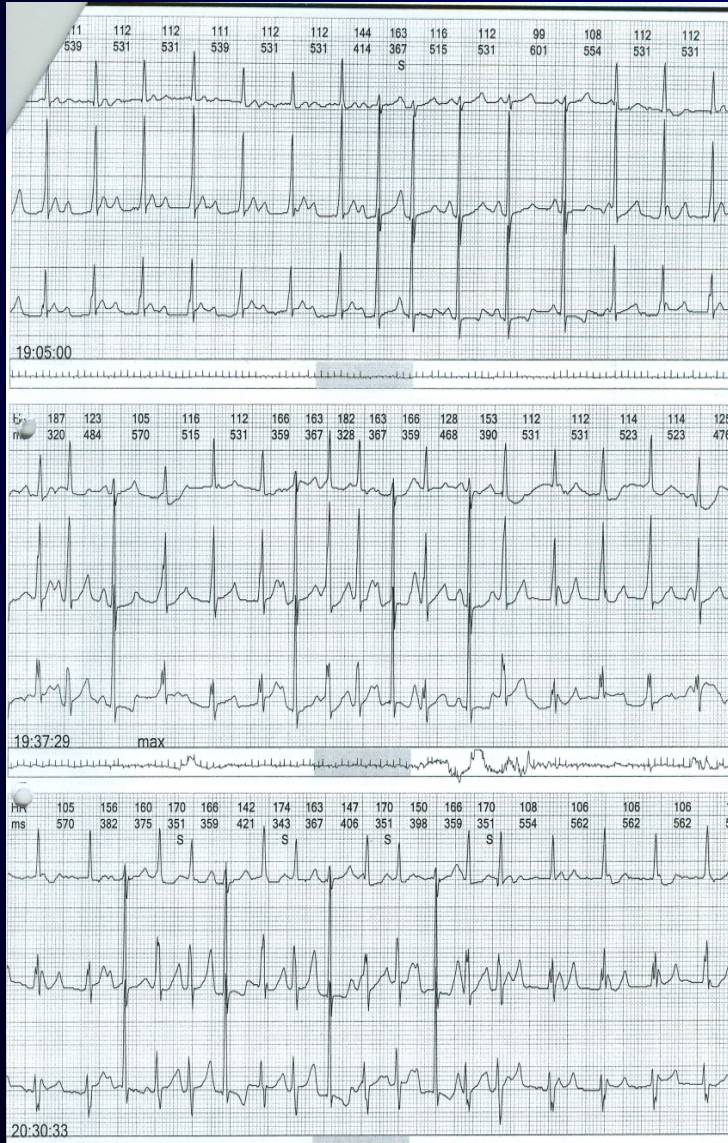


Normal size of LV, %SF= 33, EF LV= 63%

ECG post ablation



Holter ECG post ablation on propranolol, propafenone was added



Holter ECG 2 months post ablation

