A difficult case of AVNRT/WPW

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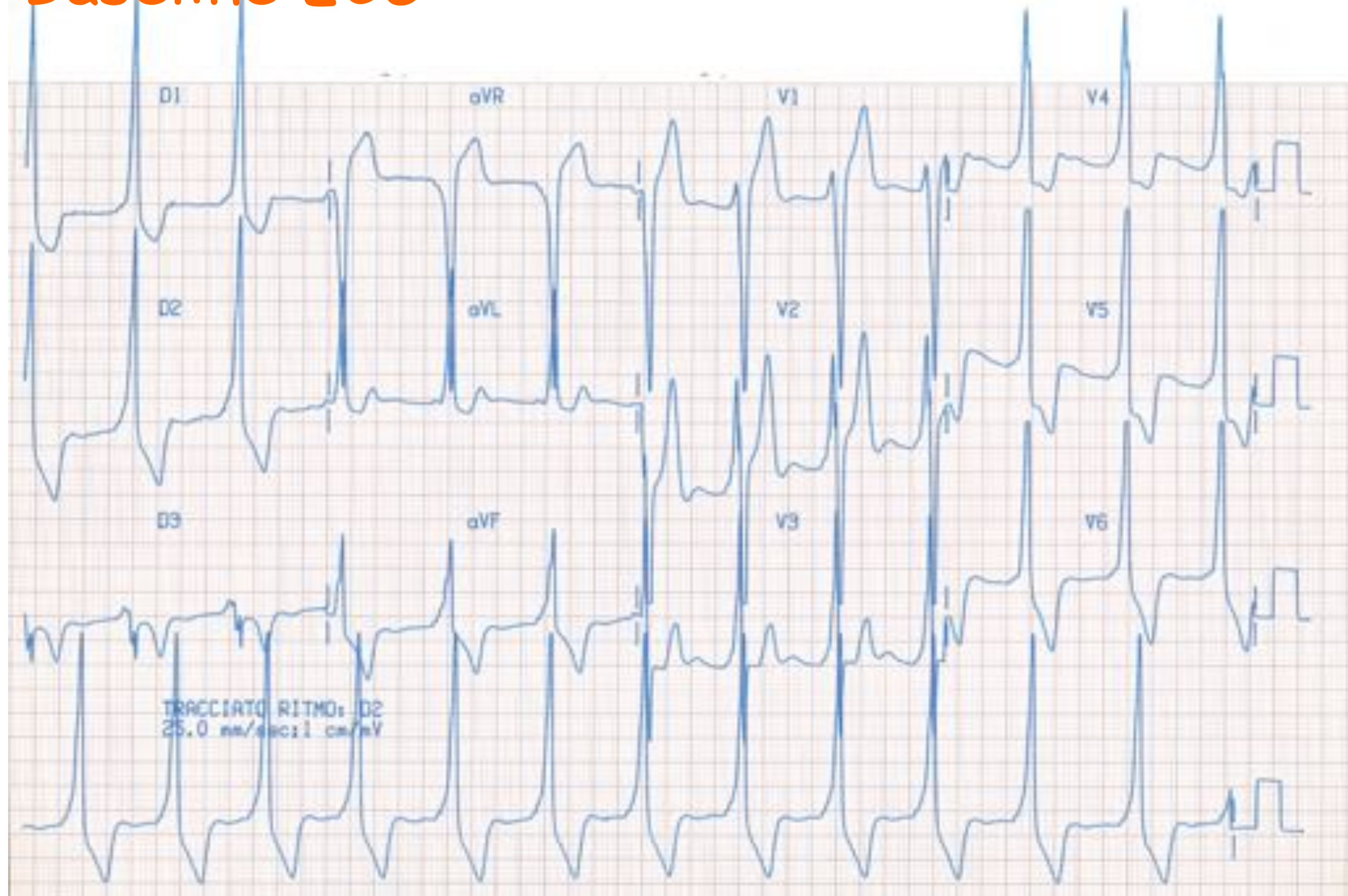
Conflict of interest disclosure

-Biosense Webster: lecture and consultancy fees
-Boston Scientific: lecture fees
-Sorin: lecture fees
-Bayer: lecture fees

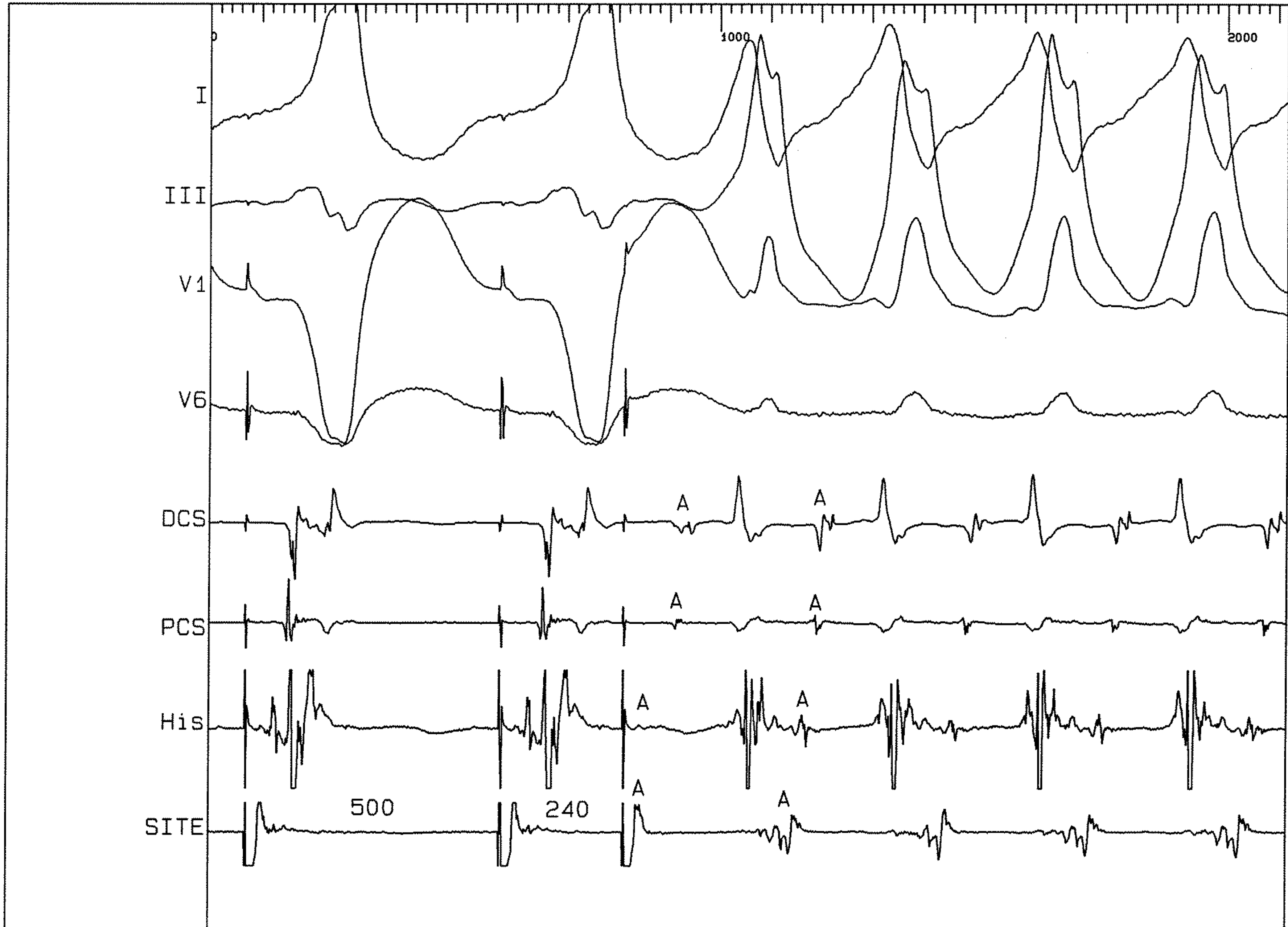
My most challenghing WPW case

- 23-year-old male
- Hypertrophic cardiomyopathy
- ECG: right ventricular pre-excitation
- Symptomatic wide complex tachycardia
- Recurrences on propafenone and on amiodarone
- Referred for electrophysiologic evaluation in January 1993 (University of Pavia, Pavia, Italy)

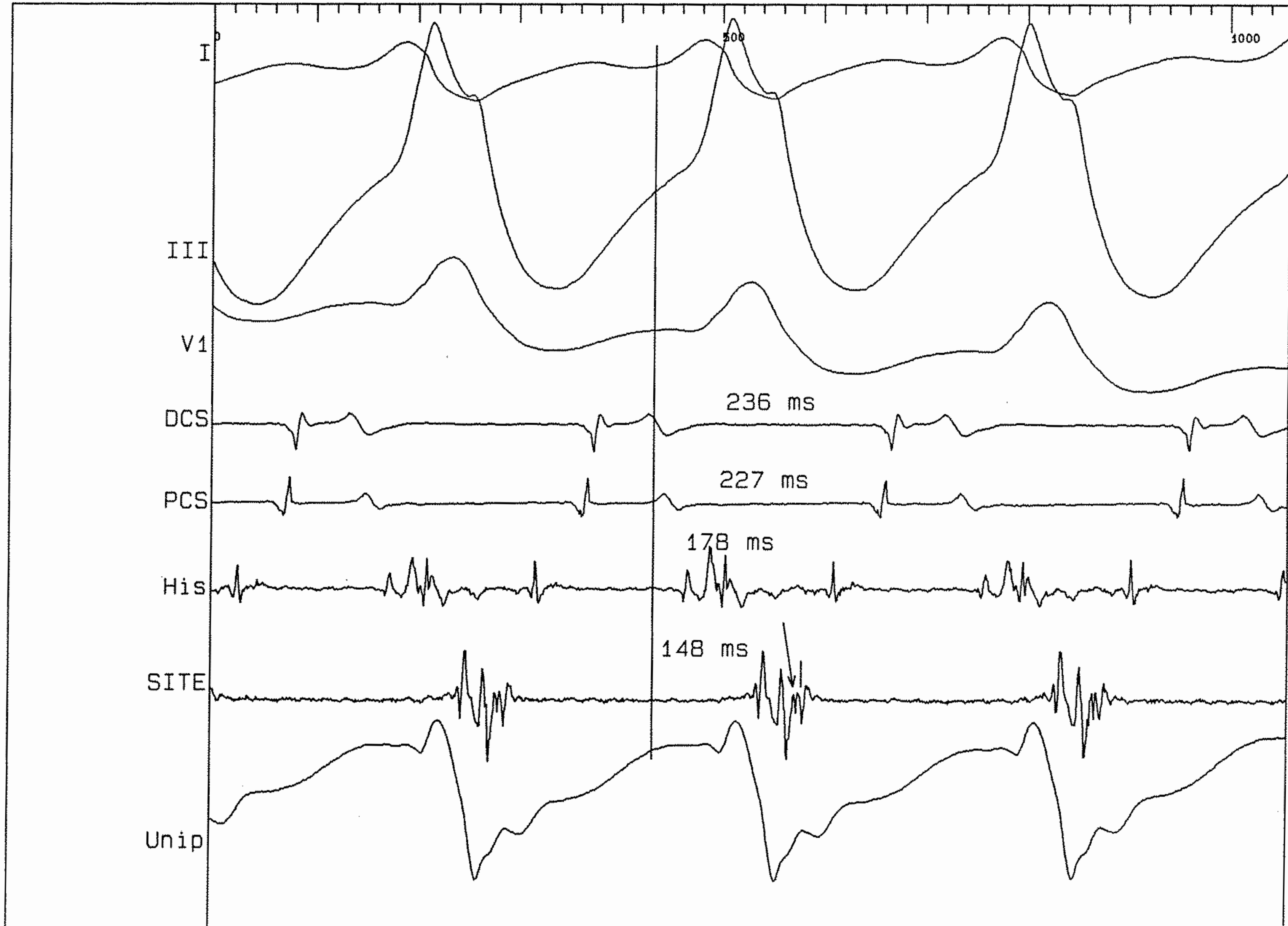
Baseline ECG



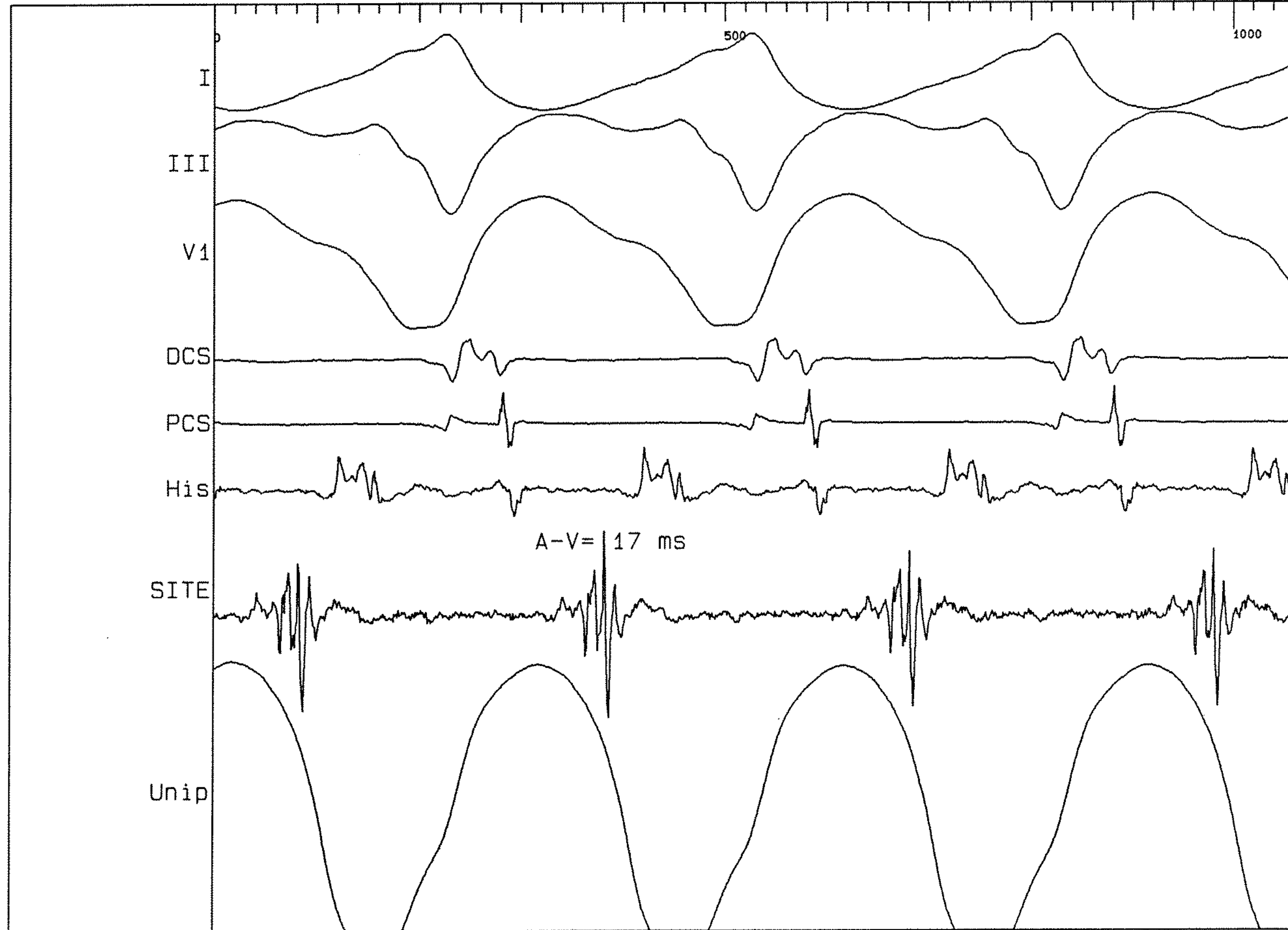
EPS: arrhythmia induction



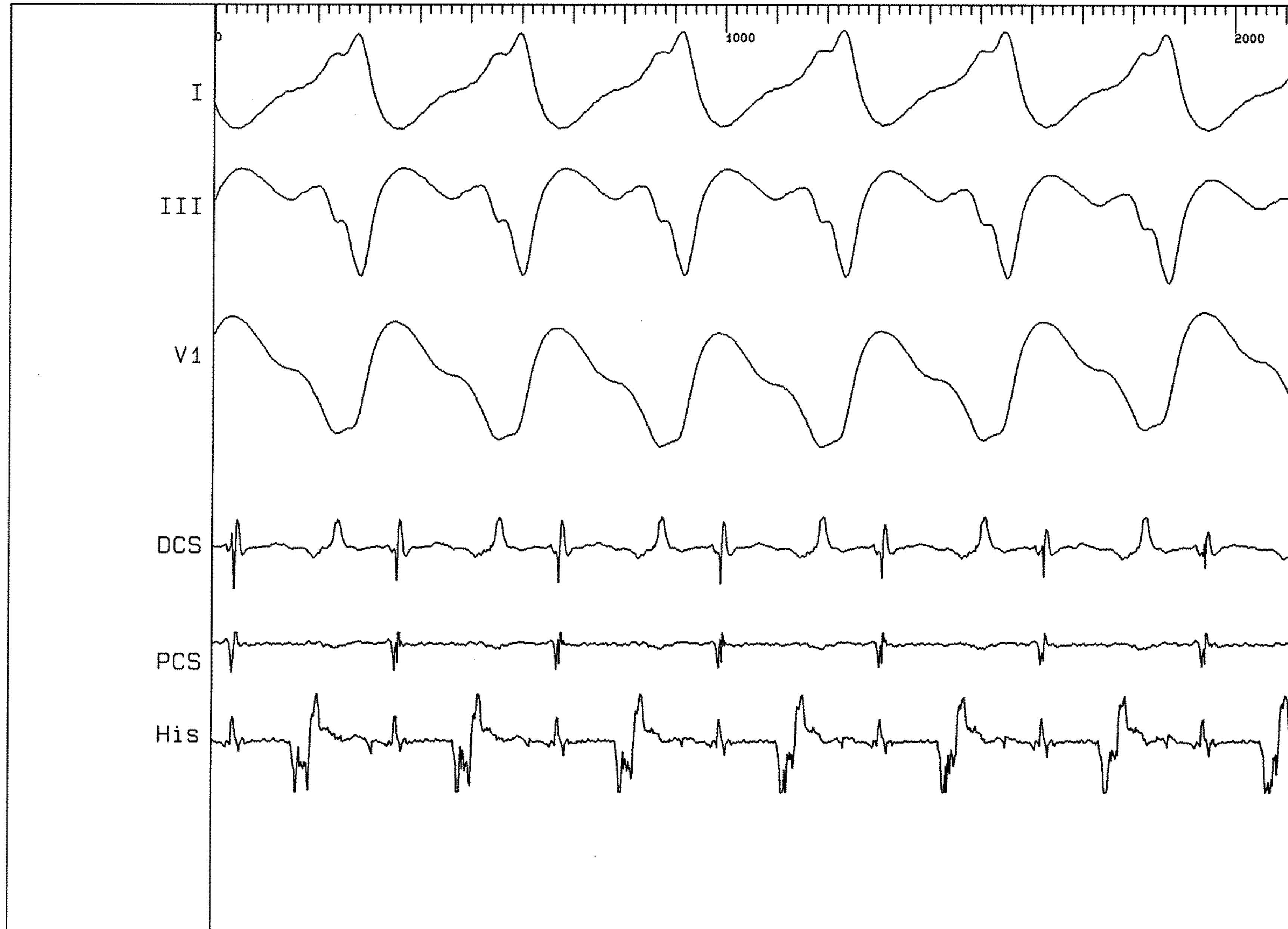
Antidromic AVRT (↓ left, ↑right): TCL 295 ms



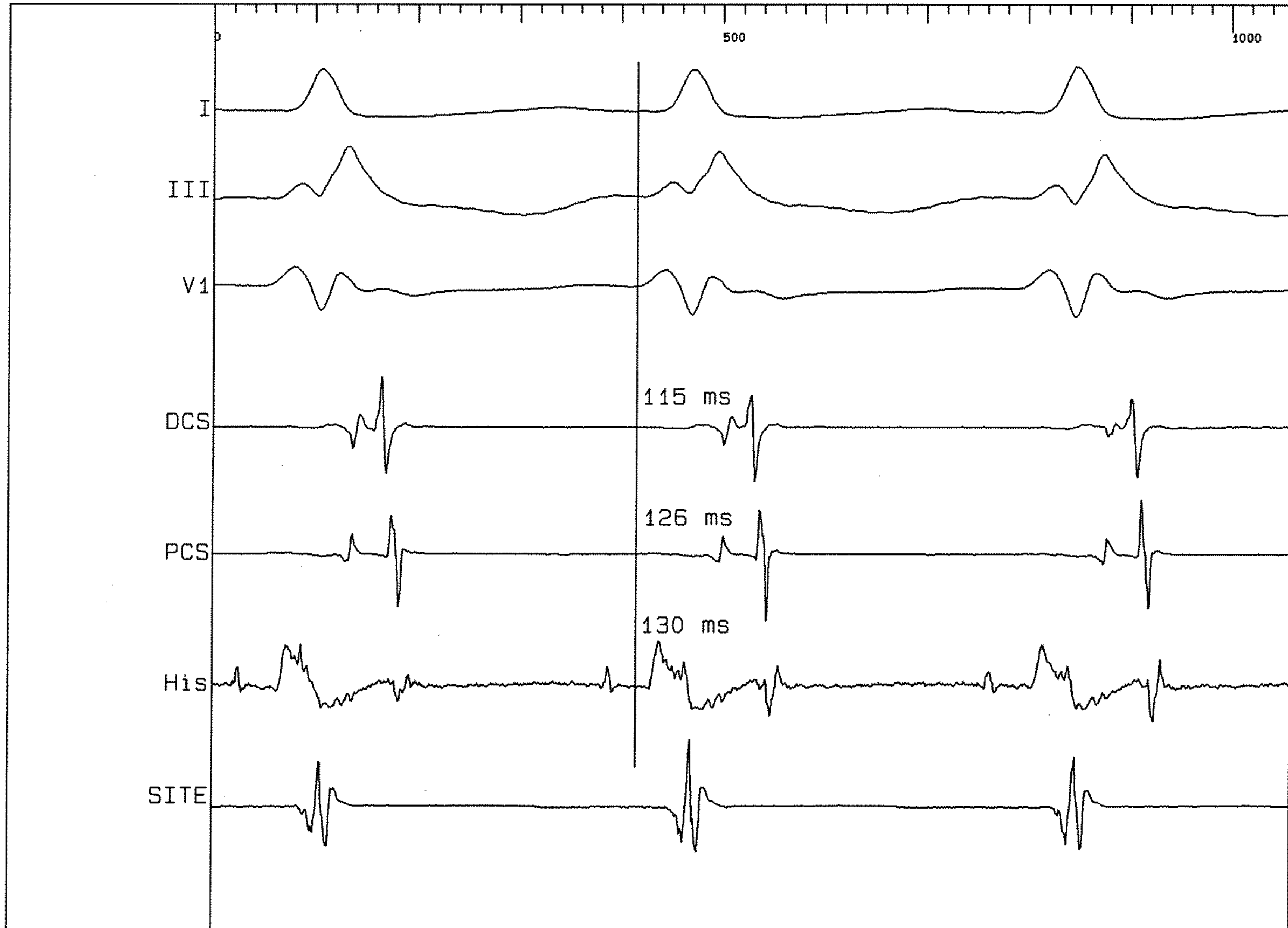
Antidromic AVRT (↓ right, ↑left): TCL 300 ms



Antidromic AVRT (↓ right, ↑AV node): TCL 320 ms



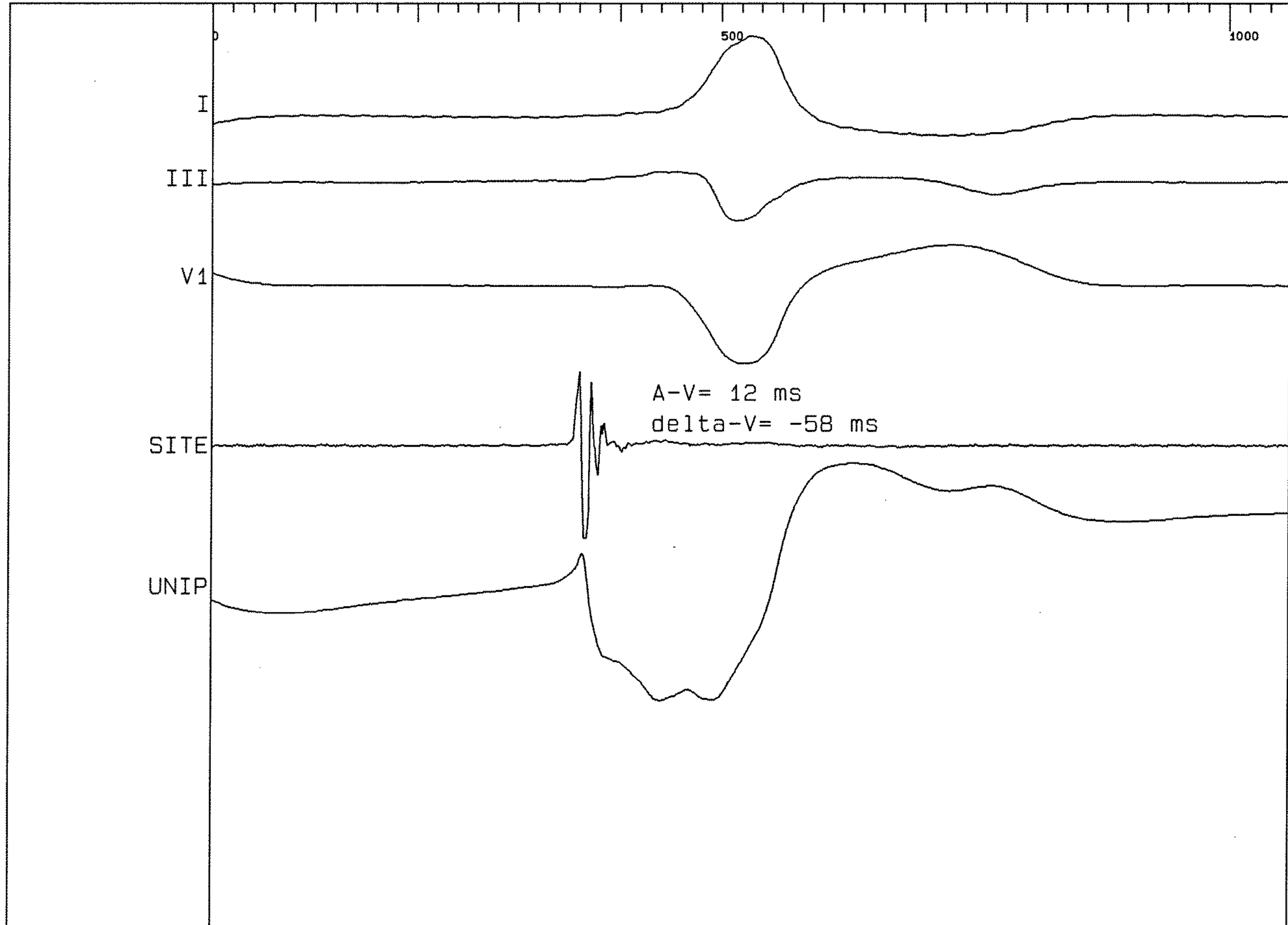
Orthodromic AVRT (↓ AV node, ↑left): TCL 370 ms



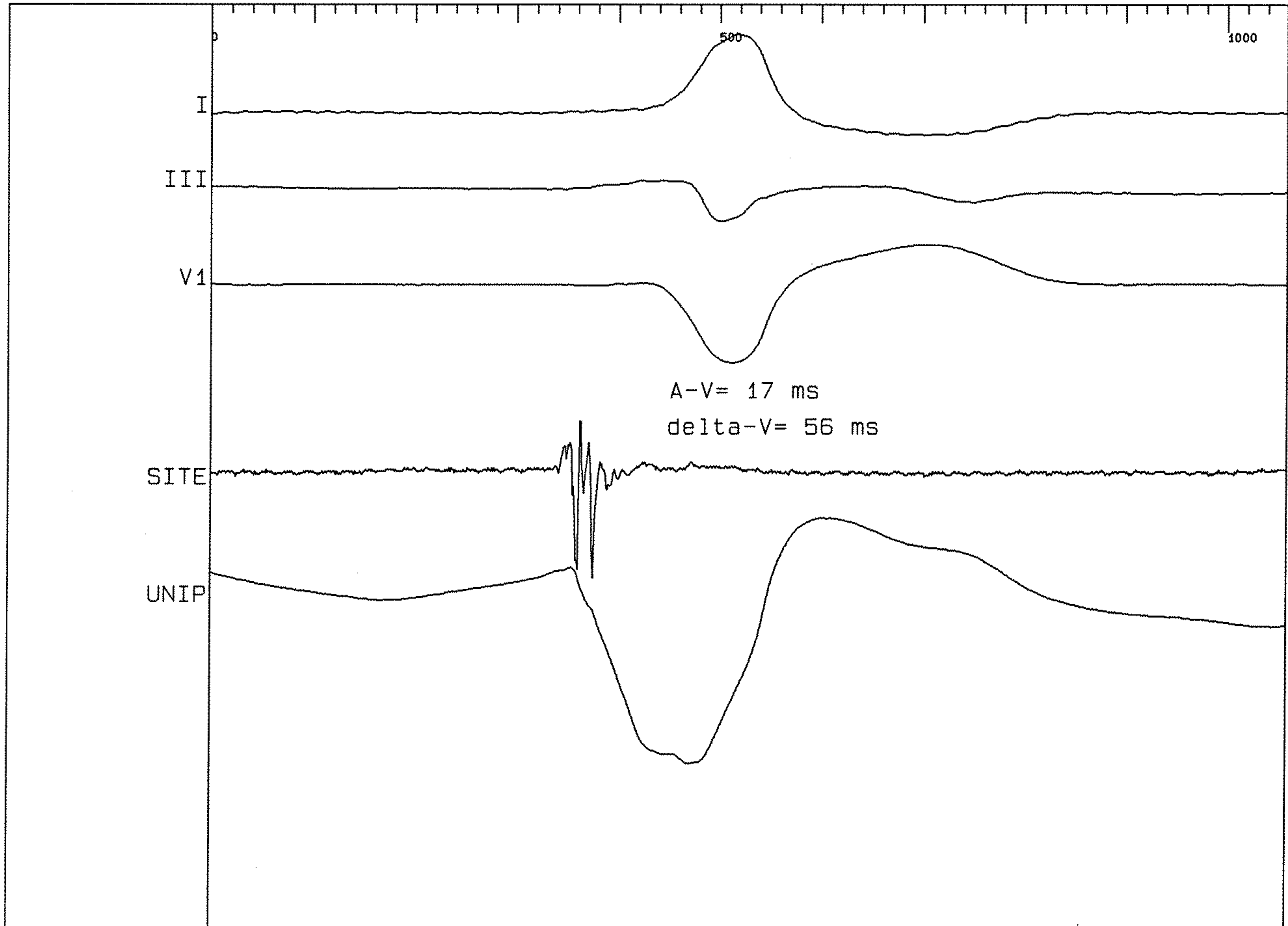
Ablation procedures - techniques

- September 1993, February 1994, January 1995
- In the same period, 402 pts underwent AP ablation
- 4 mm tip catheters
- Power (1st) and temperature (2nd, 3rd) control mode (up to 75 Ws)
- Approach to the R-AP: IVC, SVC, long sheaths
- .Approach to the L-AP: transseptal and transaortic

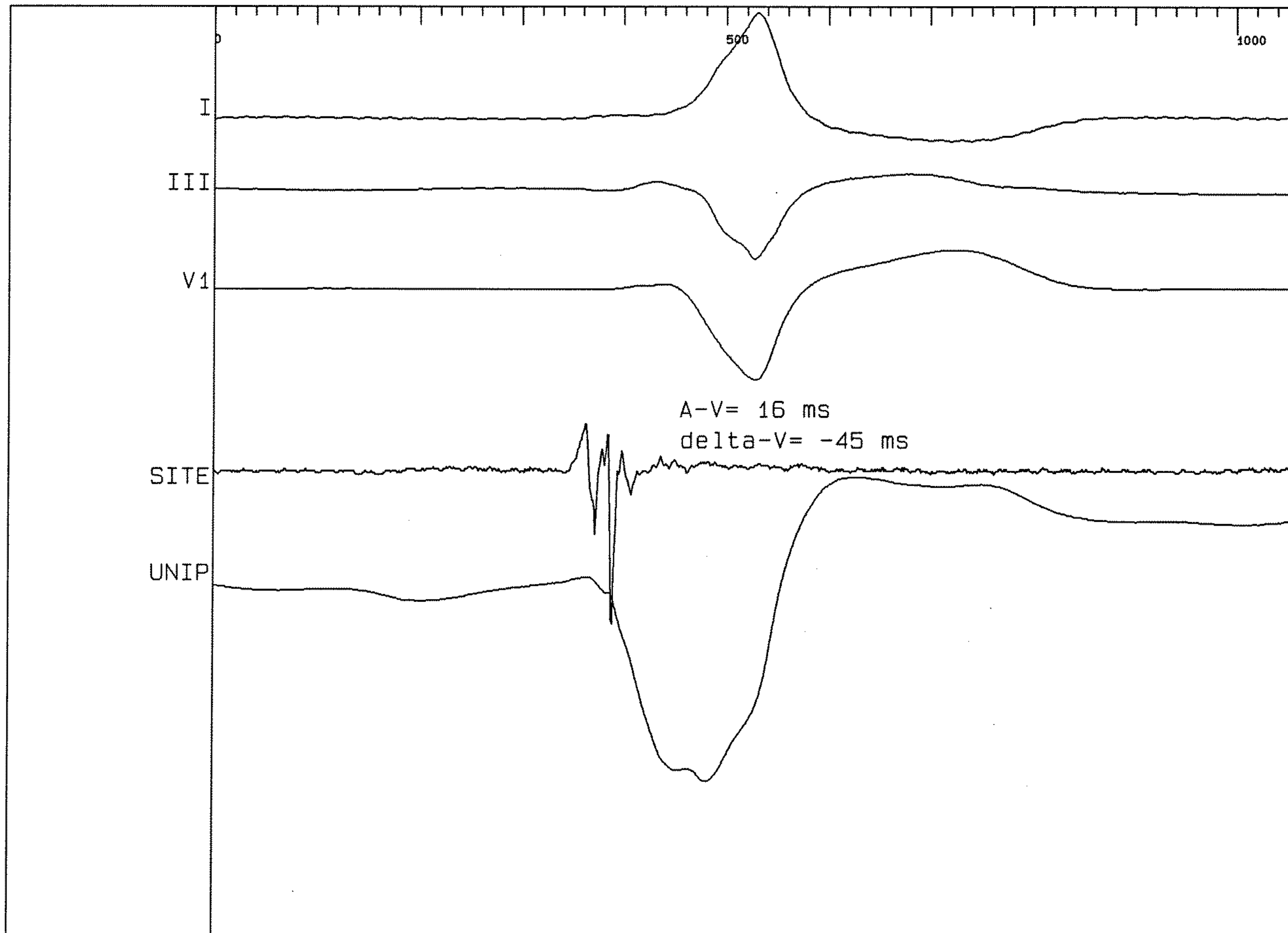
Tricuspid annulus mapping during SR



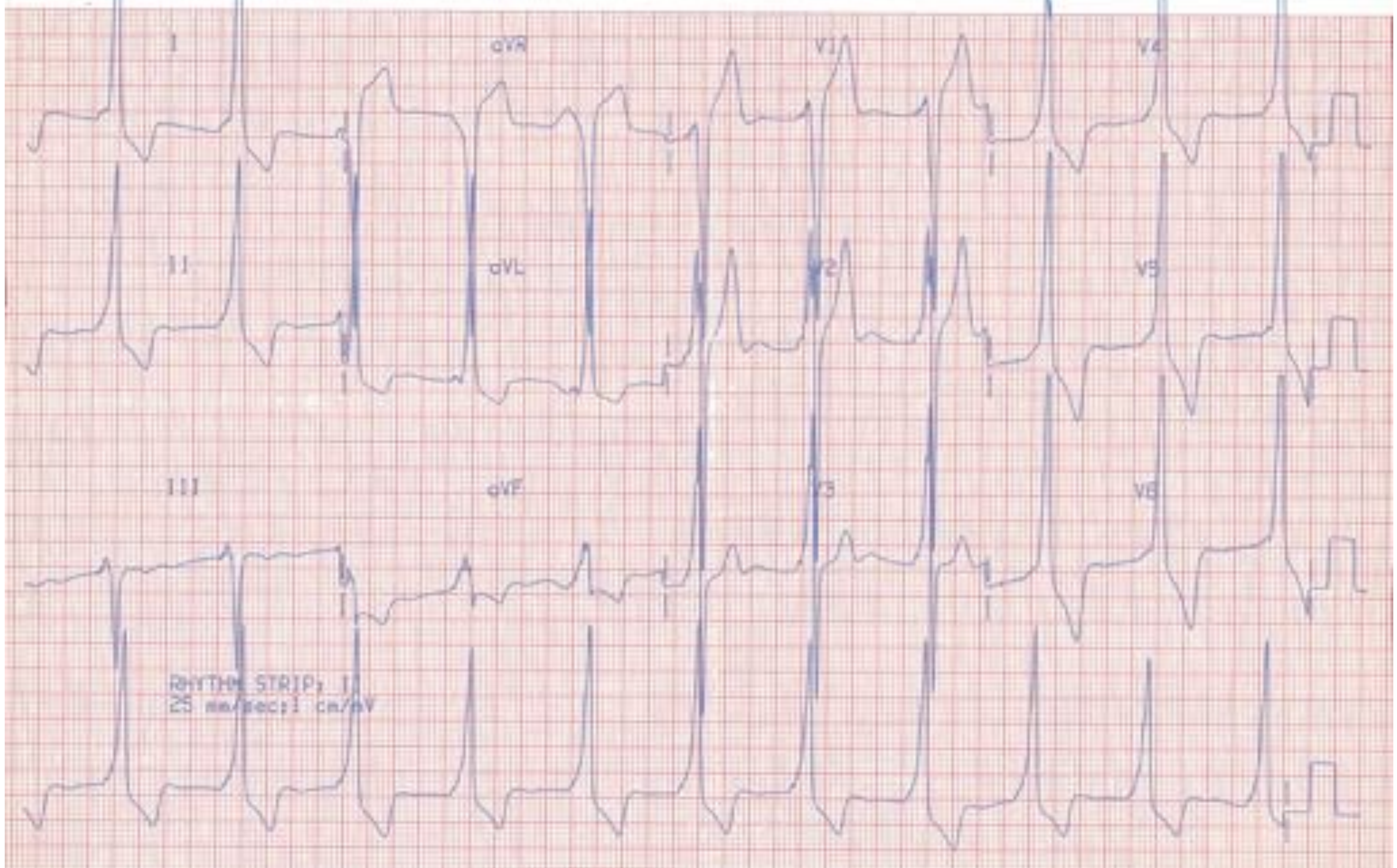
Tricuspid annulus mapping during SR



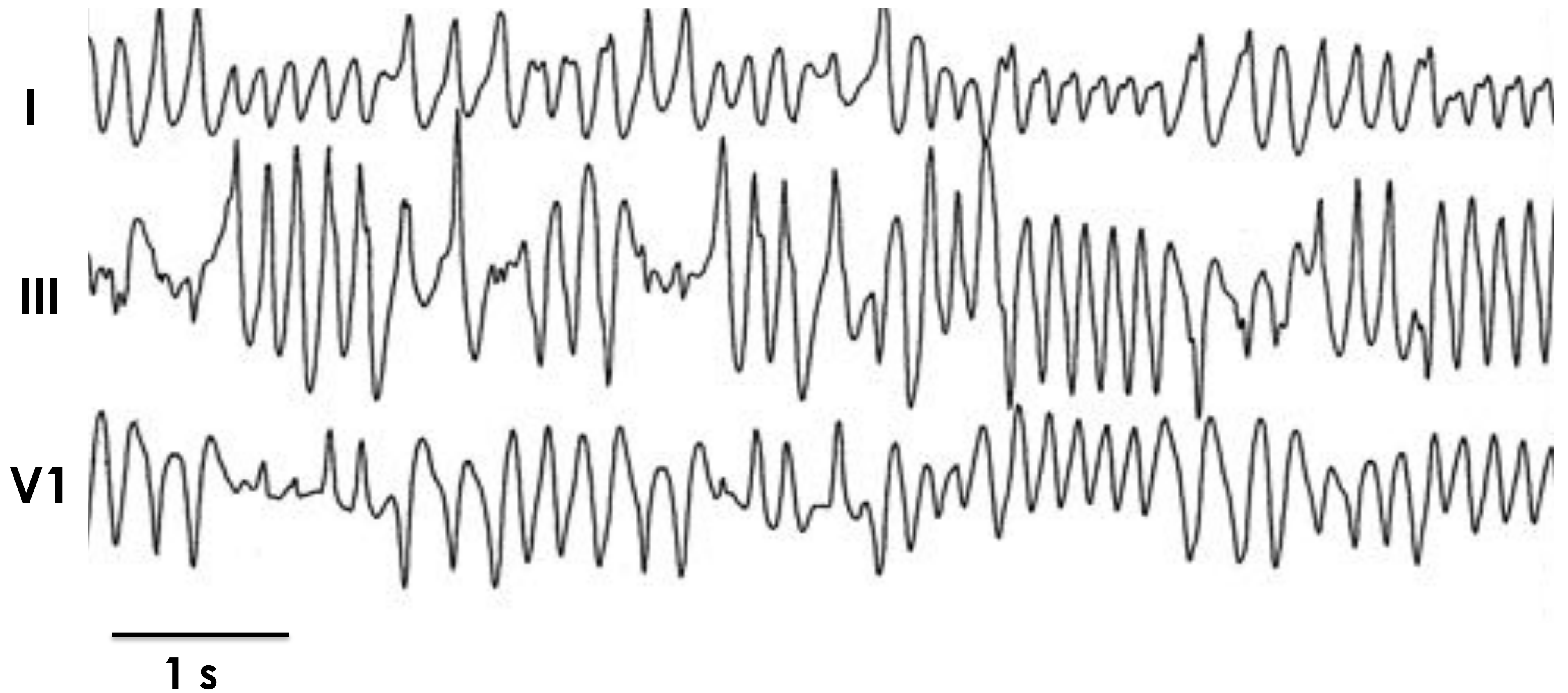
Tricuspid annulus mapping during SR



Baseline ECG after 3 EP procedures



Pre-excited AF over right and left APs



Surgery for WPW syndrome

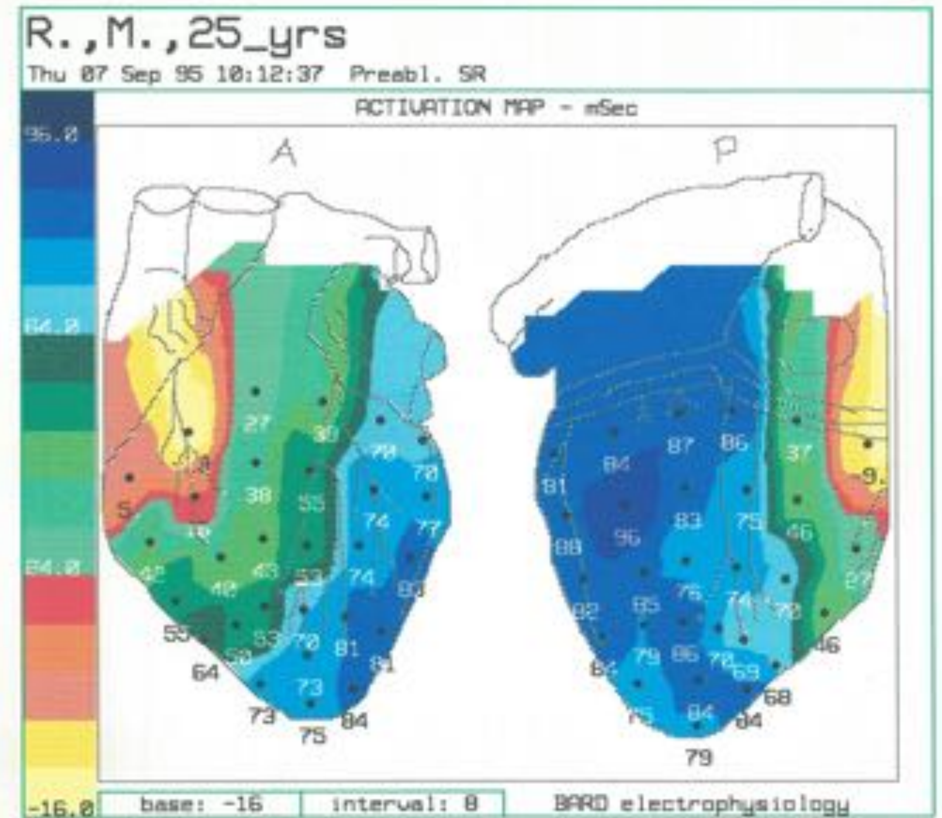
- From 1985-1992: 152 pts
- Preoperative mapping
- Intra-operative computerized mapping (Bard Cardiac Mapping System)
- Continuous intraoperative monitorization (epicardial wires in RV, RAA, LAA for PES)
- Off-pump epicardial AV groove dissection with cryoablation (Guiraudon's technique)

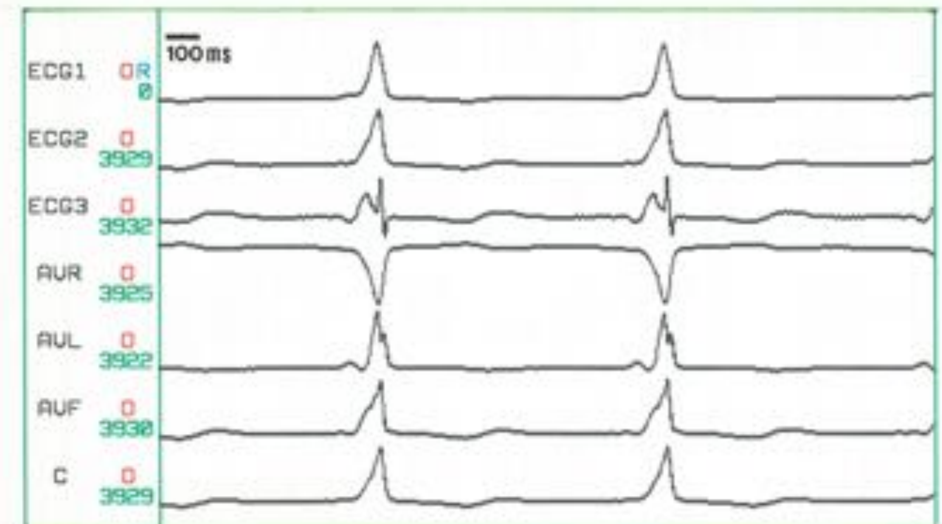
Intraoperative mapping

•Multielectrode array on the ventricular mass

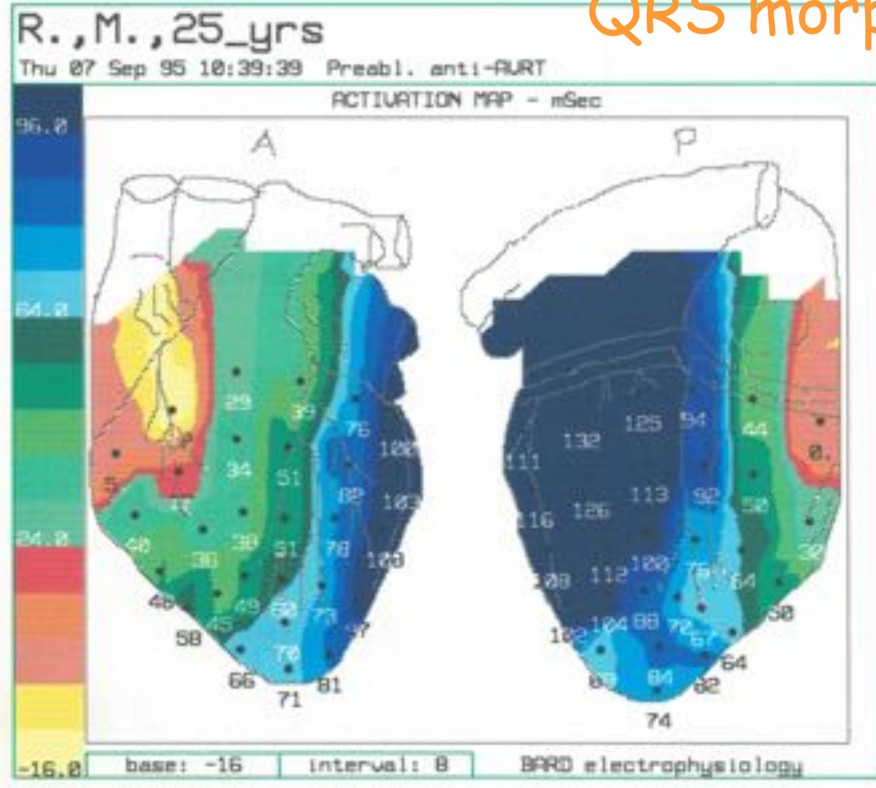
•Mapping of the ventricular pre-exctation (delta wave onset as reference)

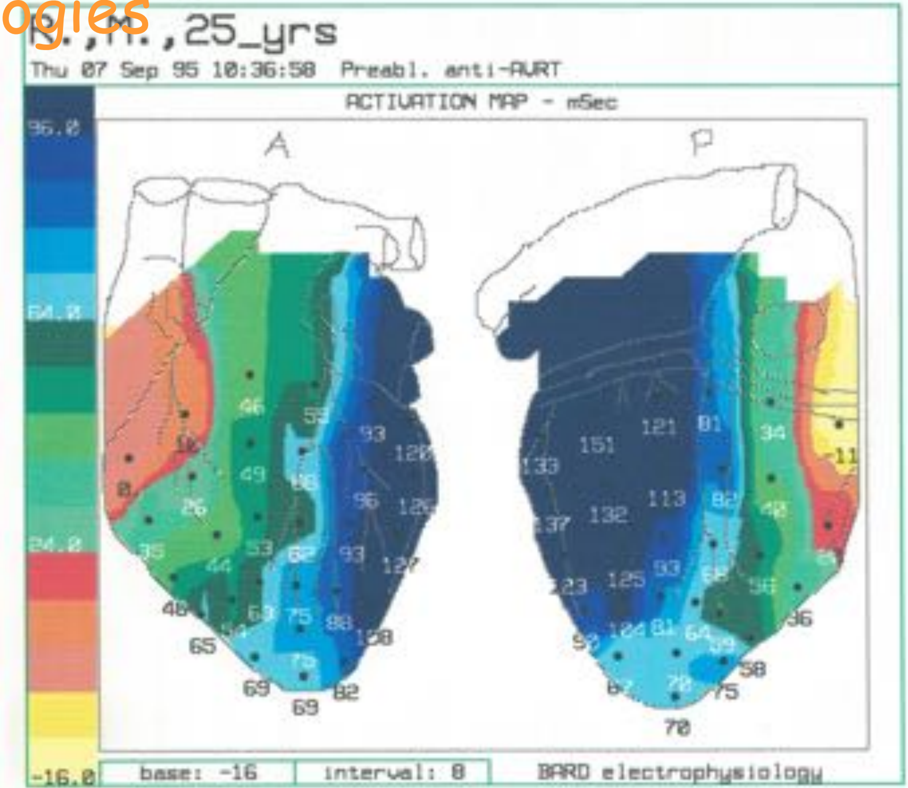
•During SR and induced arrhythmias

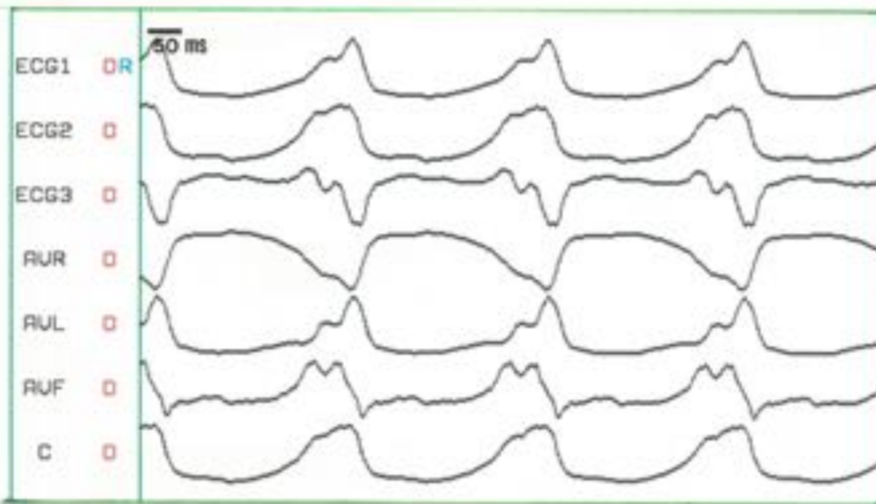


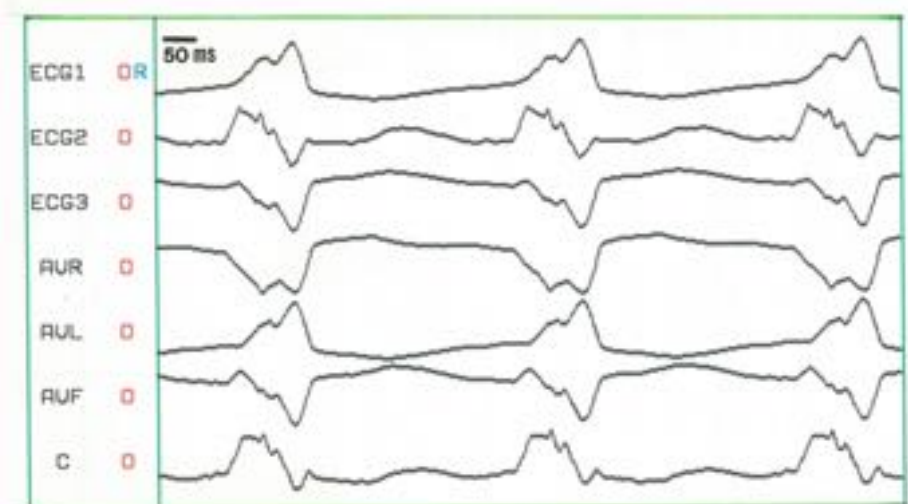


Multiple component of the right AP during anti-AVRT with different QRS morphologies

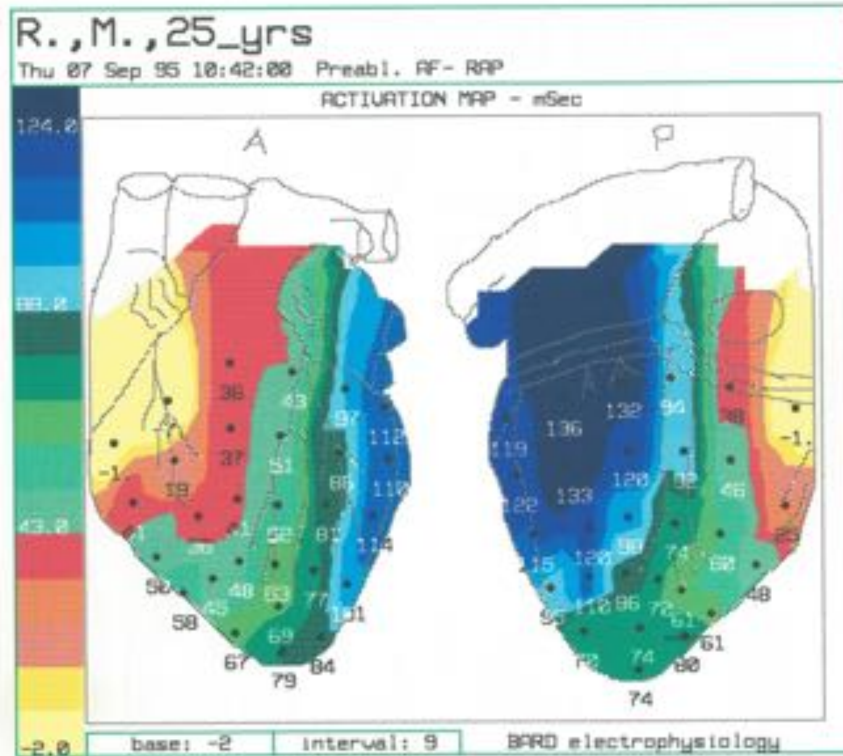


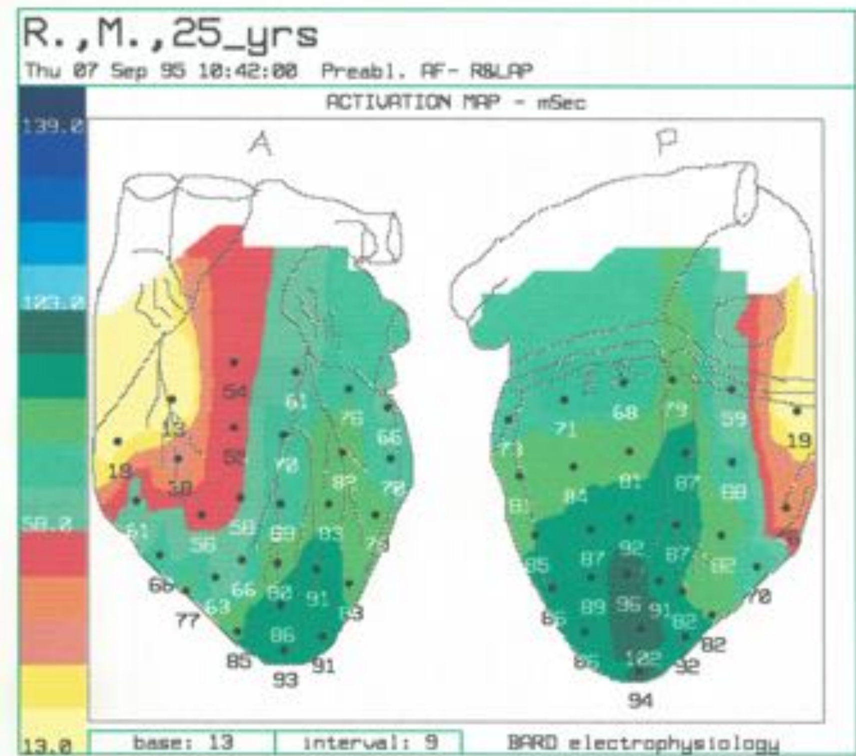


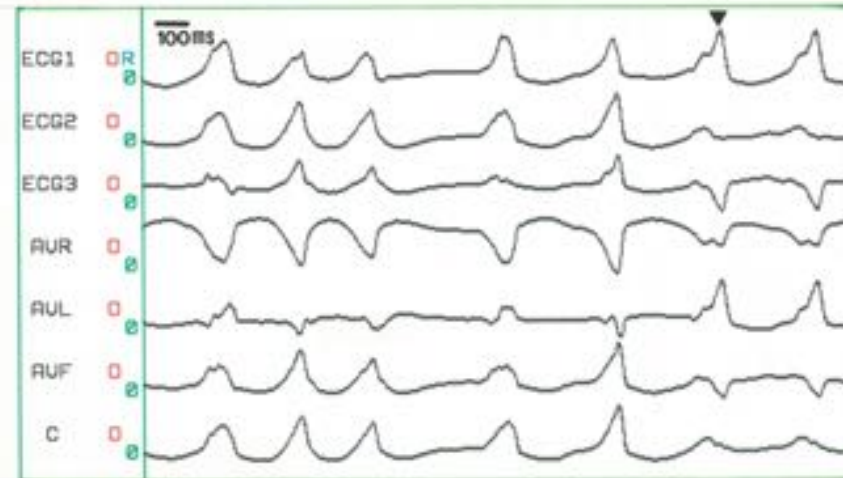


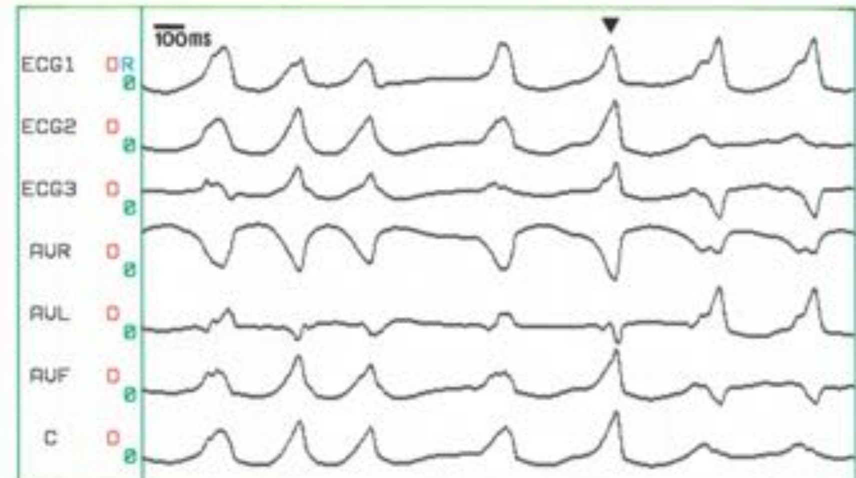


Wide wavefront of ventricular pre-excitation during AF

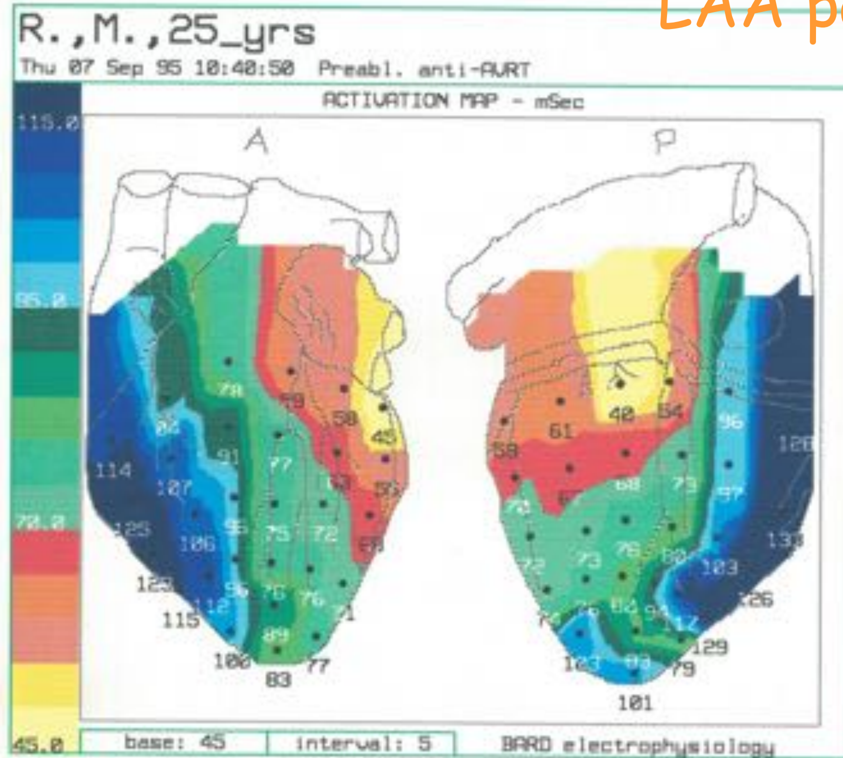


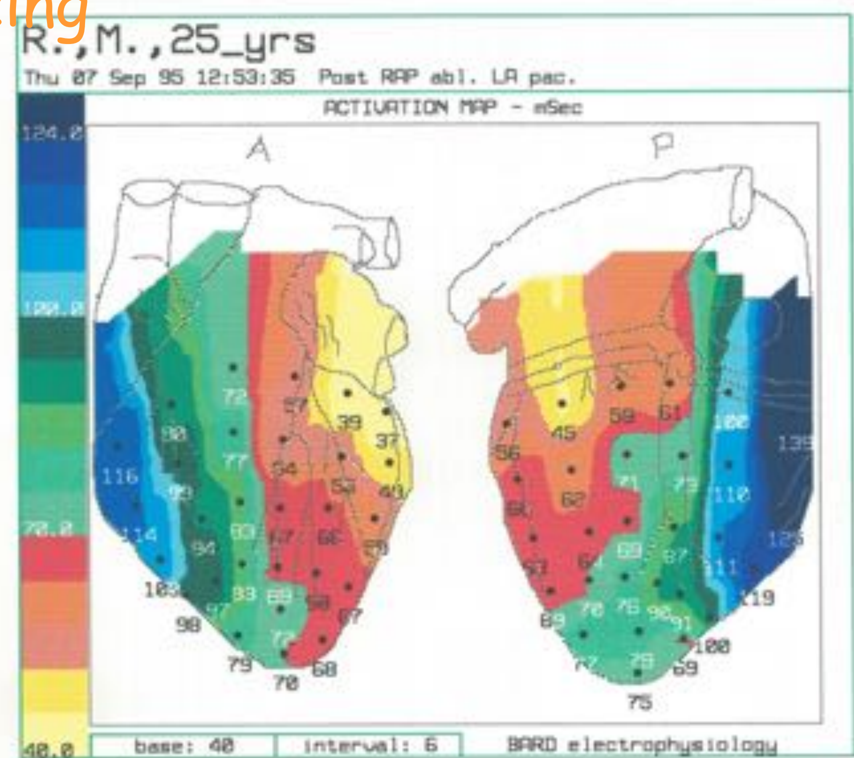


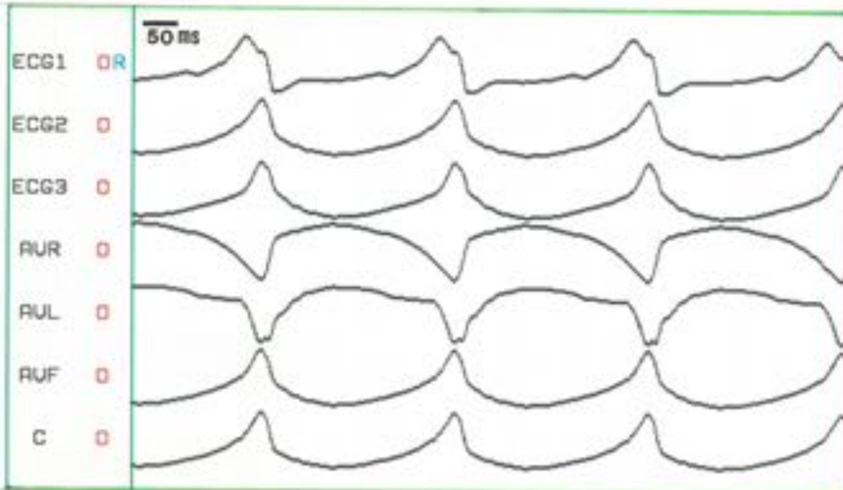


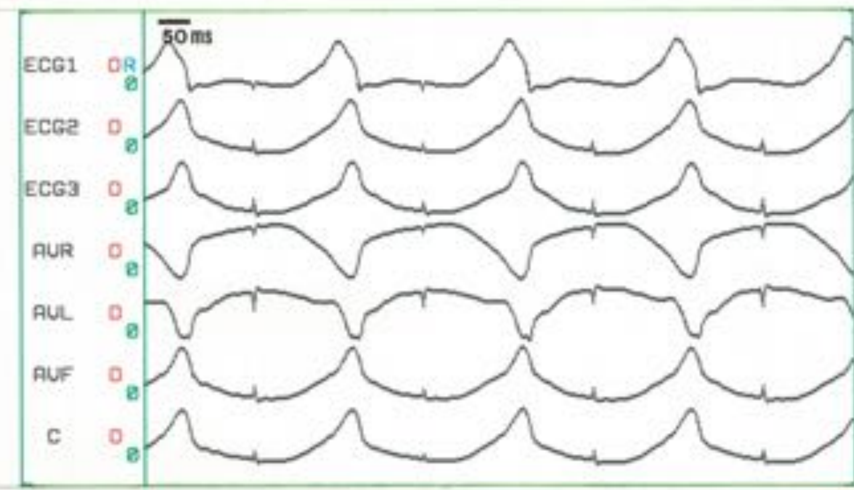


Wide wavefront of ventricular pre-excitation during anti-AVRT and LAA pacing

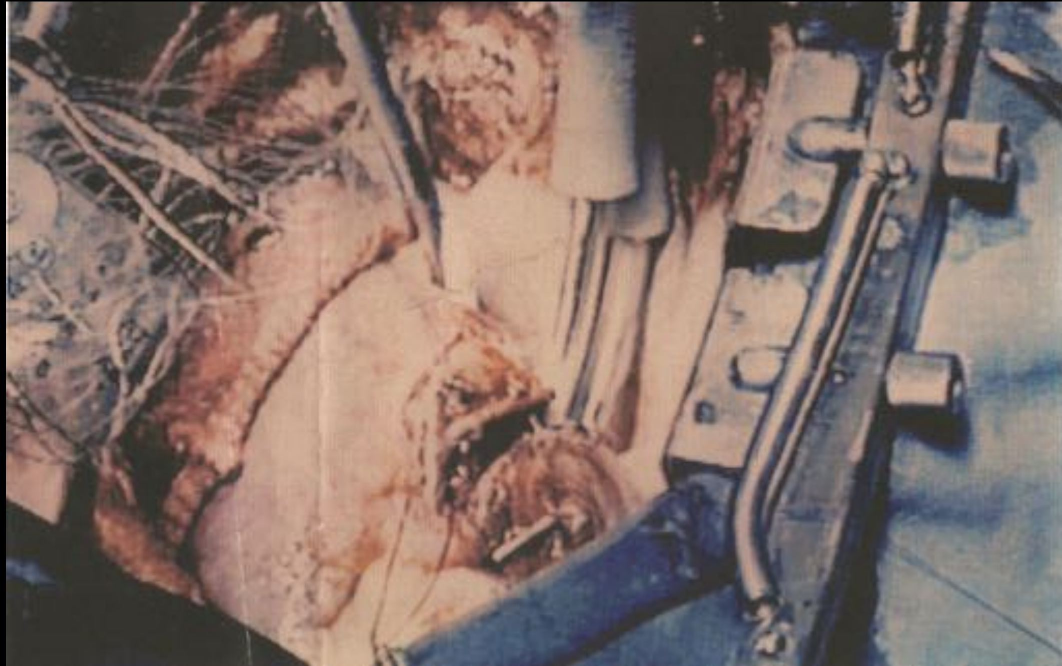


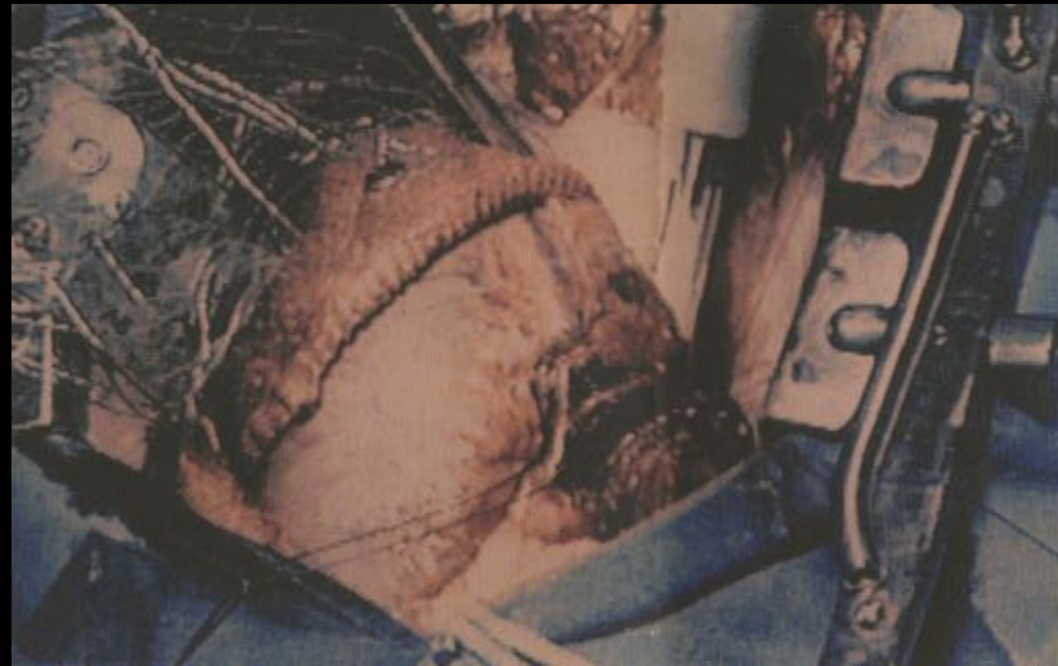




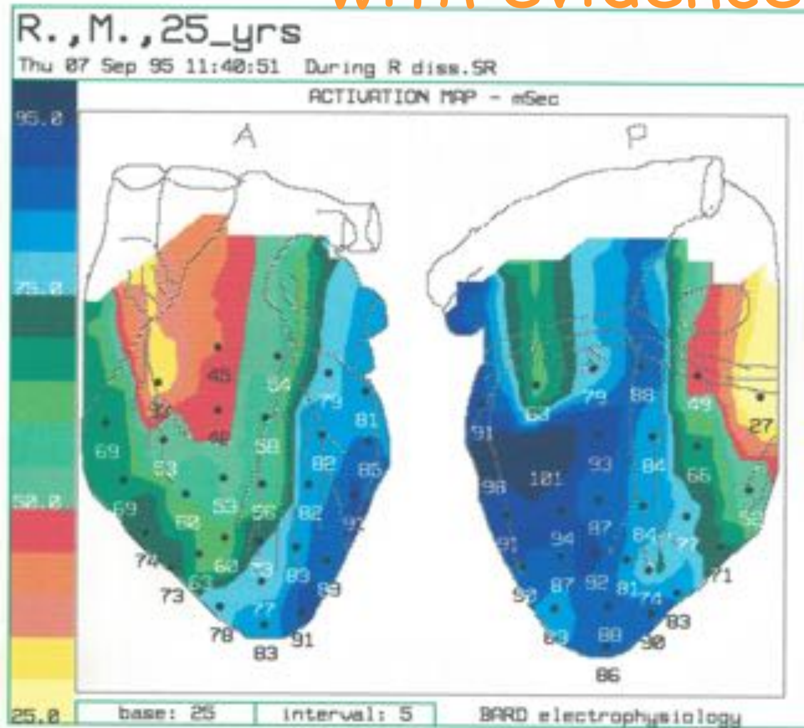


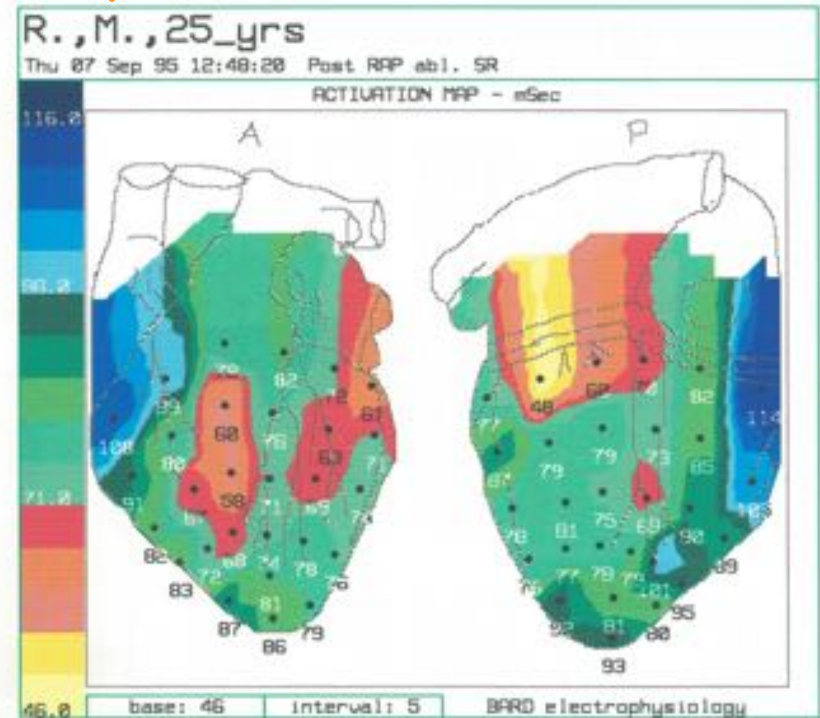
Extensive dissection and cryoablation of the right AV groove

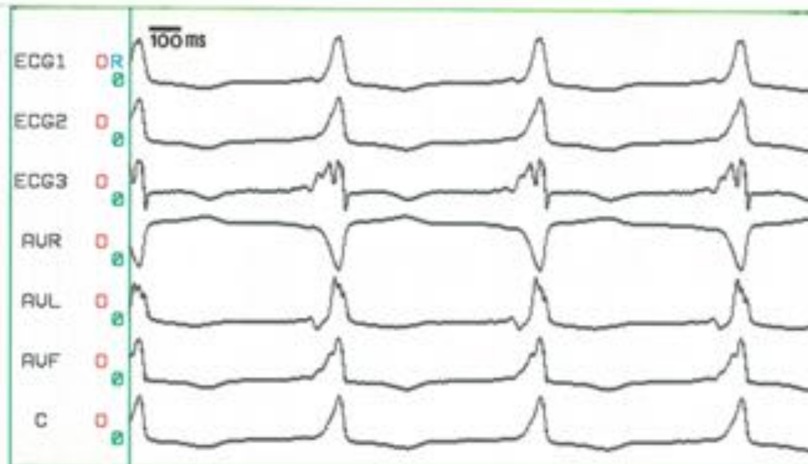


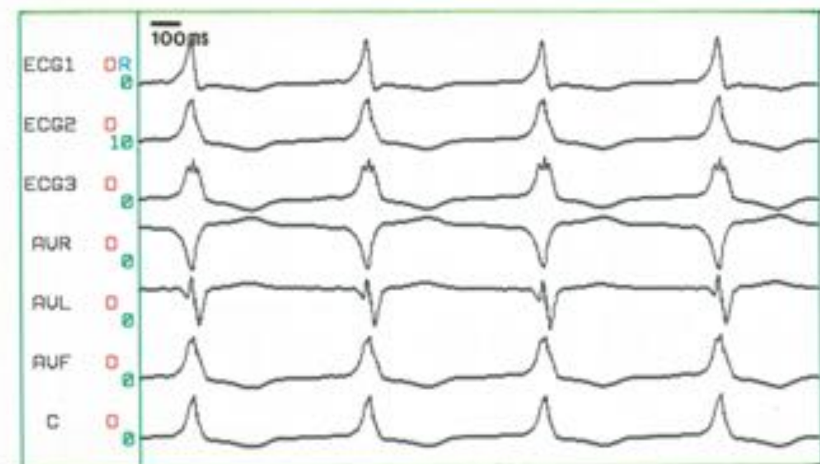


Reduction of the right VPE and interruption of the right AP with evidence of left VPE



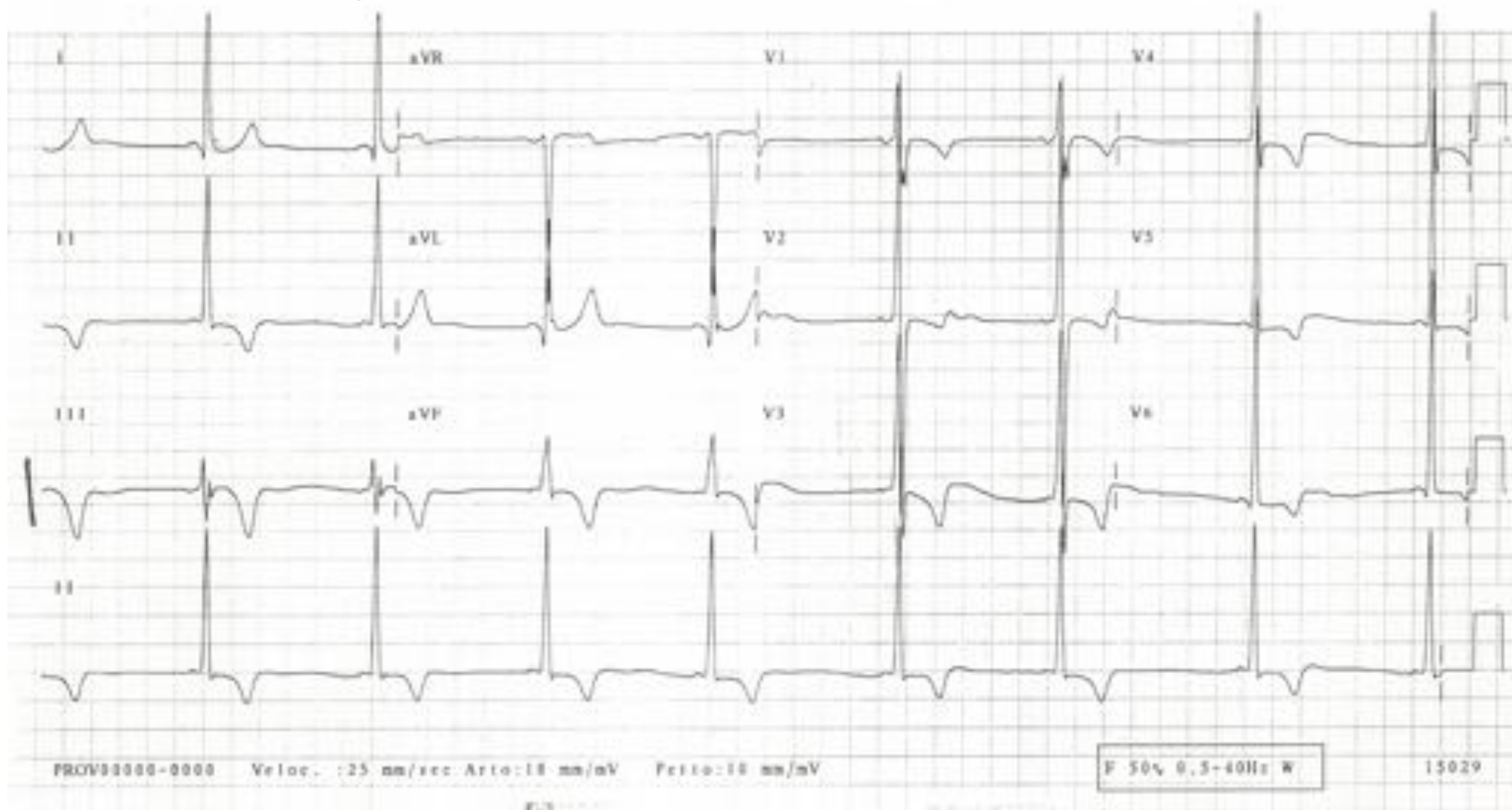






Multi-component left accessory pathway with fibers bridging from the LAA to the LV

Post-surgery baseline ECG



Open questions

- Is the peculiarity of th
underlying heart disease

- Could new technologies
tip, 3D mapping, epica
been successful in this

- Do we still need antiar
special cases with comp

4.5.2 Anti-arrhythmic surgery

Surgical ablation of ventricular tachycardia

Recommendations	Class[a]	Level[b]	Ref.[c]
Surgical ablation guided by preoperative and intraoperative electrophysiological mapping performed at an experienced centre is recommended in patients with VT refractory to anti-arrhythmic drug therapy after failure of catheter ablation by experienced electrophysiologists.	I	B	212–215
Surgical ablation at the time of cardiac surgery (bypass or valve surgery) may be considered in patients with clinically documented VT or VF after failure of catheter ablation.	IIb	C	216, 217

VF = ventricular fibrillation; VT = ventricular tachycardia.
[a]Class of recommendation.
[b]Level of evidence.
[c]Reference(s) supporting recommendations.

Priori et al. EHJ 2015