

Radiofrequency Current Catheter Ablation

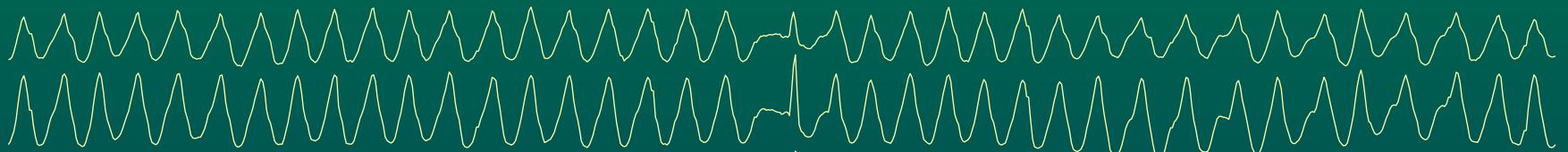
- 2016:
challenges



- perception (*asymptomatic preexcitation*)
- decision making / prognostics
- multi AP / substrate
- close proximity to spec. cond. syst.
- unusual course / site of AP
- cardiac (vascular) anomalies

WPW – Atrial Fibrillation → FBI

I



II



III



aVR



aVL



aVF



V1



V2



V3



V4



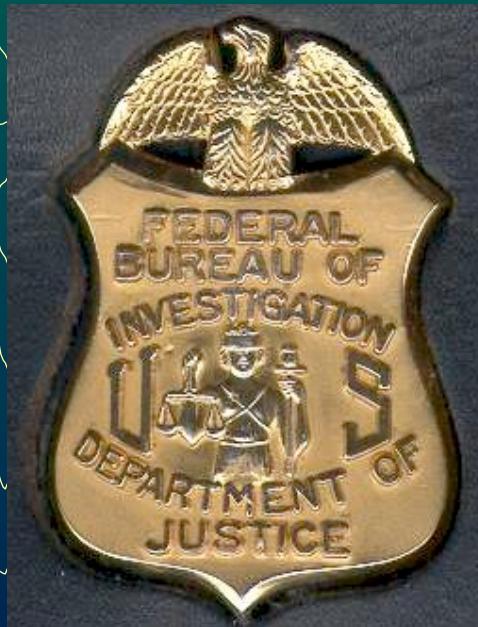
V5



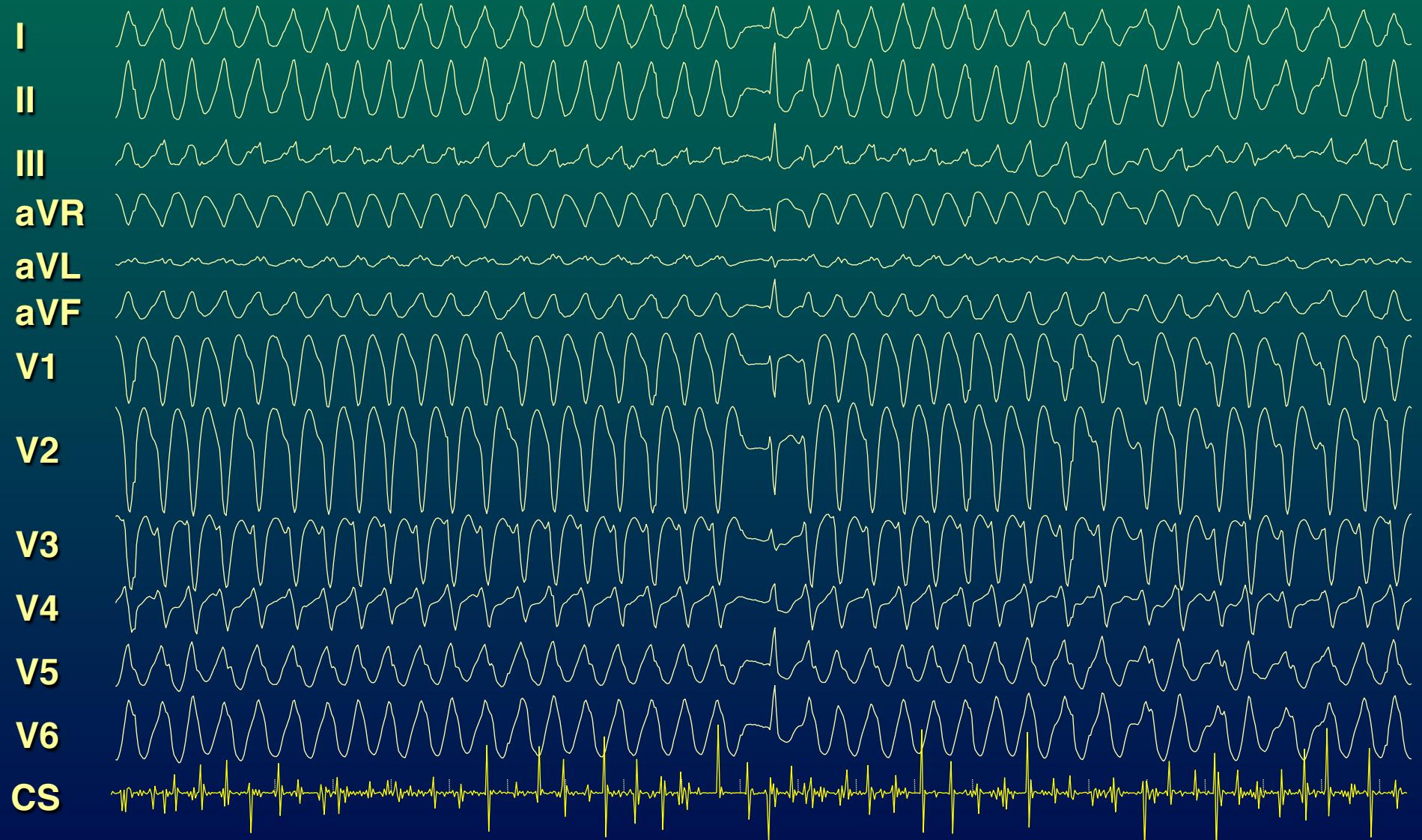
V6



CS



WPW – Atrial Fibrillation → FBI



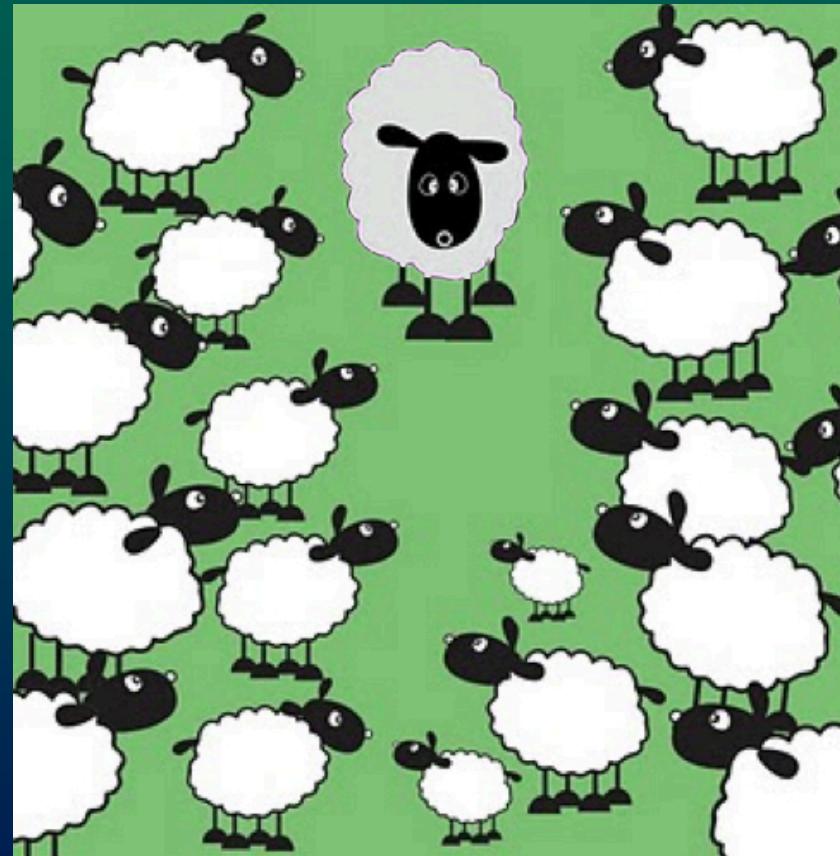
(Asymptomatic) Preexcitation – To Treat or Not to Treat ?

- *Sudden cardiac death (SCD) in pts with WPW related to rapidly conducted A.fib. via accessory pathways (AP) with short refractory periods and deterioration into V.fib.*

Dreifus LS et al Circulation 1971;43:520-27

Klein GJ et al NEJM 1979;301:1080-85

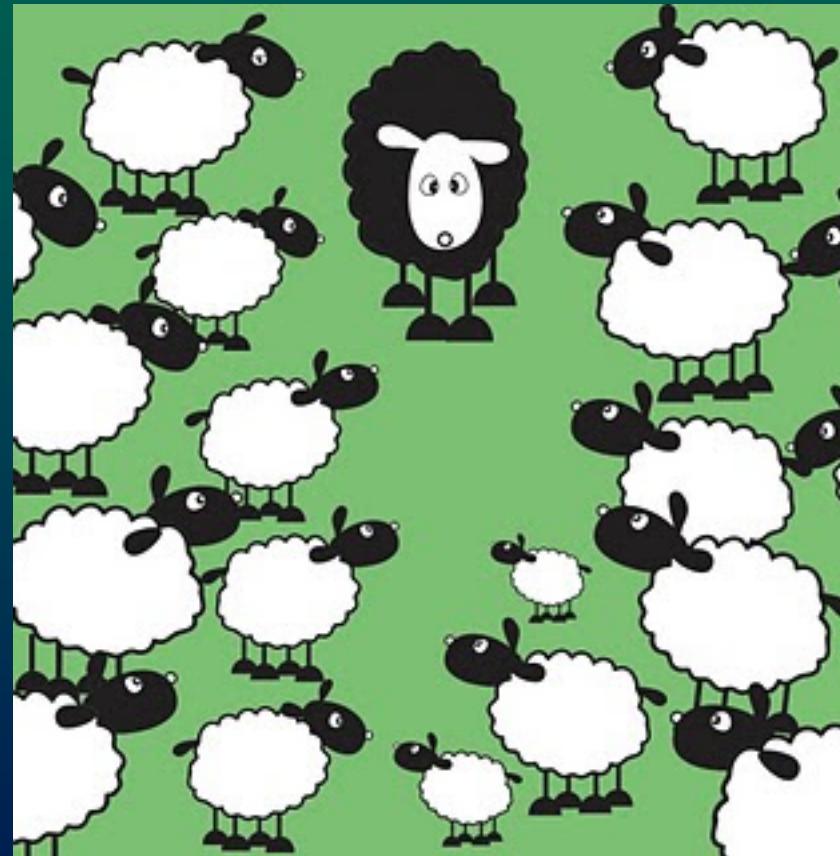
(Asymptomatic) Preexcitation – To Treat or Not to Treat ?



who is at risk for fatal outcome

?

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who is at risk for fatal outcome

?

„Asymptomatic Ventricular Preexcitation: A Long-Term Prospective Follow-Up Study of 293 Adult Patients“

293 adults (61.4% m; median 36 yol; range 28 – 47.5 yol) - asymptomatic preexcitation prospective data collection 1995 - 2005

Table 1. Characteristics of 293 Asymptomatic Adult Patients With Ventricular Preexcitation With and Without Arrhythmic Events

Variable	All Patients (n=293)	Arrhythmic Events			P Value	Potentially Life-Threatening Arrhythmias		P Value
		Yes (n=31)	No (n=262)			Yes (n=17)	No (n=276)	
Median age (IQR), y	36 (28–47.5)	25 (22–29)	37 (30–48)	<0.001		24 (20–28.5)	36 (29–48)	<0.001
Male sex, n (%)	180 (61.4)	21 (67.7)	159 (60.7)	0.445		11 (64.7)	169 (61.2)	0.775
Anterograde AERP ≤250 ms, n (%)	39 (13.3)	22 (71)	17 (6.5)	<0.001		15 (88.2)	24 (8.7)	<0.001
Multiple accessory pathways, n (%)	13 (4.4)	4 (12.9)	9 (3.4)	0.037		2 (11.8)	11 (4.0)	0.169
Inducibility, n (%)	47 (16.0)	22 (71.0)	25 (9.5)	<0.001		14 (82.4)	33 (12.0)	<0.001

AERP indicates accessory pathway effective refractory period.

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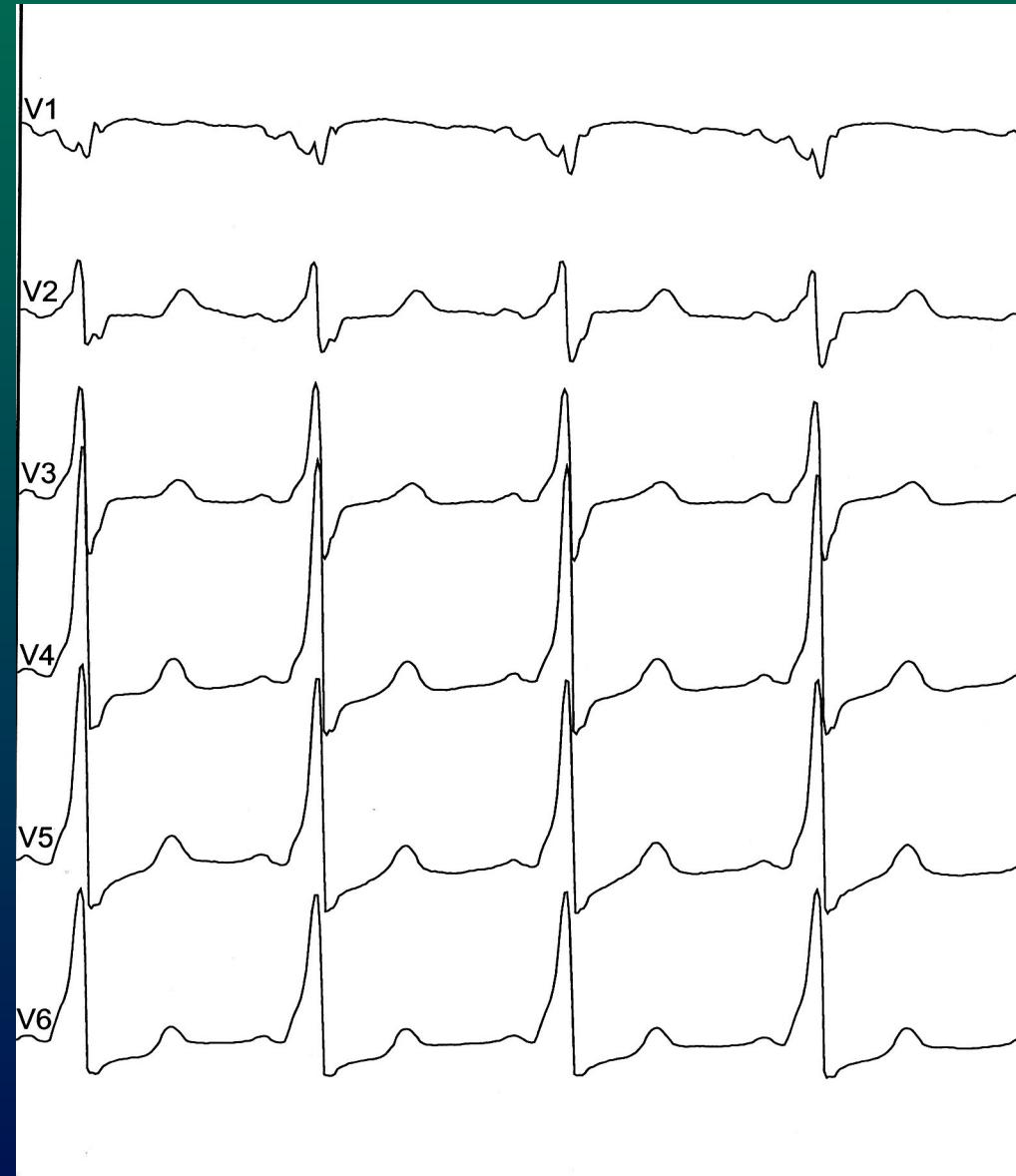
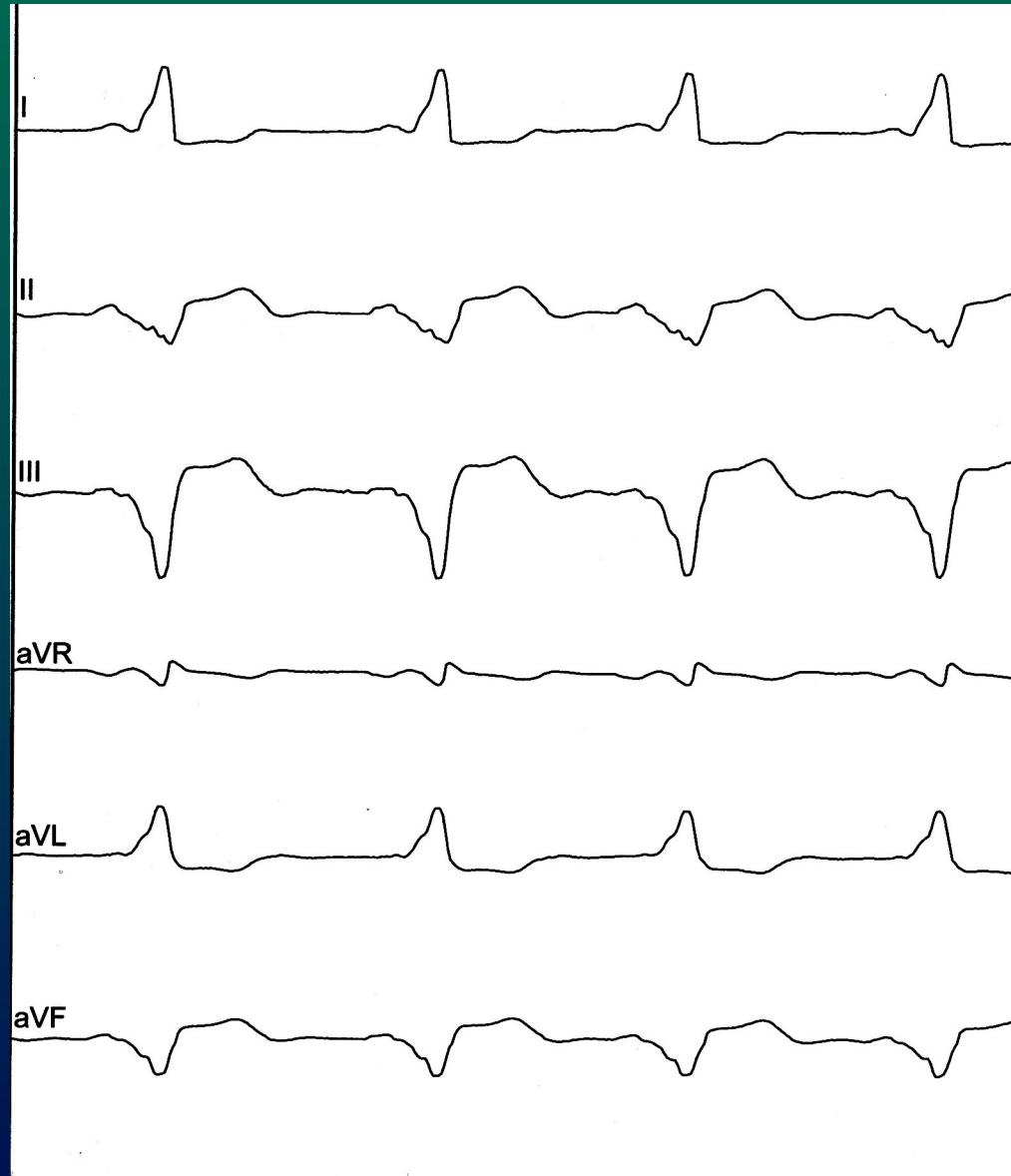
dynamics of AP's capacity ?

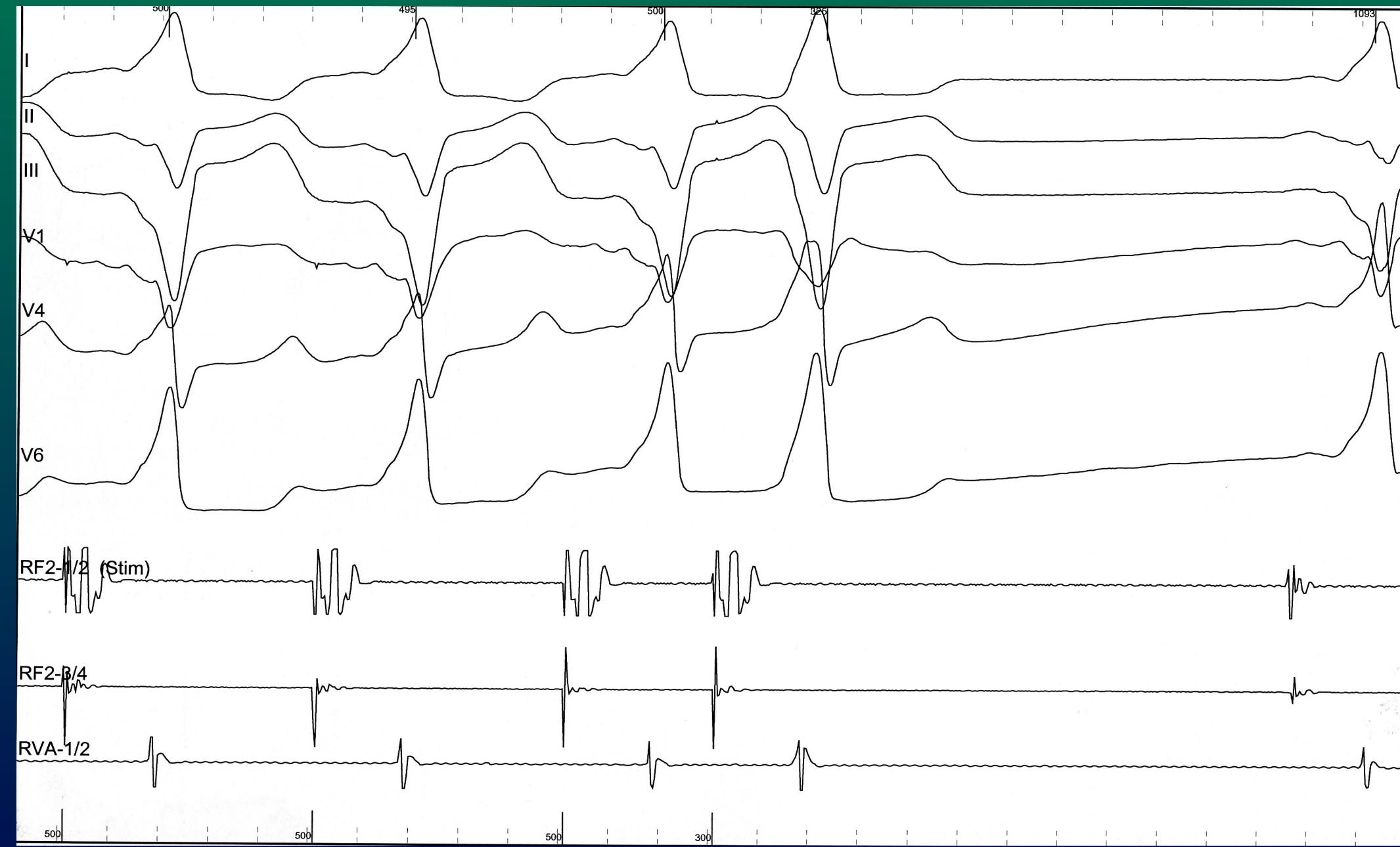
- neuro-humoral stimulation
- drugs / stimulans
- while arrhythmia
- ...

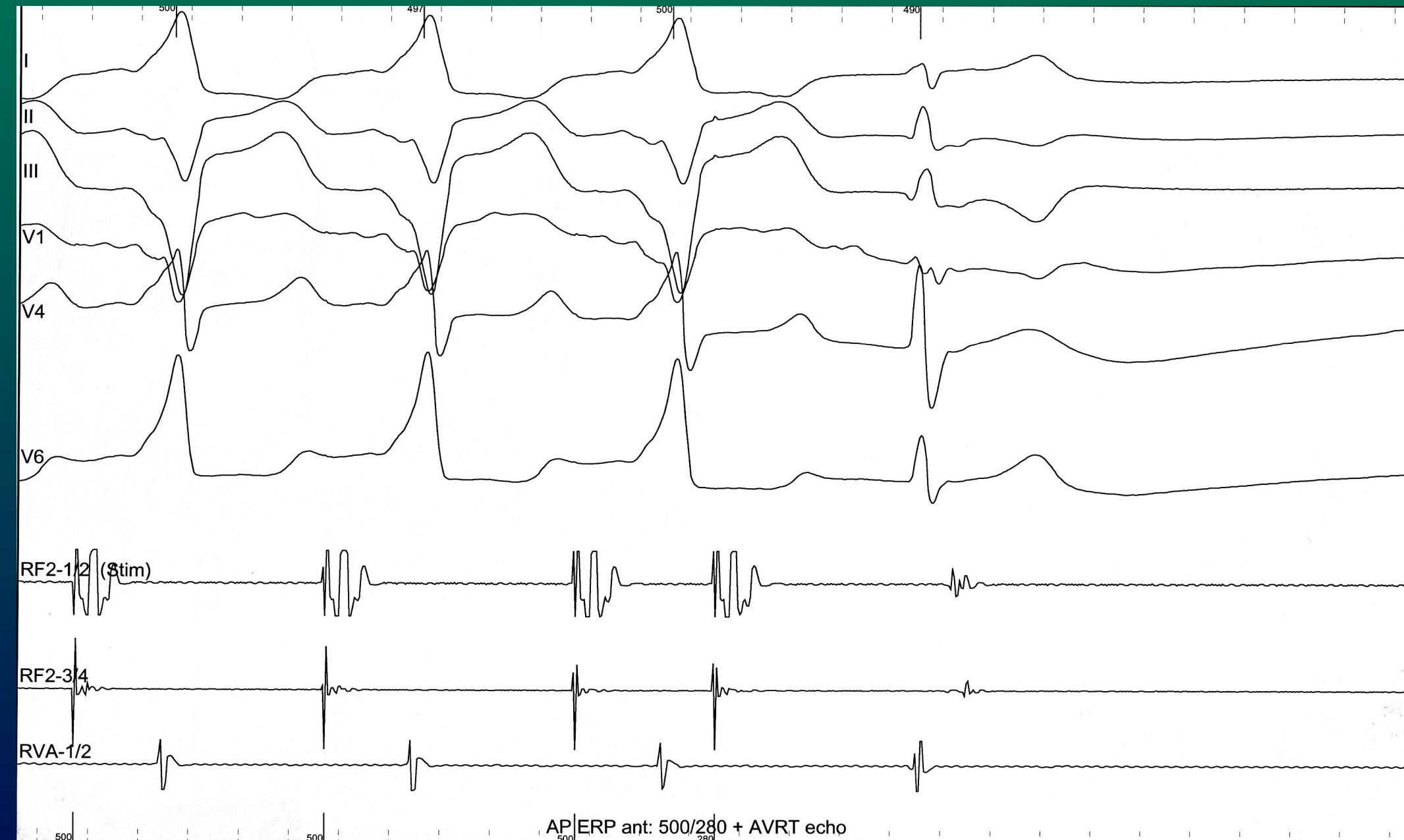
a recent case:

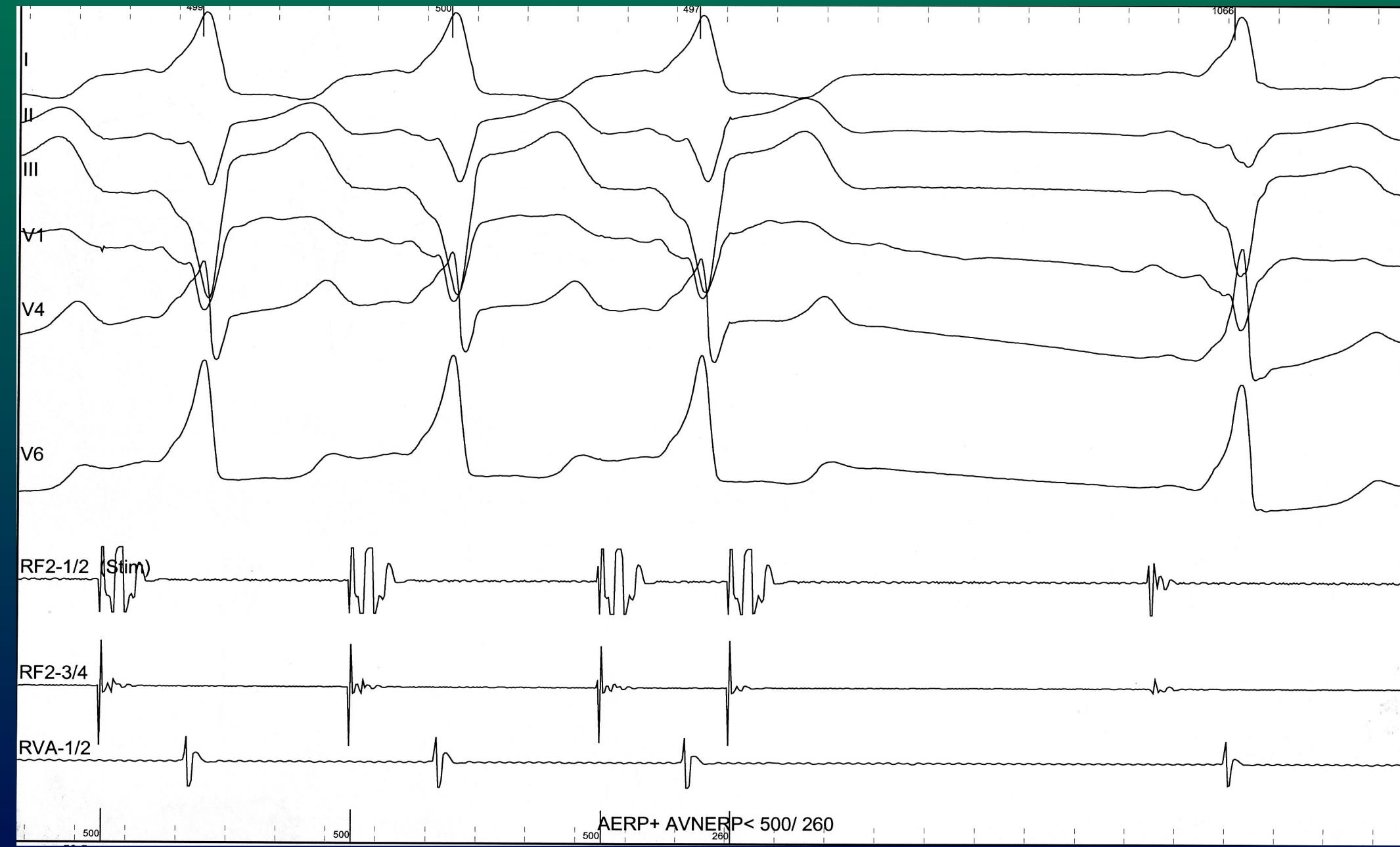
(Asymptomatic) Preexcitation – To Treat or Not to Treat ?

- *m, 11 y/o*
- *normal heart*
- *rec. palpitations since 1y, total max. 8 x*
 - *duration max 30 min., spont termination*
- *no documentation of tachycardia*
- *no severe symptoms*
- *no AA medication*
- *tennis 3x/w, soccer 3x/x, childrens-marathon, ...*









AERP+ AVNERP< 500/ 260

A-ERP + ≤ AVN-ERP ant 500 / 260





