

Case Discussion

Venice Arrhythmias 2015

Venice, Italy 16 October 2015

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Disclosure

Consulting:

- Biosense Webster
- Boston Scientific
- Spectrum Dynamics
- VytronUS
- ACT

Lecture Honoraria:

- Biosense Webster
- Boston Scientific
- AtriCure
- Biotronik
- St Jude Medical

1. Relationship Between Accessory Pathways and Hypertrophic CM - PRK-AG2 Mutation
3. 2 Accessory Pathways – Differential Pacing
3. Left Atrial Appendage – LV Connections
4. Questions: Mapping Systems, Surgery

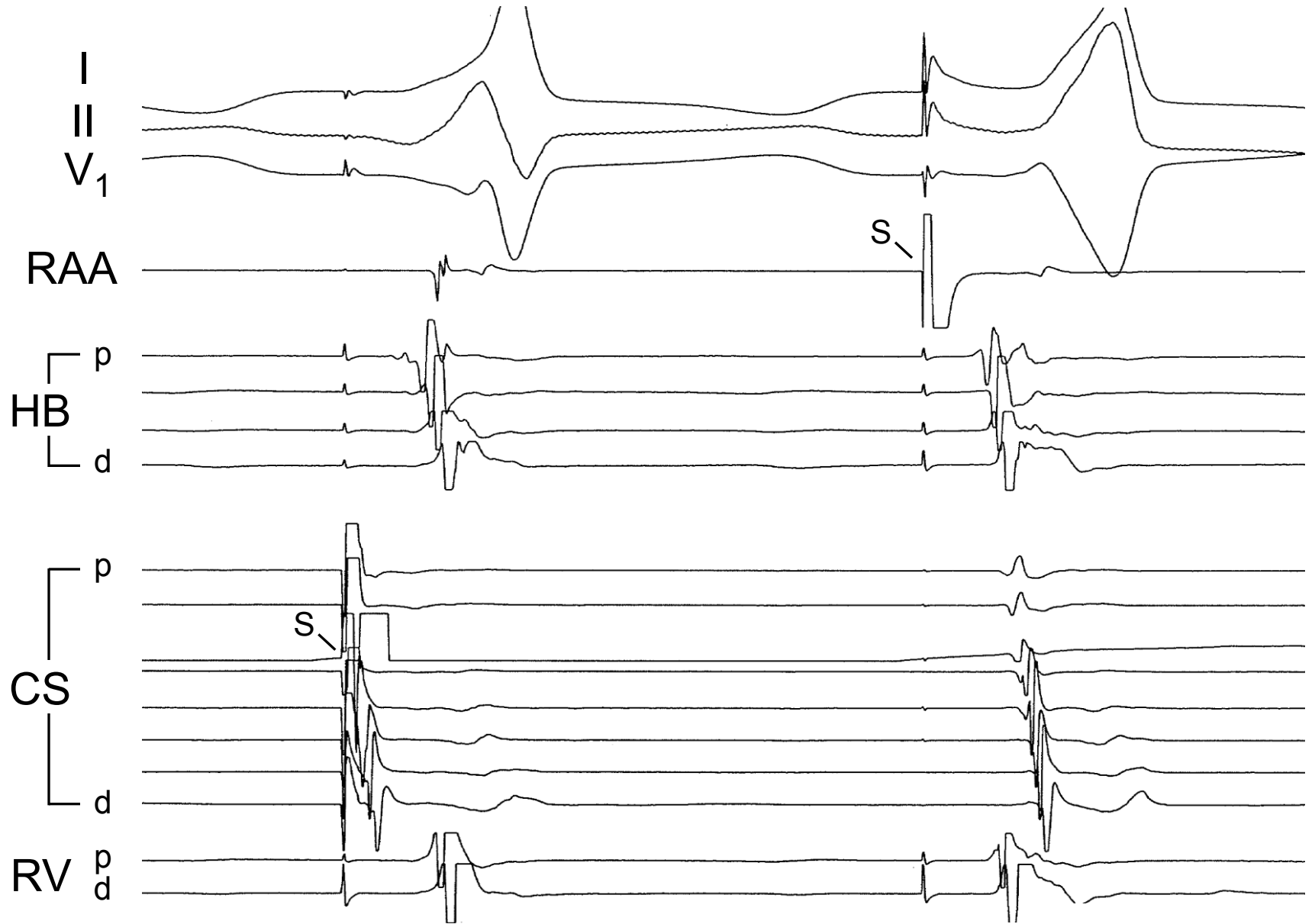
PRK-AG2 Mutation

- Glycogen storage disease
(increased AMP kinase activity)
- Autosomal dominant mutations of the $\gamma 2$ regulatory subunit of AMP-activated protein kinase
(modulates glucose uptake and glycolysis)
- Histology: myocytes are enlarged with vacuoles containing glycogen derivatives, but myocyte disarray (characteristic of HCM) is absent and interstitial fibrosis is minimal
- HCM, preexcitation, atrial fibrillation, progressive AV block

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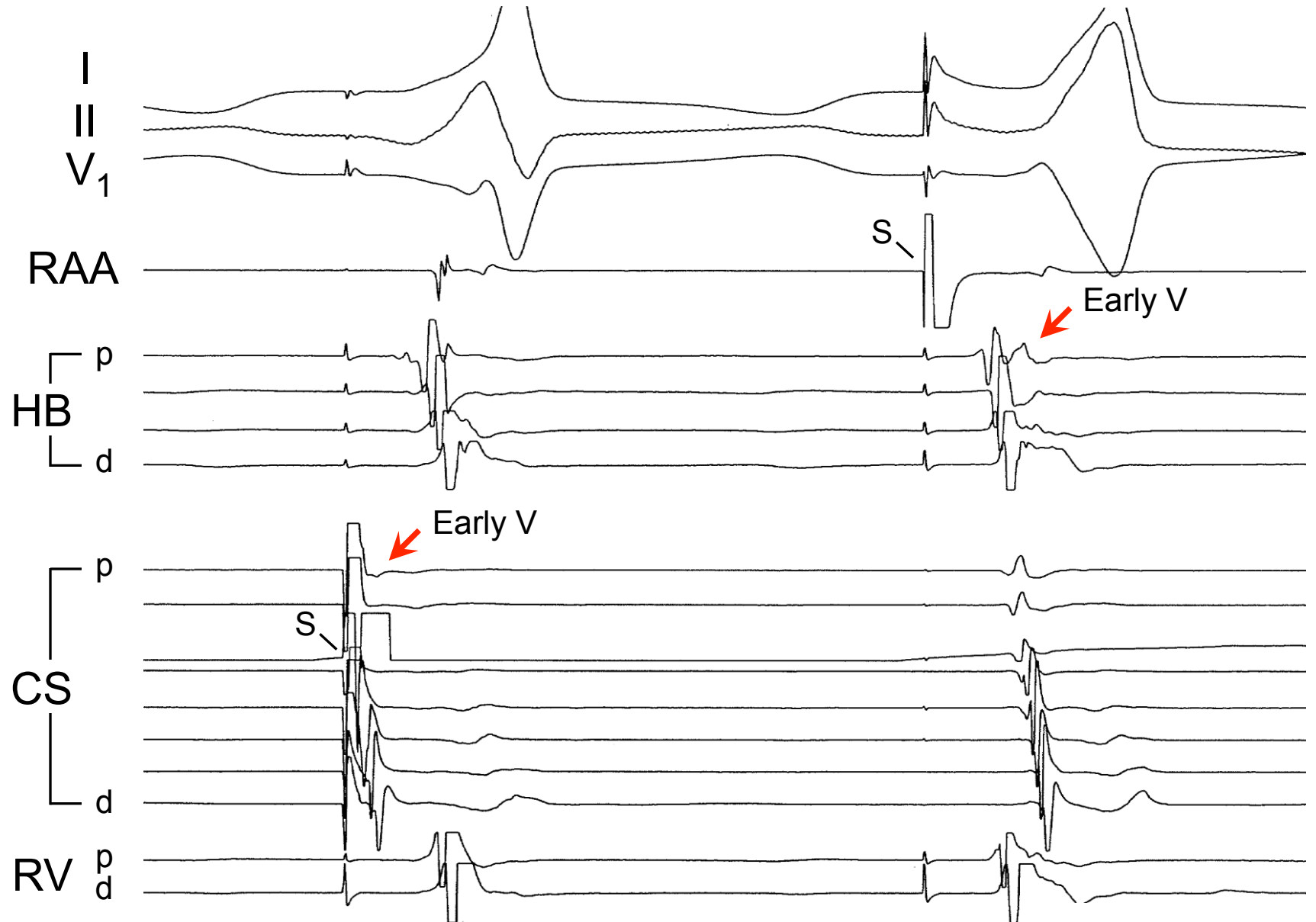
1. R Ant Paraseptal AP
2. R Posteroseptal AP

Differential Atrial Pacing



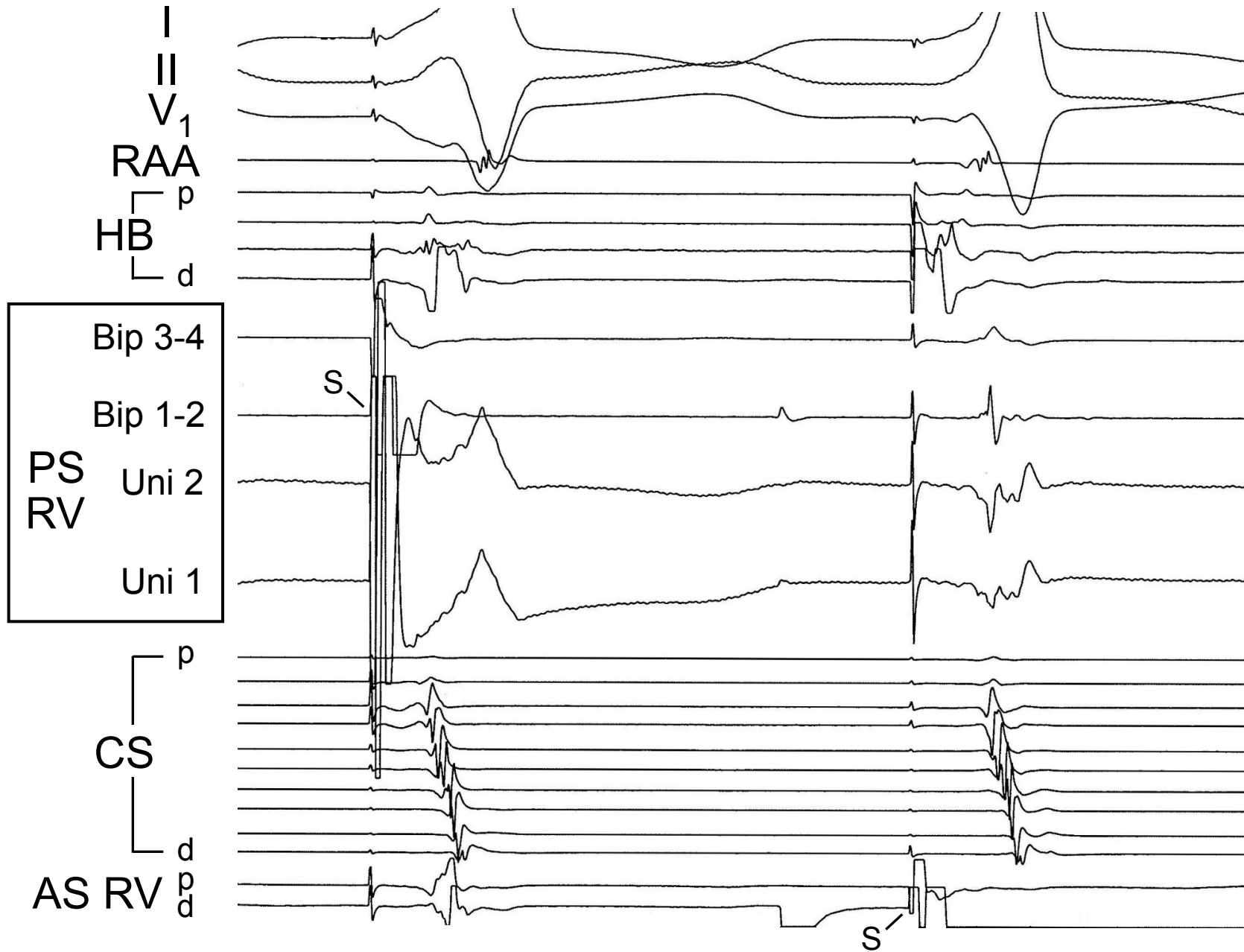
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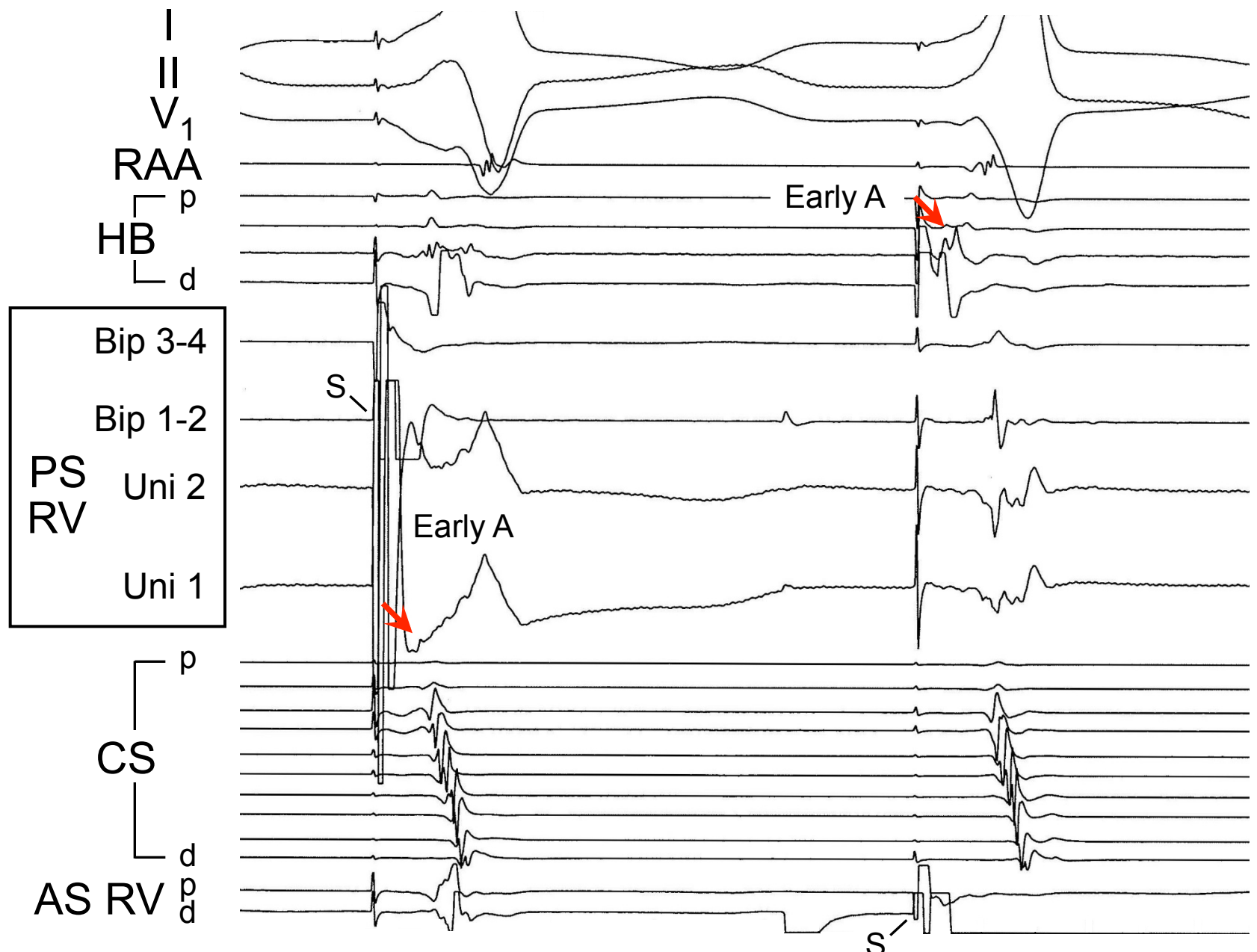
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Differential Ventricular Pacing



Differential Ventricular Pacing

- 1. R Ant Paraseptal AP
- 2. R Posteroseptal AP



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AHA 2002

Atrial Appendage – Ventricle Connections

- Study Population (9 pts)
 - 8 RAA-RV connections
 - 1 LAA-LV connection

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Atrial Appendage – Ventricle Connections

- Study Population (9 pts)
 - 8 RAA-RV connections
 - 1 LAA-LV connection
- No structural heart disease
 - 1-3 prior failed ablation procedures

Atrial Appendage – Ventricle Connections

Endocardial Recordings

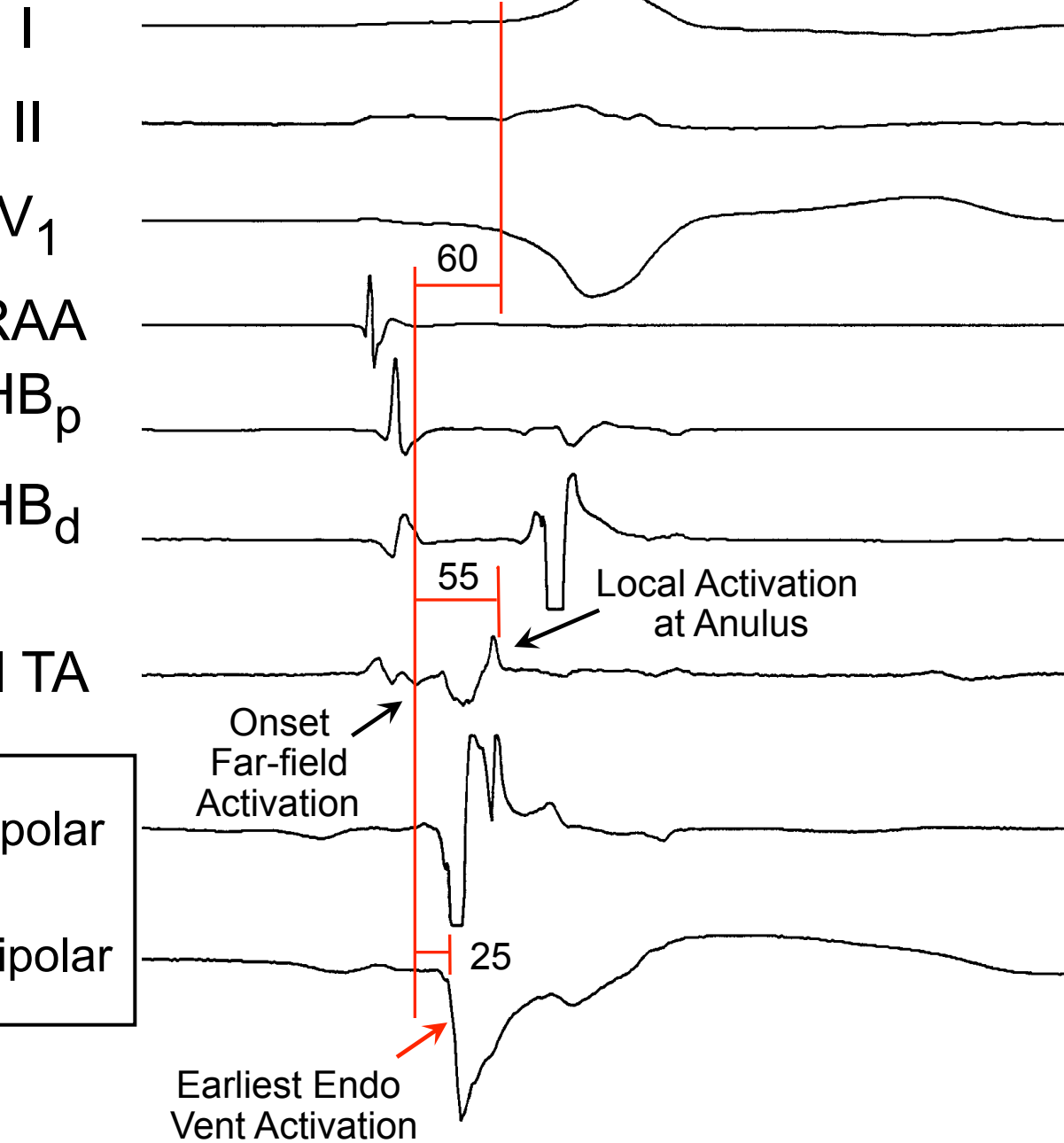
1. Absence of a distinct AP activation potential
2. The site of earliest activation was displaced away from the annulus
3. Earliest activation was recorded from the atrial appendage

Atrial Appendage – Ventricle Connections

Catheter Ablation Results

- Elimination of AP conduction in 6 of 9 pts
(Surgery in 3 pts – Tamponade in 1)
- Required separation of a segment of the atrial appendage attached to the ventricular connection
- Large number of RF applications
4-17 (median 8)

RAA – RV
Connection

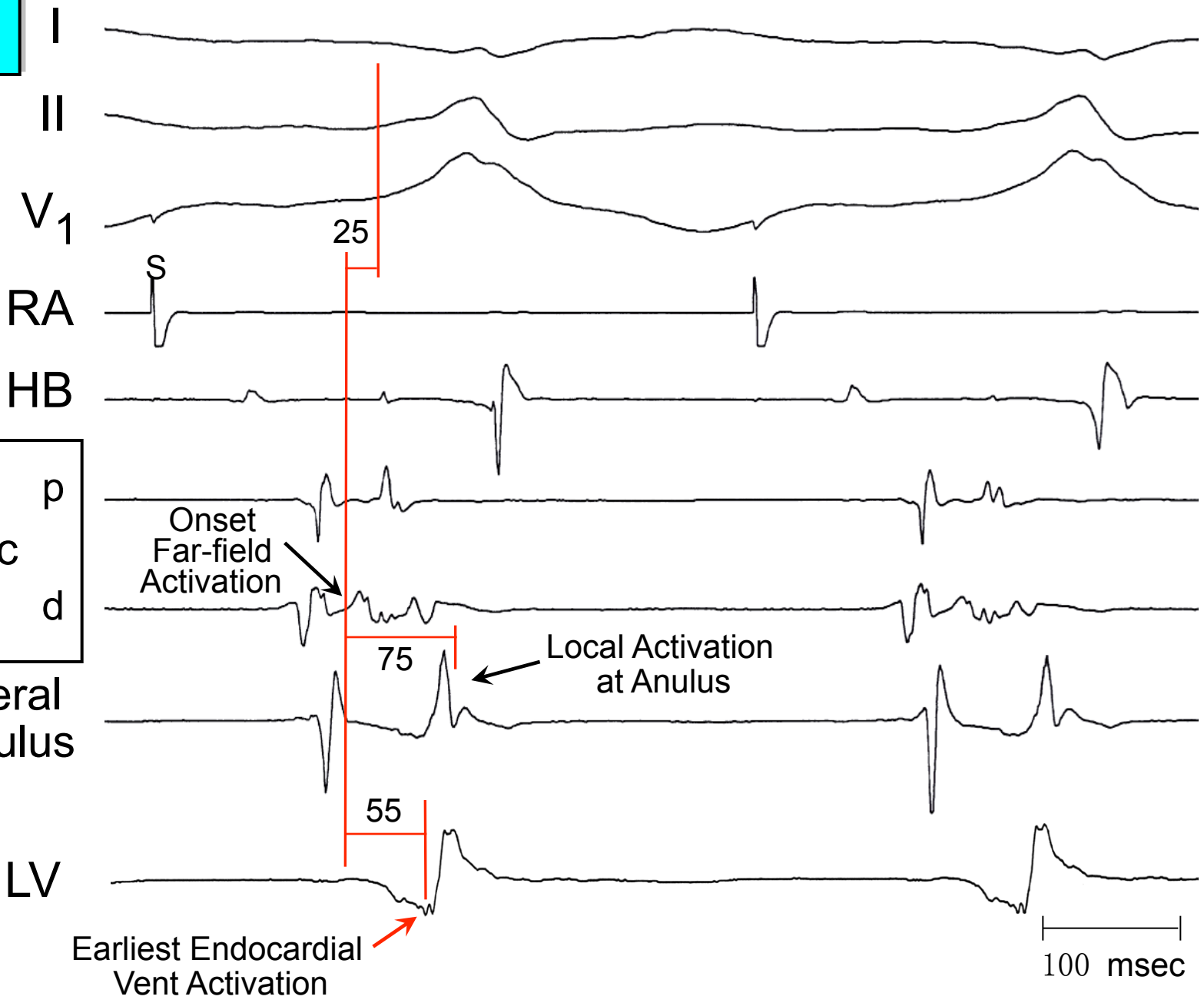


Anterolateral TA

RV Bipolar
10 mm From Anulus
Unipolar

Earliest Endo Vent Activation

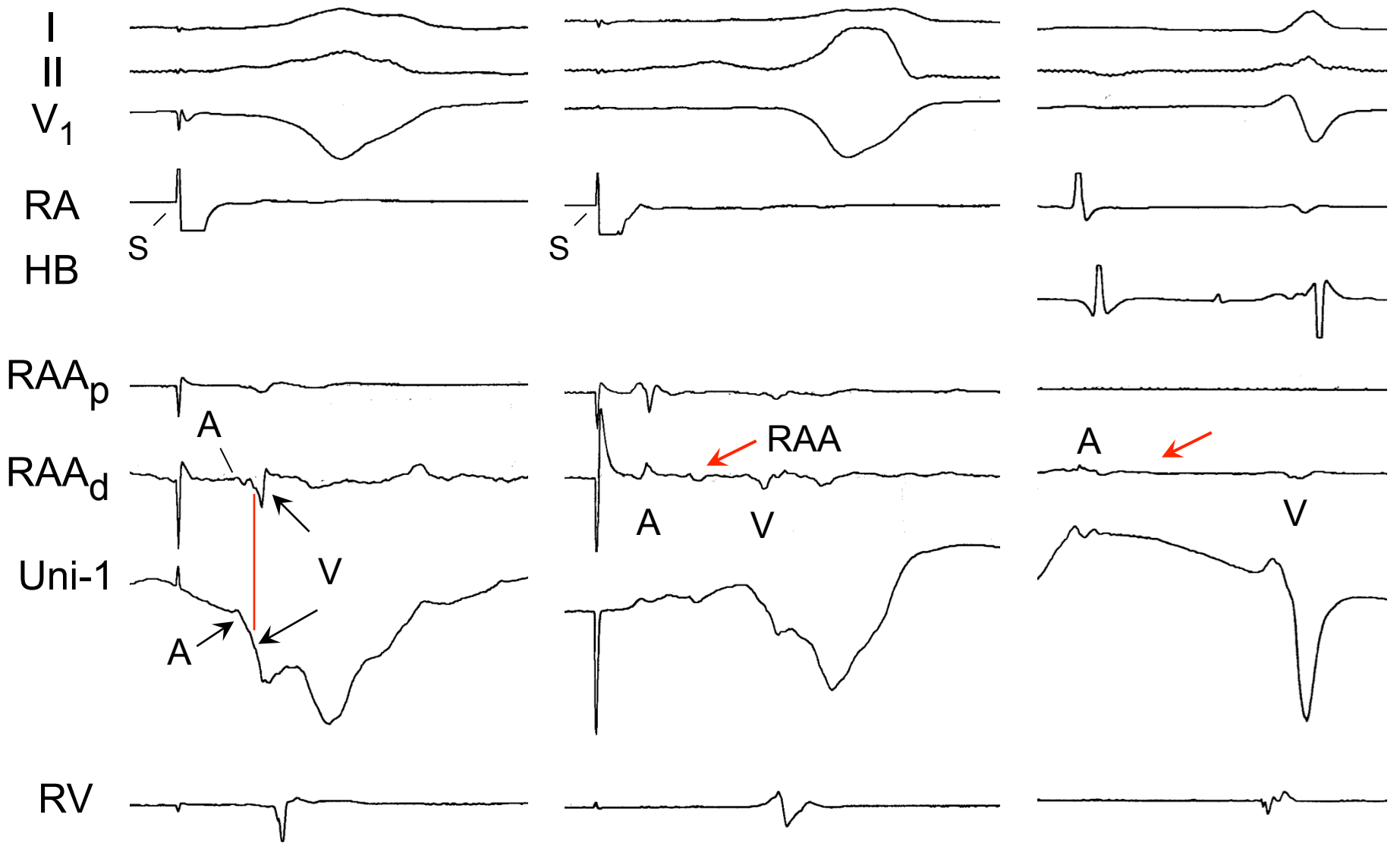
**LAA – LV
Connection**



Pre-RF1

Pre-RF8

Post Ablation



Pre-RF1

Pre-RF8

VA block

