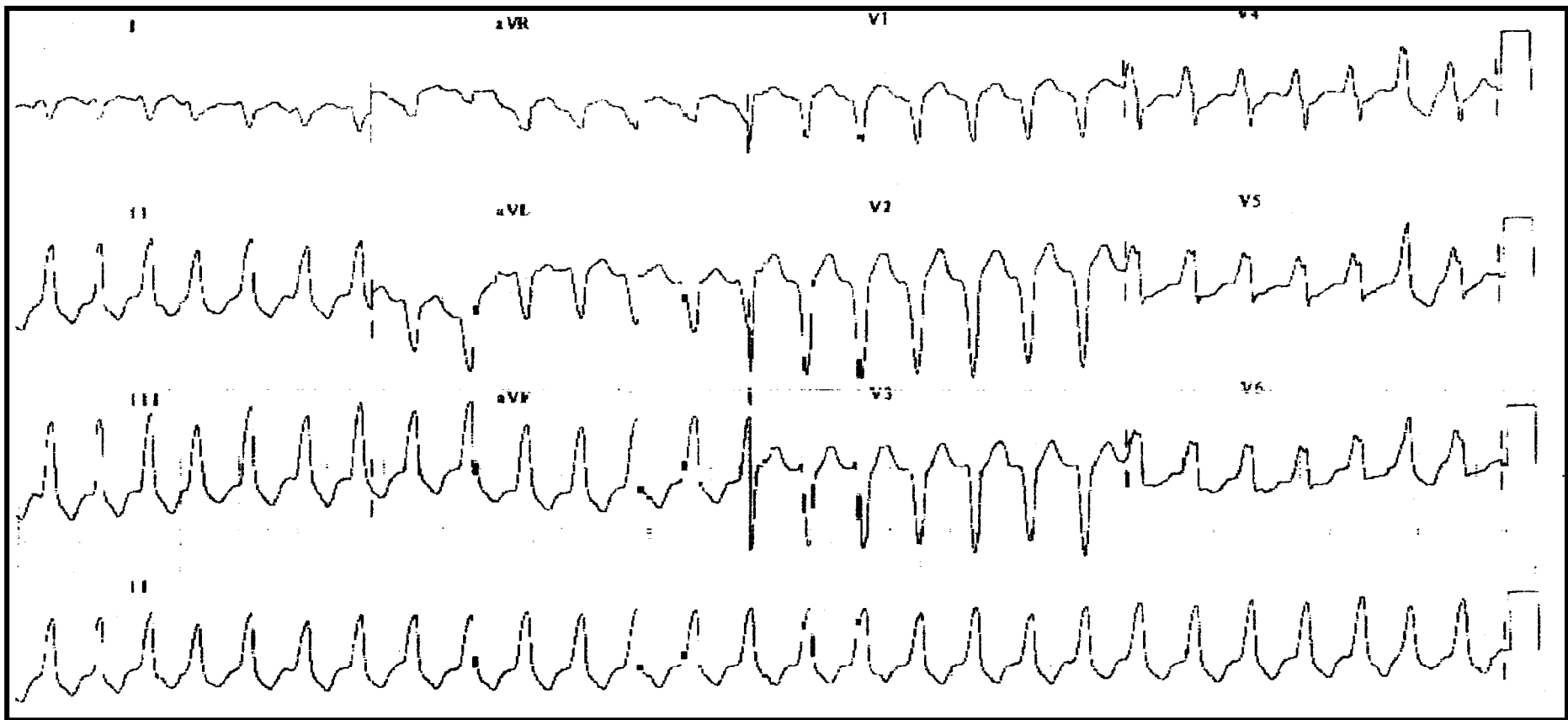


THE PATIENT (1)

- M 68
- Recurrent monomorphic LBBB-VT (160/min) for the last 6 months
- All episodes requiring DC shock
- Failure of IV medications for VT termination
- Failure of amiodarone, BB, verapamil in VT prevention

THE PATIENT (2)

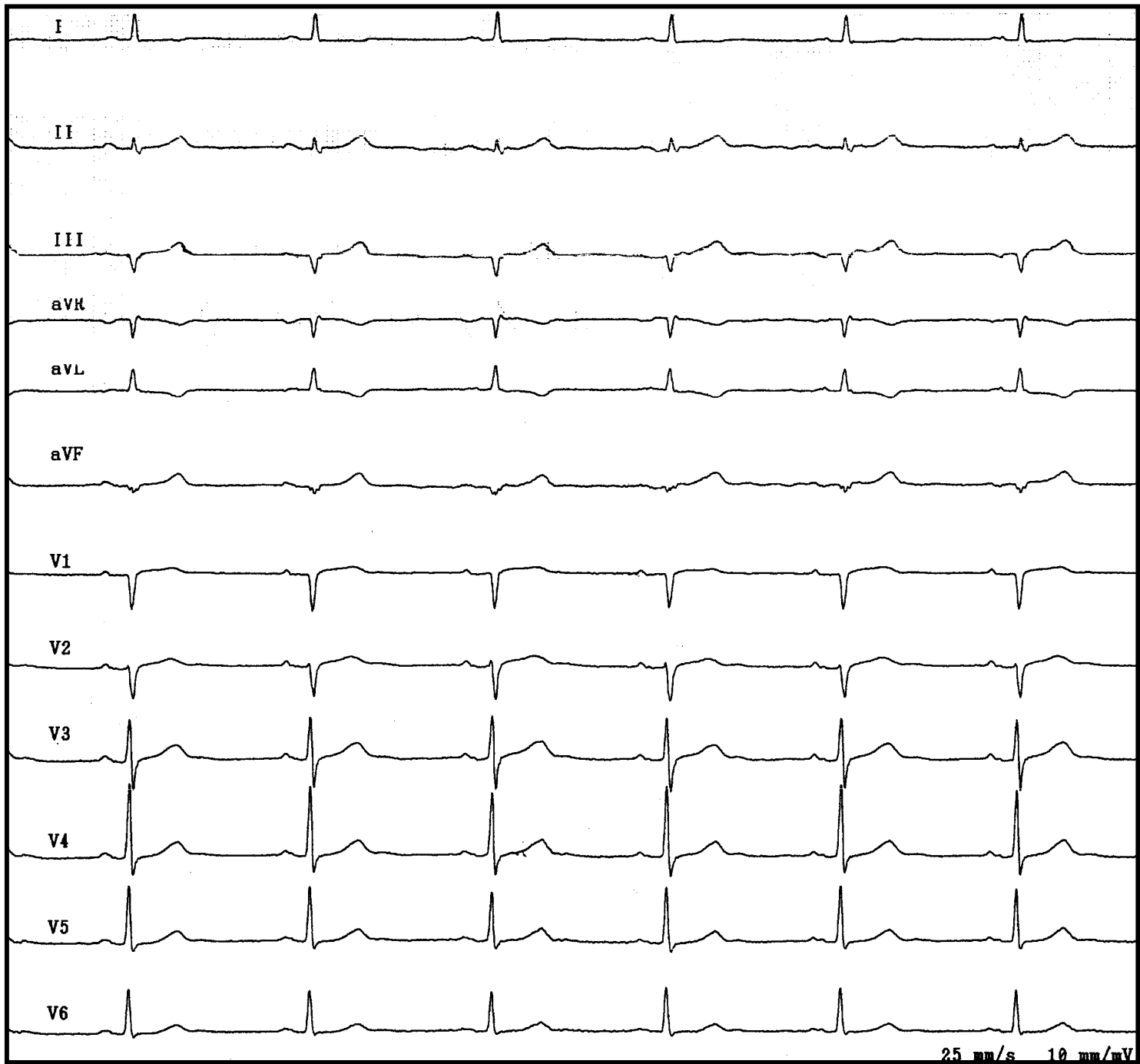
- No obvious heart disease (s/p 2 normal TTE)
- Normal resting ECG
- s/p failed RF ablation (right side)
- Aggravation of VT frequency (3 last week)

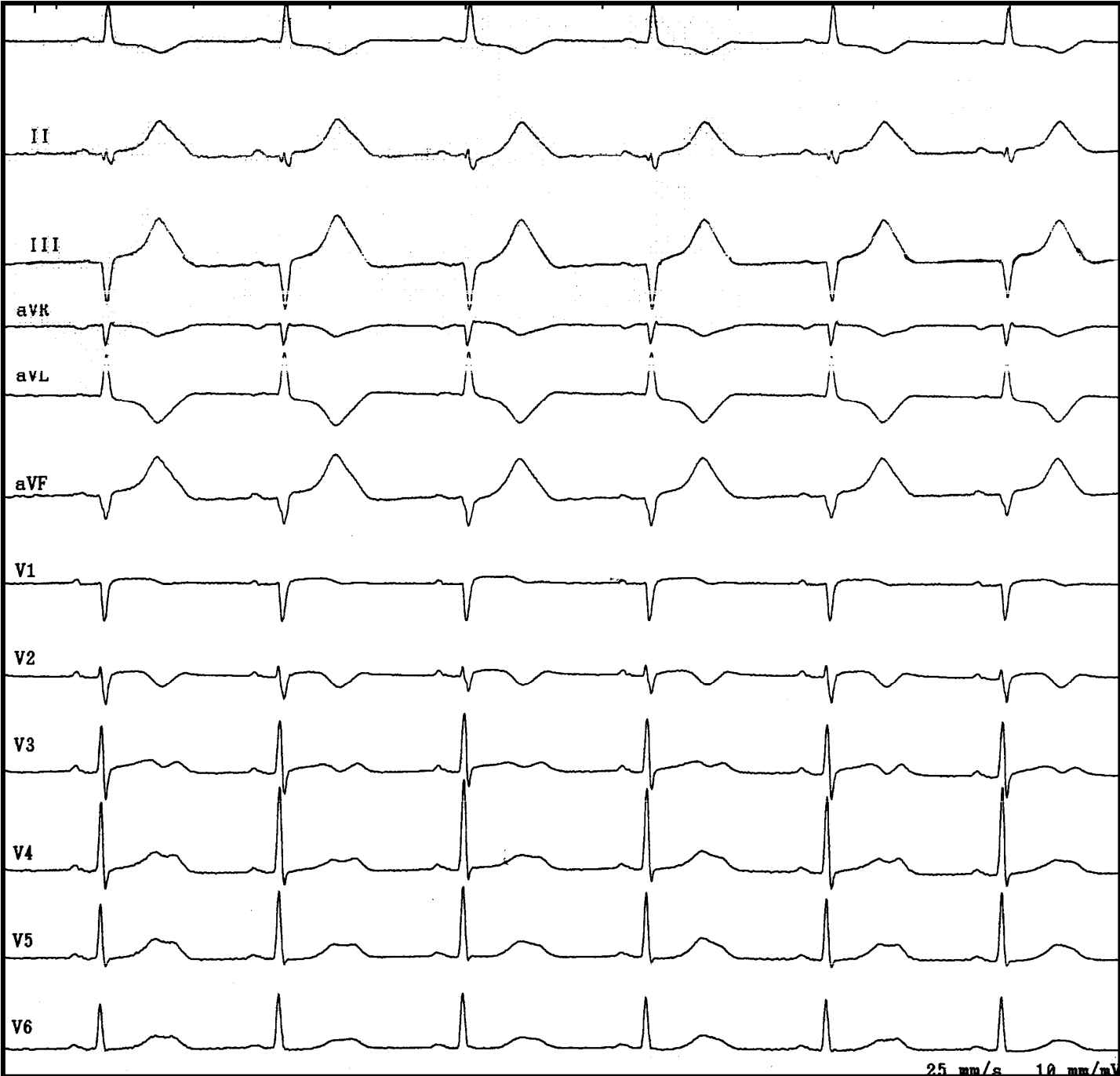


THE TSMC CATH TEAM

20-3-2003

- I. Herz
- A. Glick
- M. Berger
- S. Peled, B. Gelman, A. Mayerov
- Attending: M. Swissa
- B.B



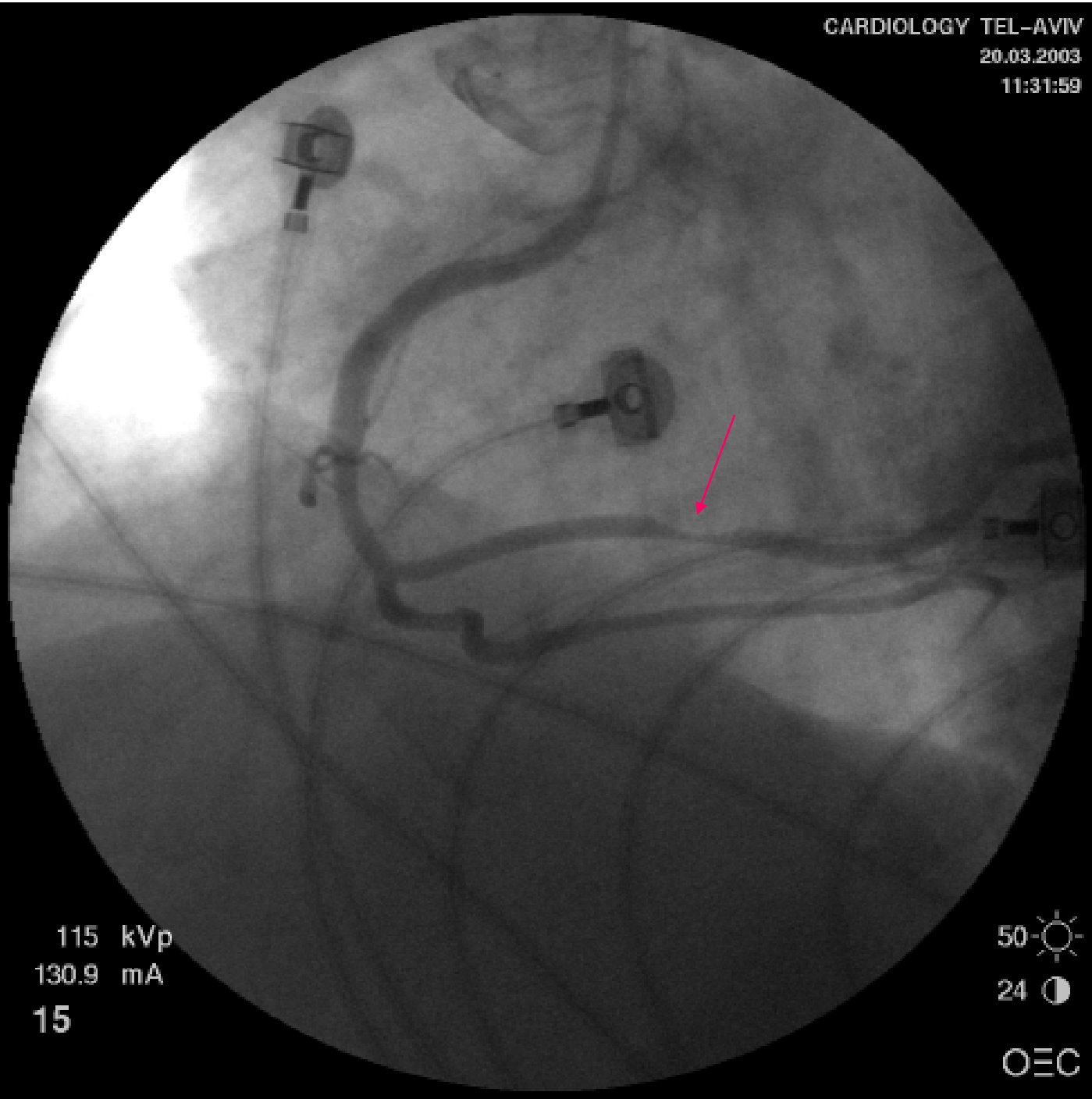


25 mm/s 10 mm/mV

CARDIOLOGY TEL-AVIV

20.03.2003

11:31:59



115 kVp
130.9 mA
15

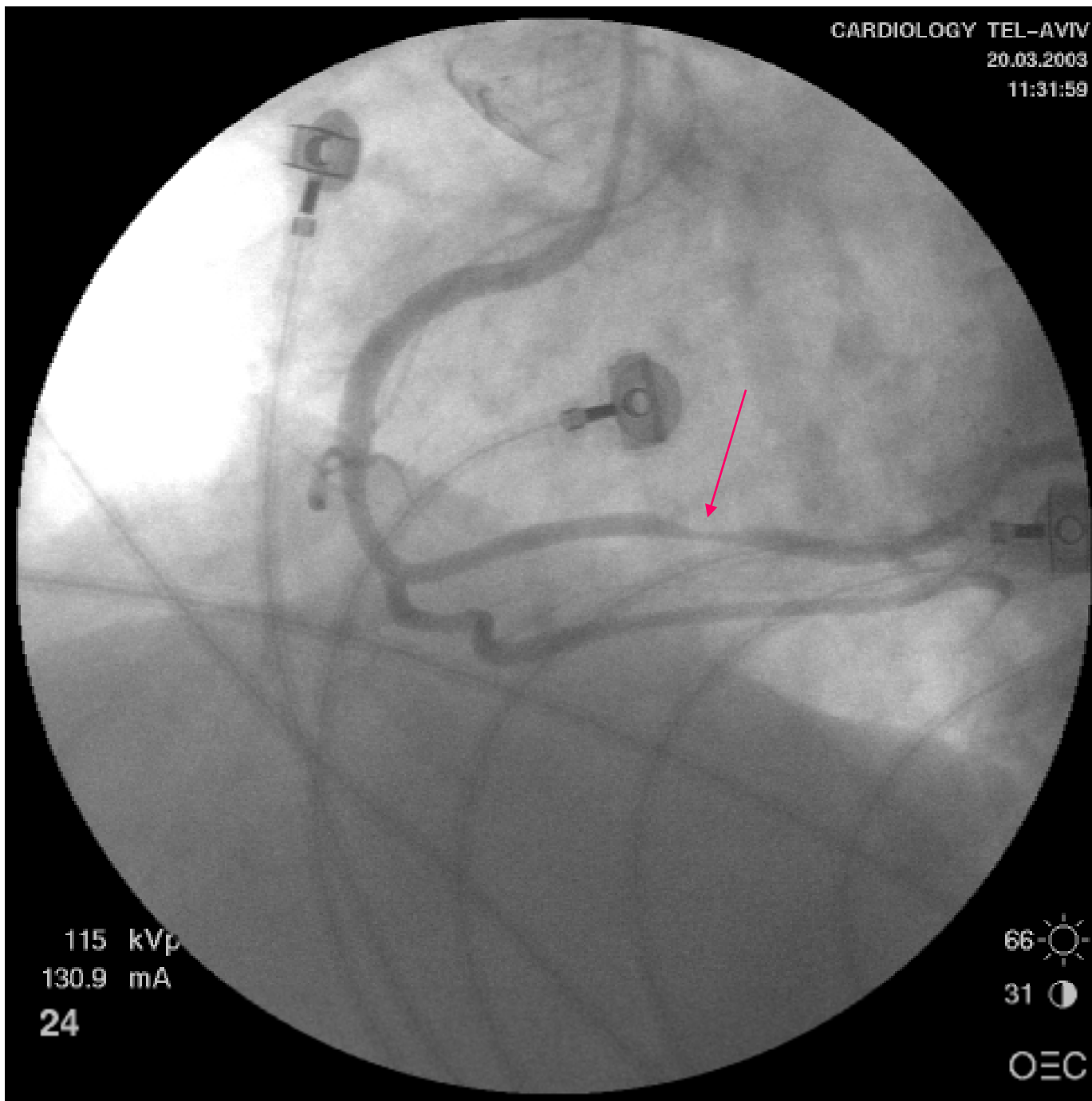
50 
24 

OEC

CARDIOLOGY TEL-AVIV

20.03.2003

11:31:59



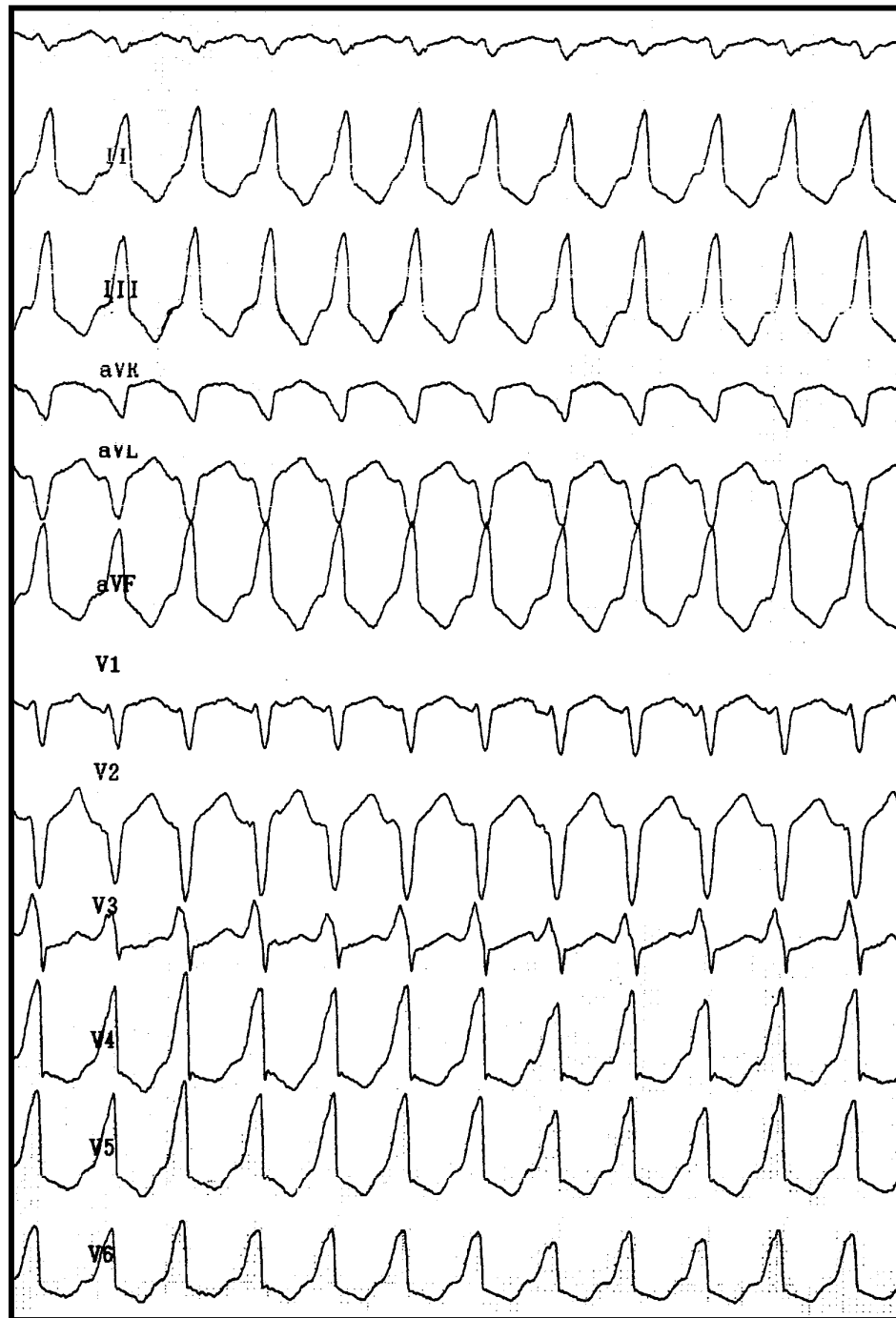
115 kVp
130.9 mA
24

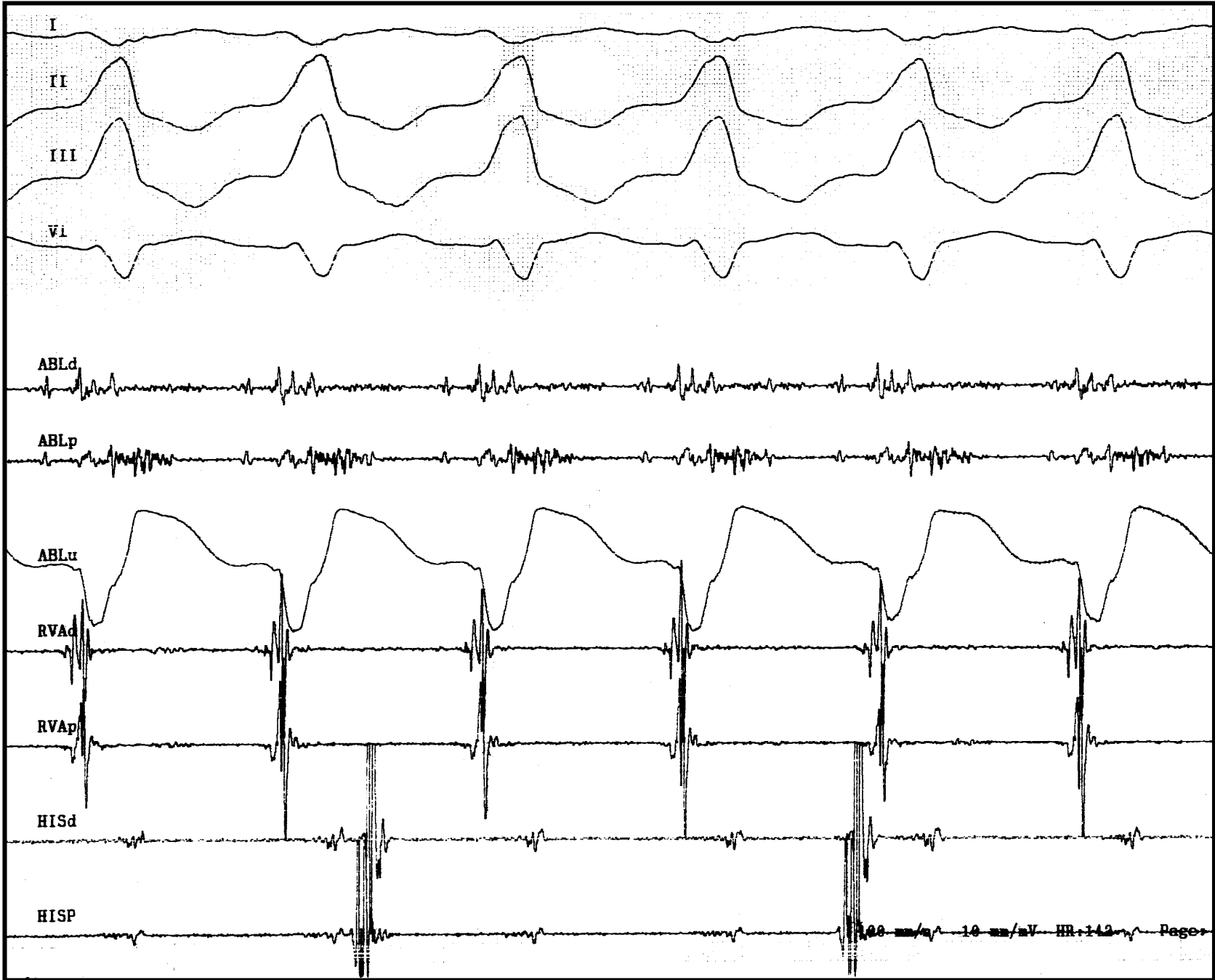
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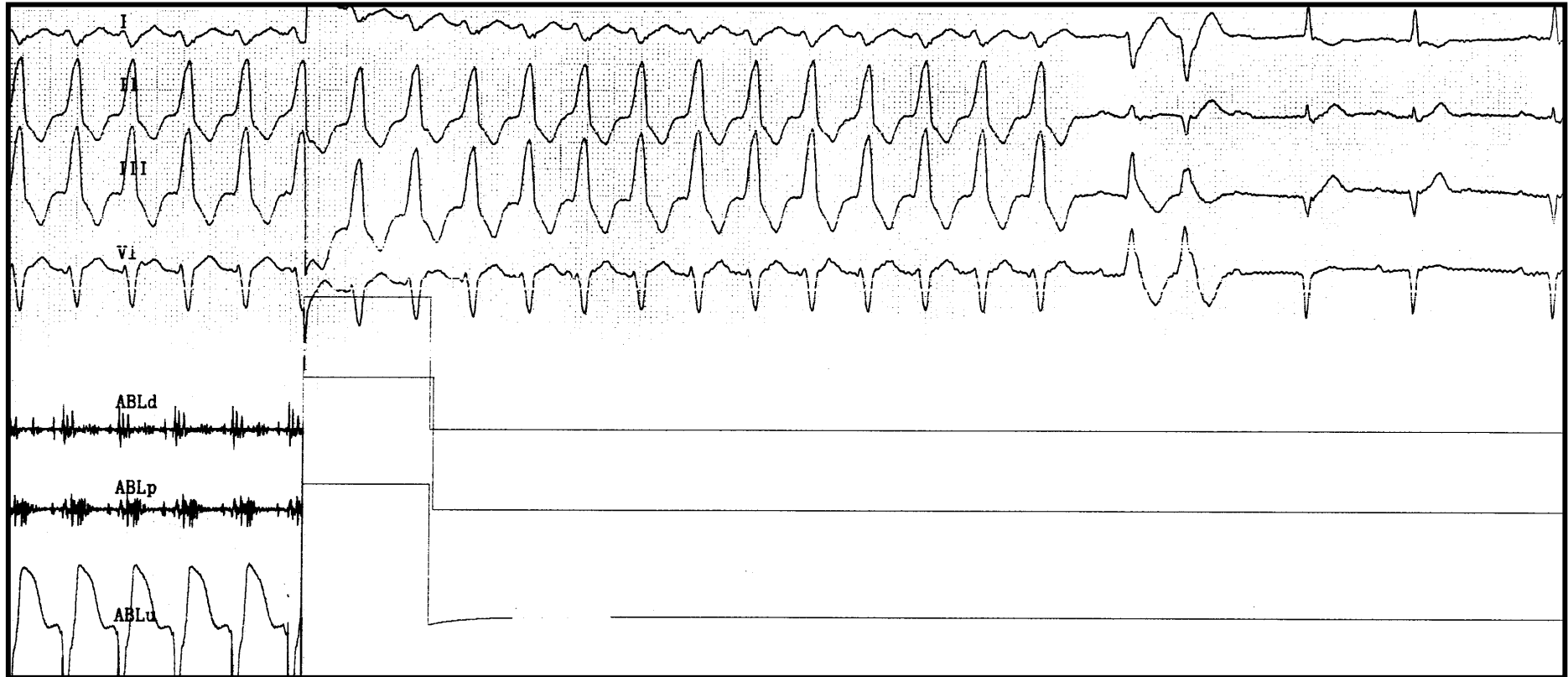
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OEC

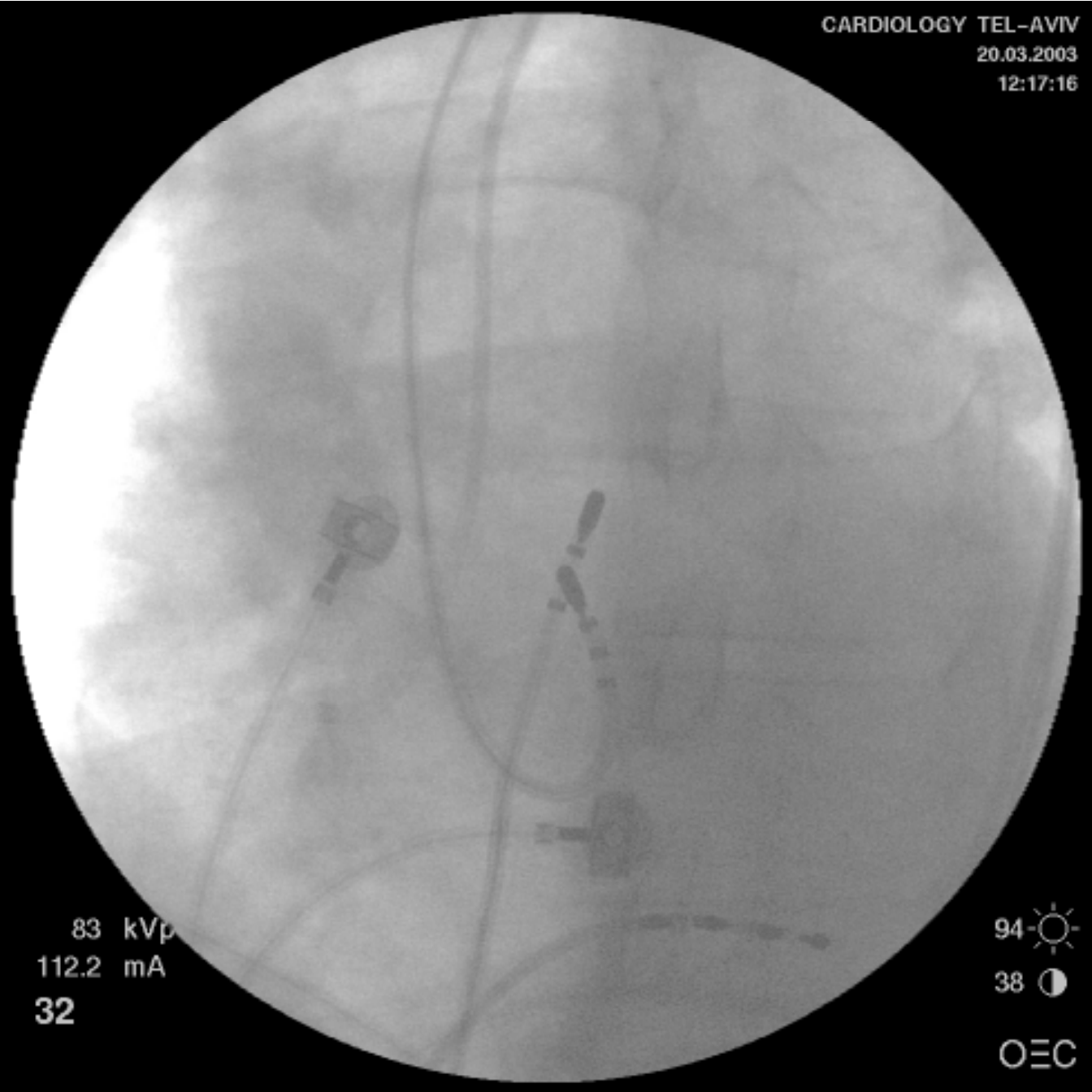








LAO



AP

CARDIOLOGY TEL-AVIV

20.03.2003

12:18:07



83 kVp
112.2 mA
33

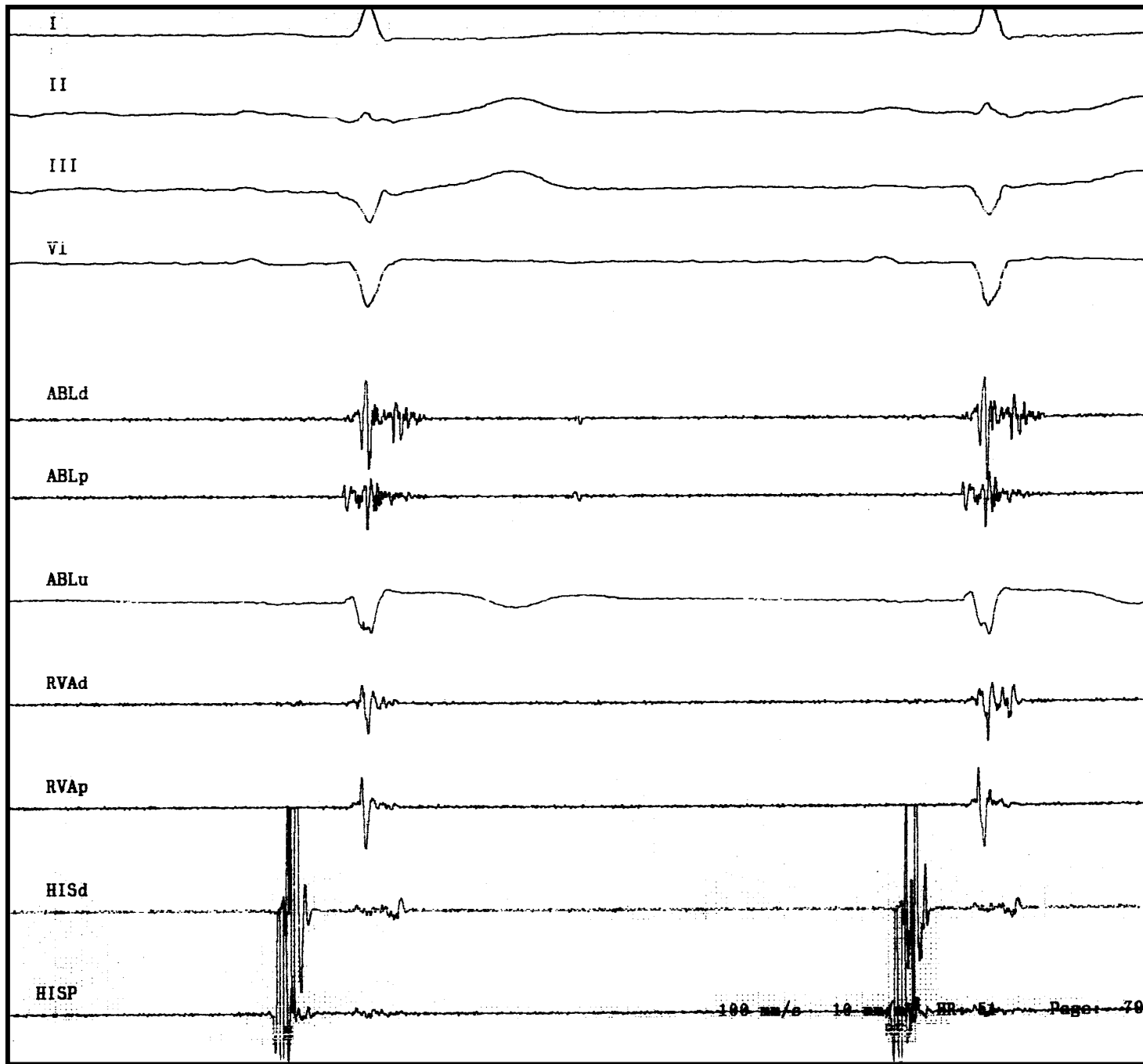
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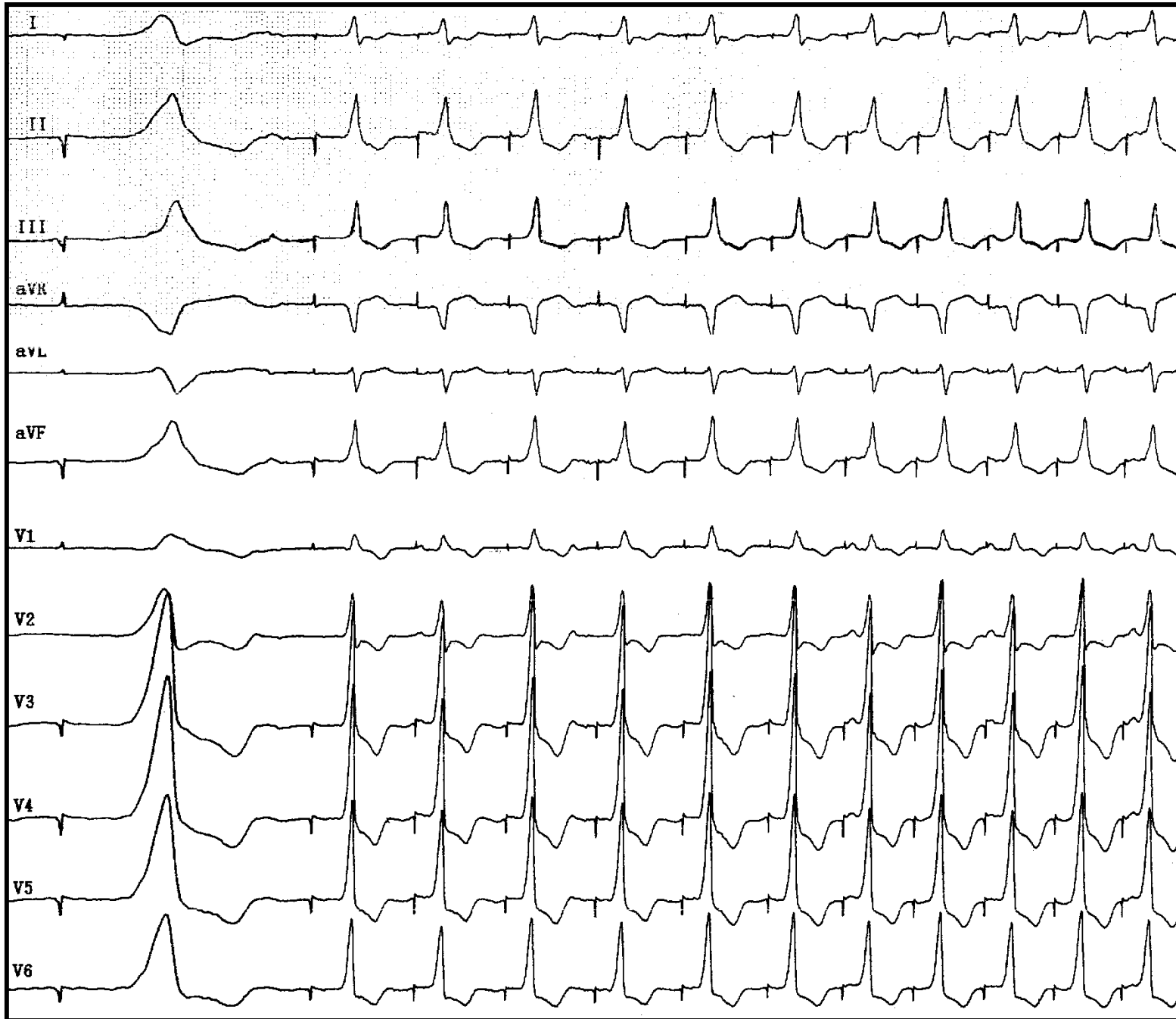
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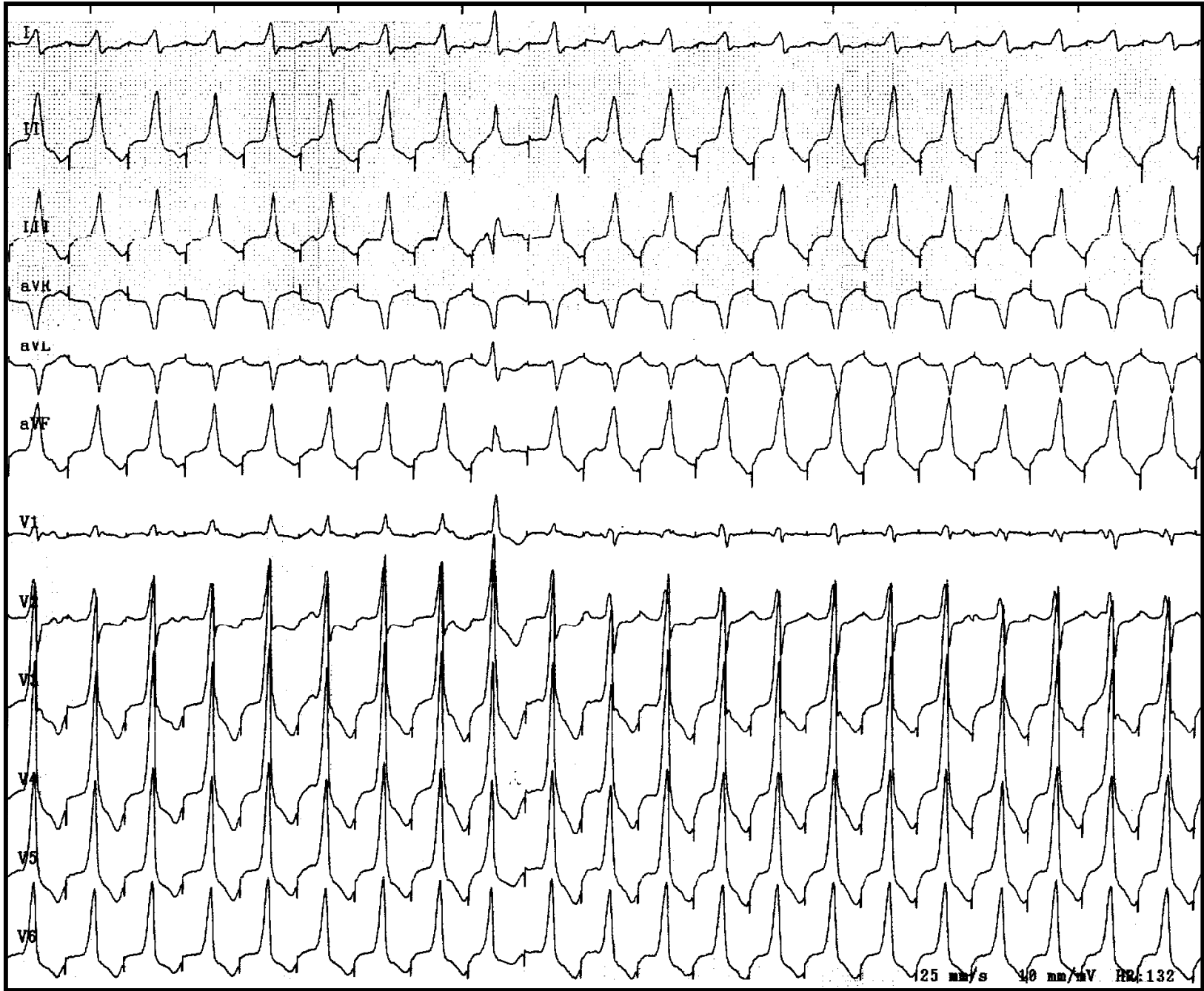
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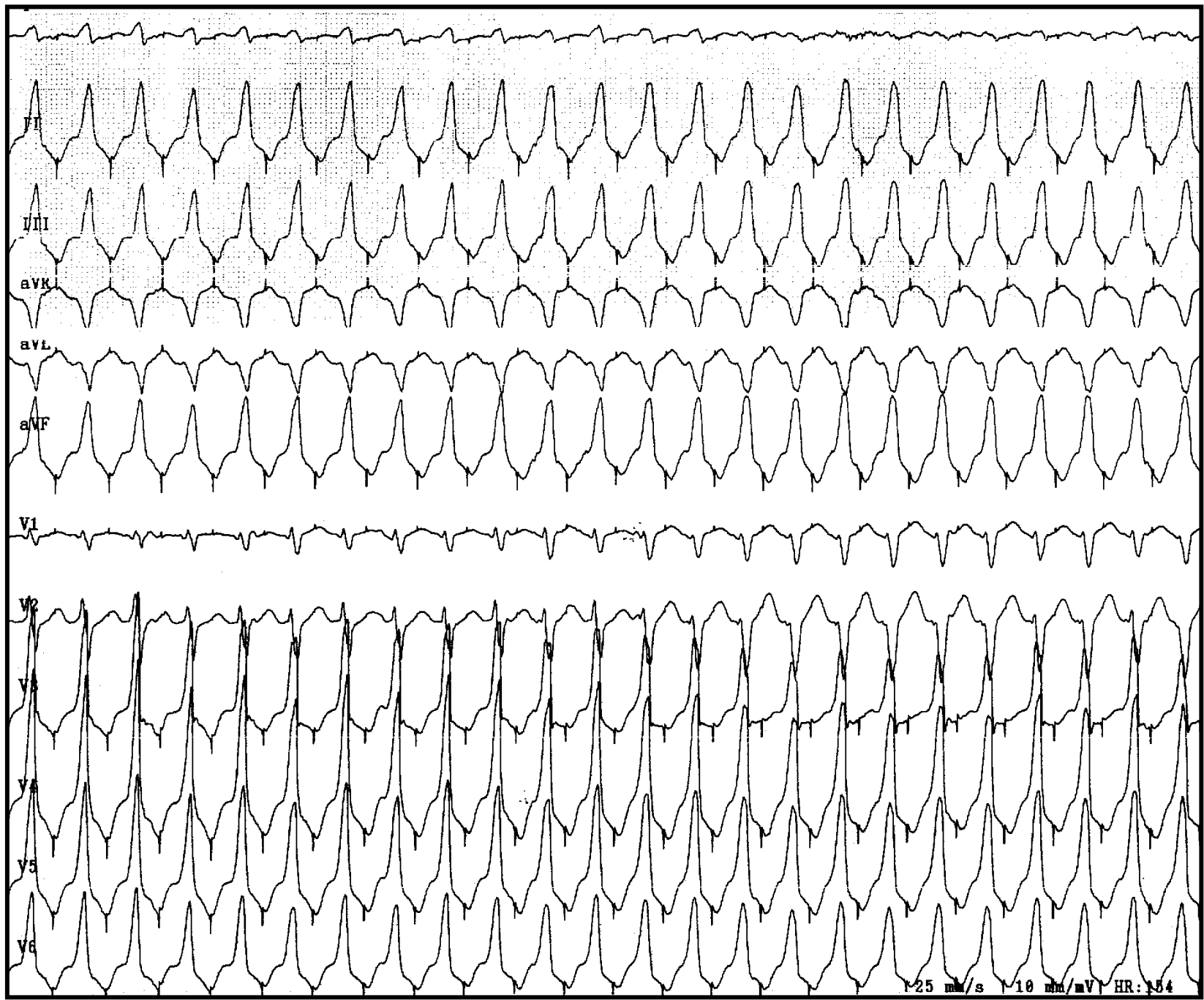
RAO

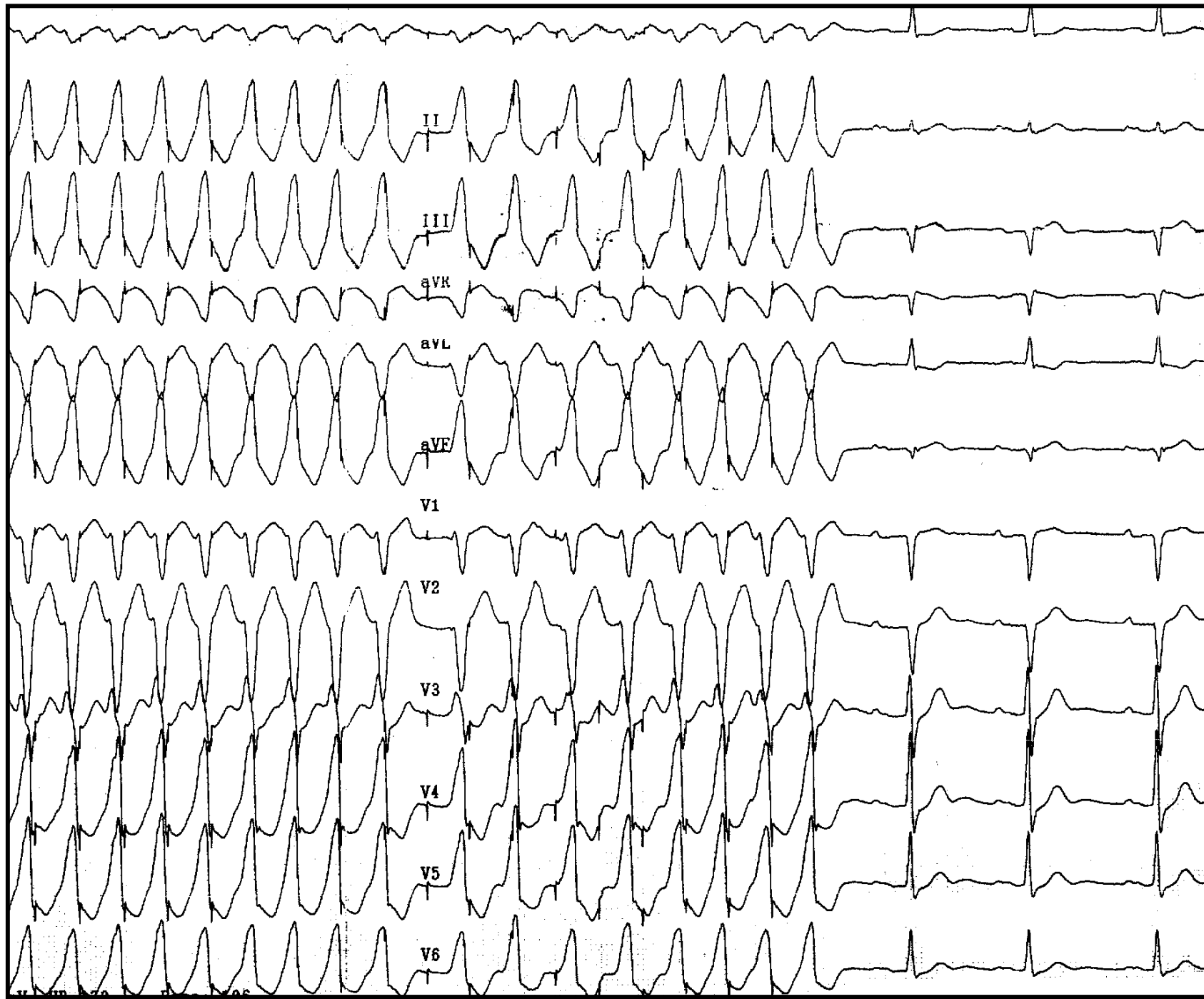


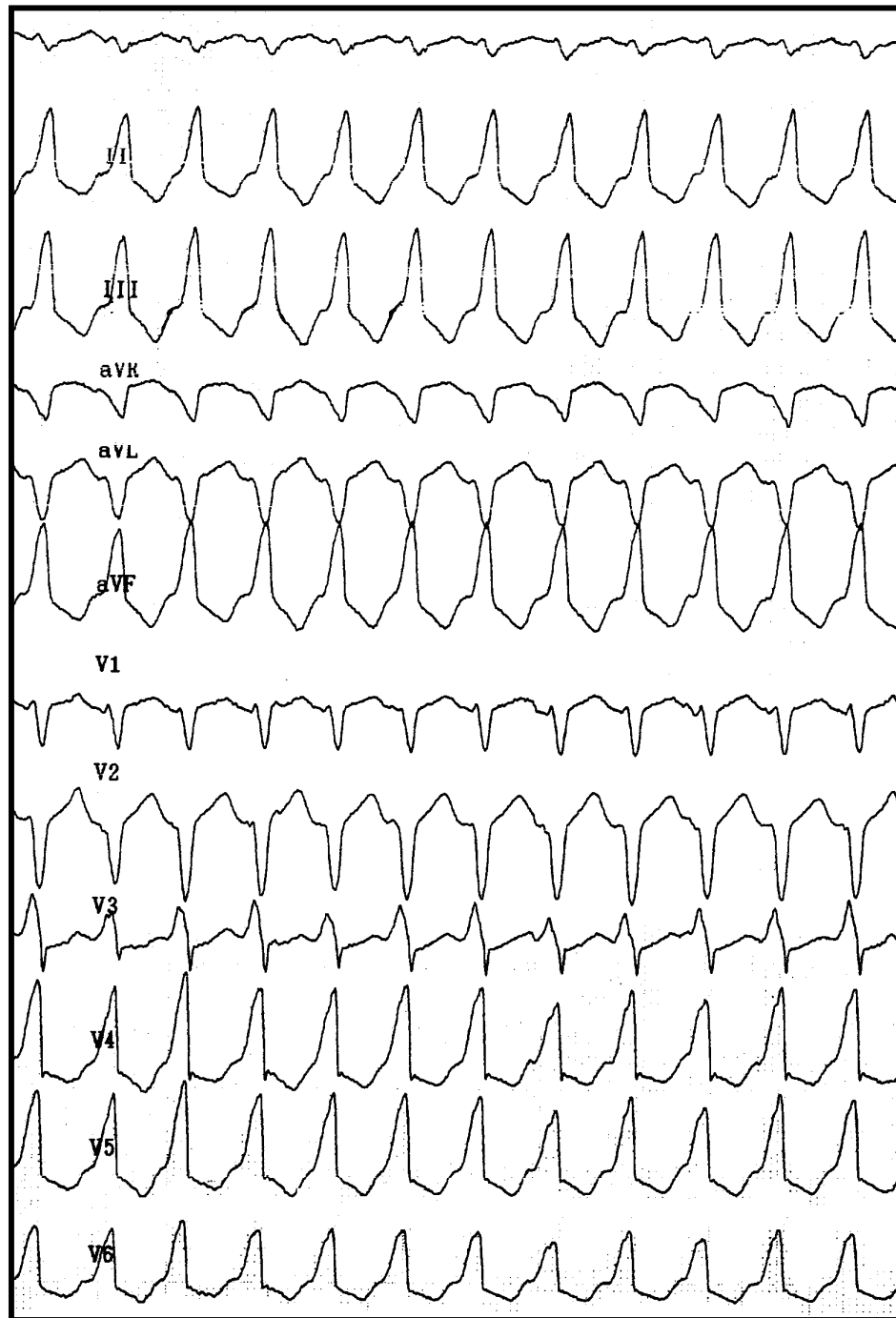




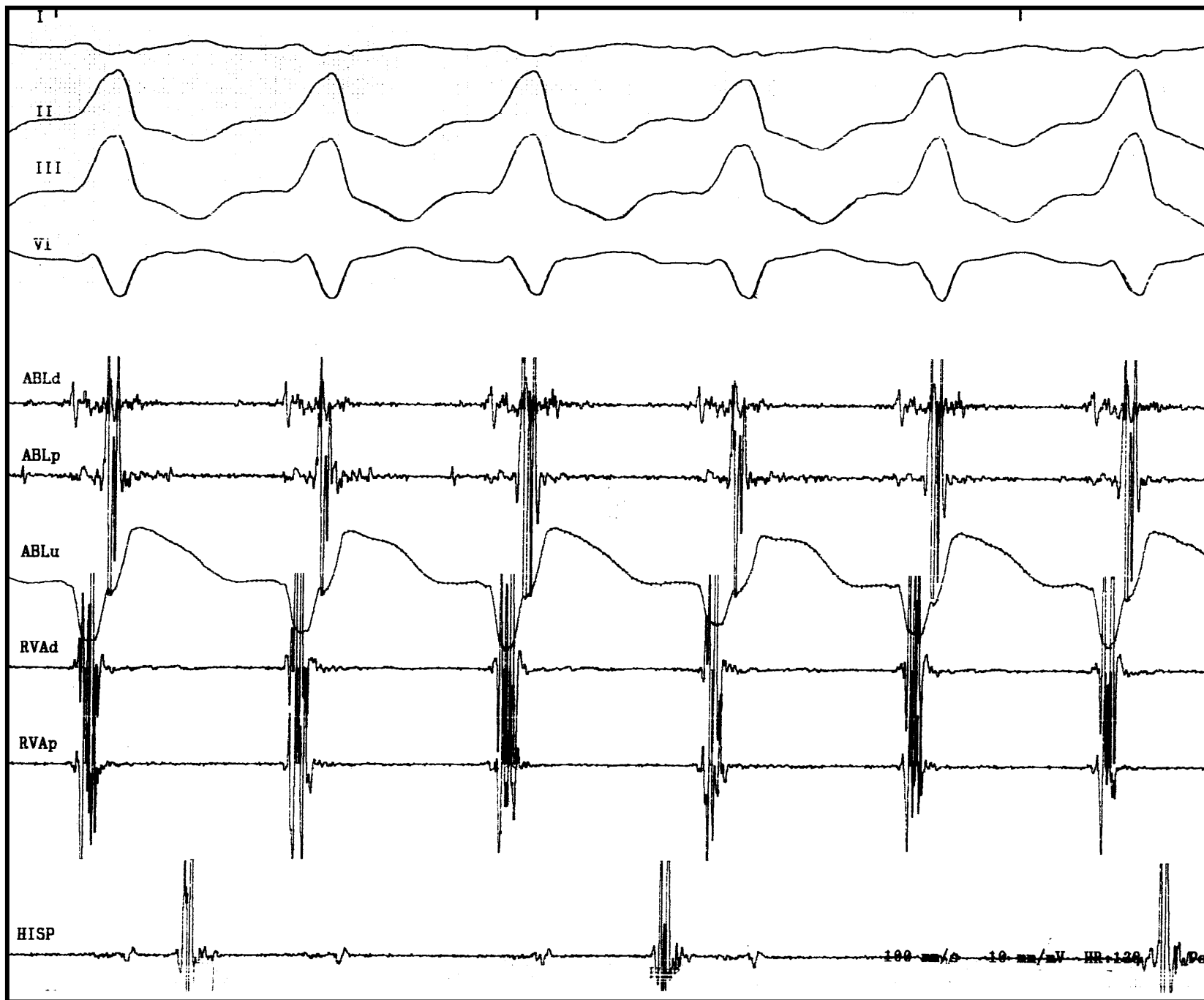


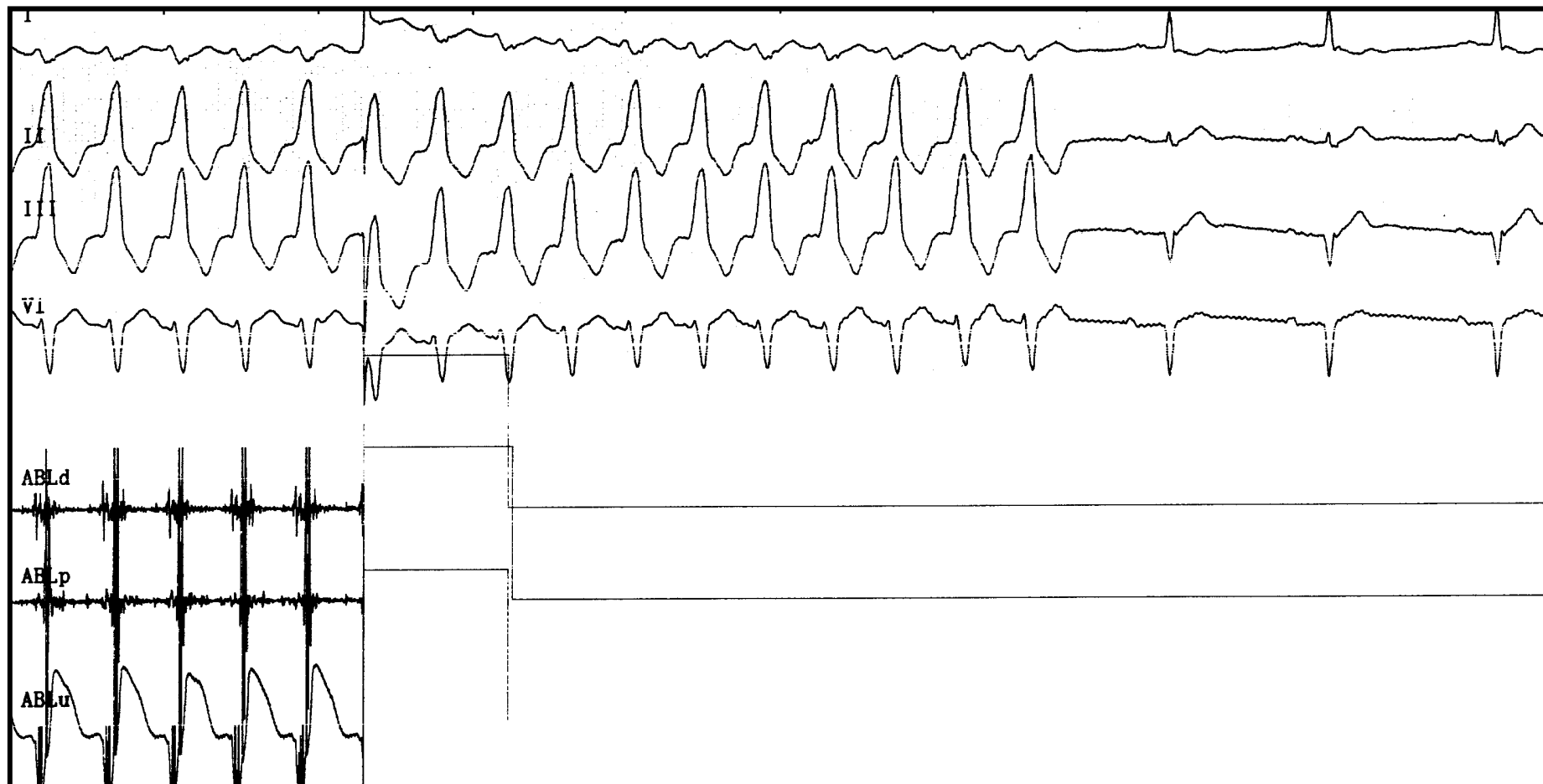








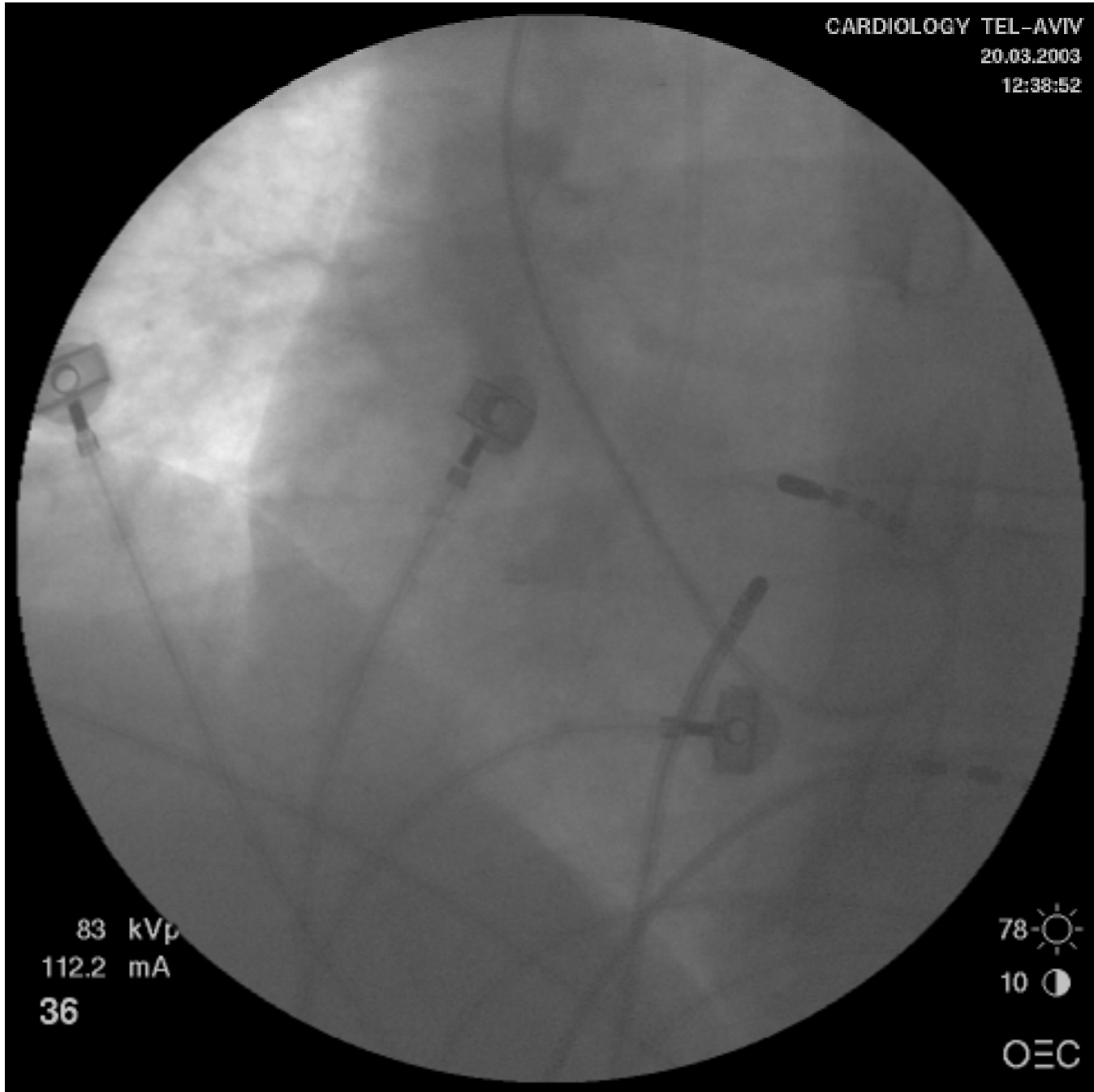




LAO



LAO

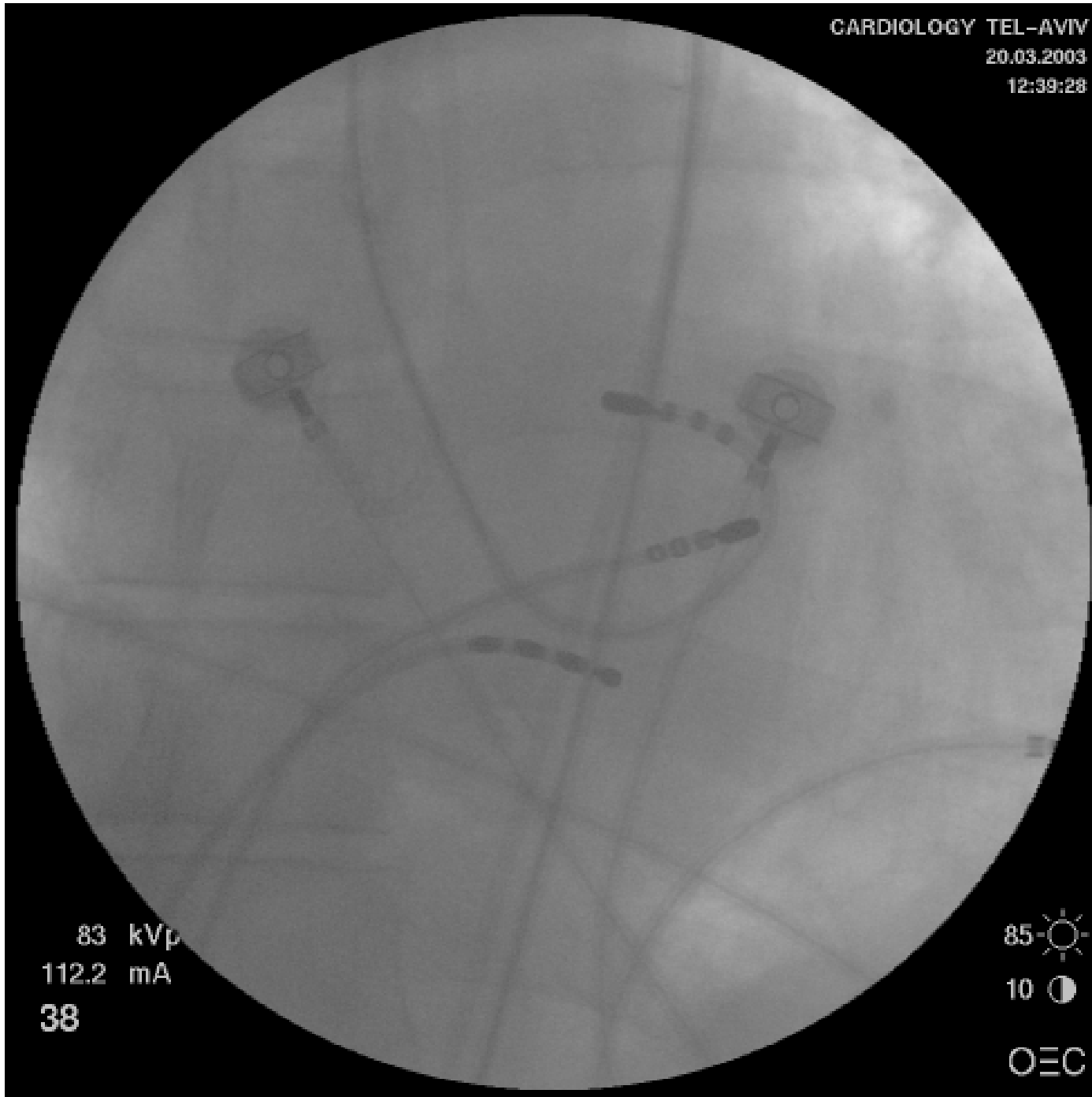


AP

CARDIOLOGY TEL-AVIV

20.03.2003

12:39:28



83 kVp
112.2 mA
38

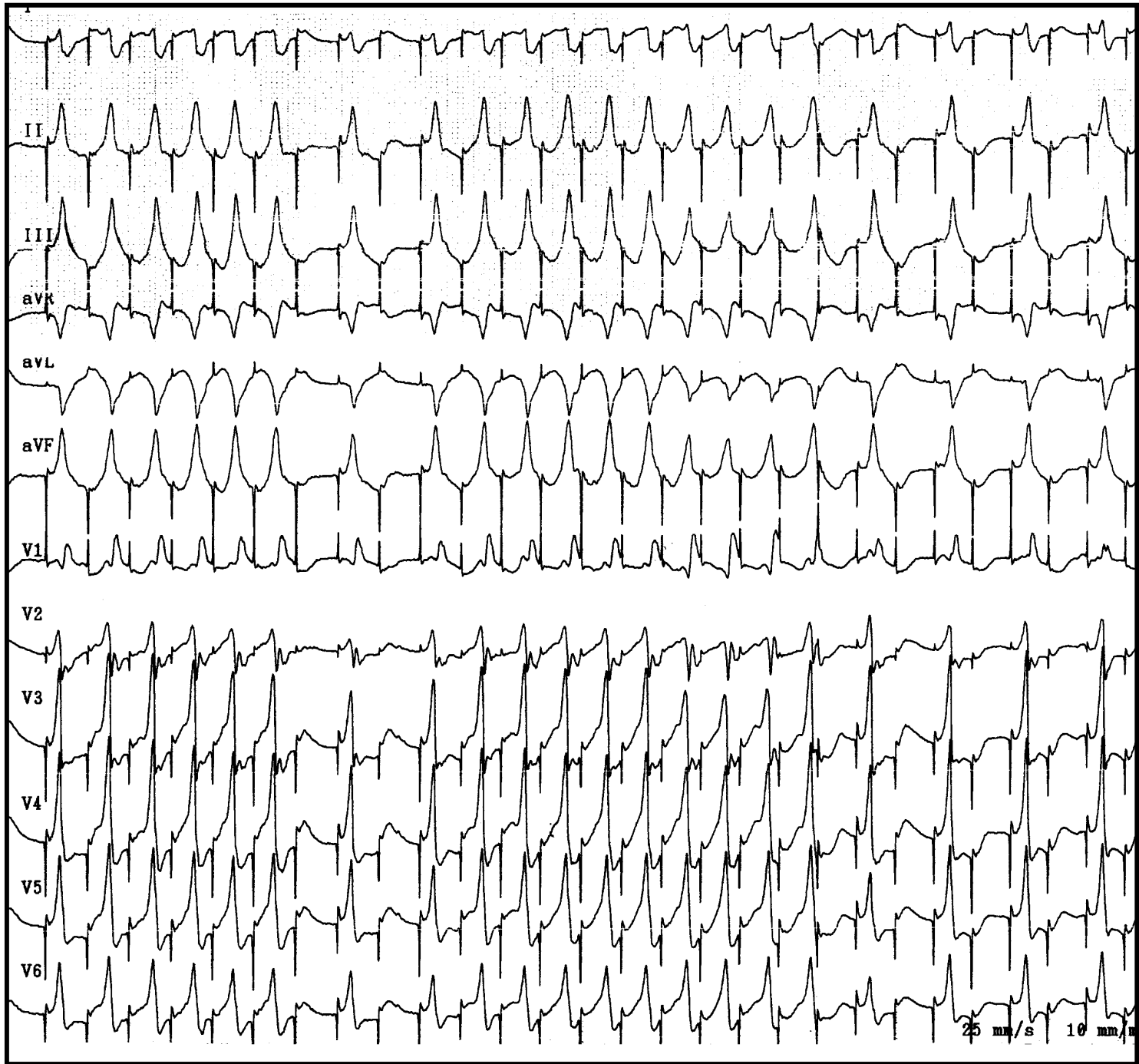
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10 

OEC

RAO





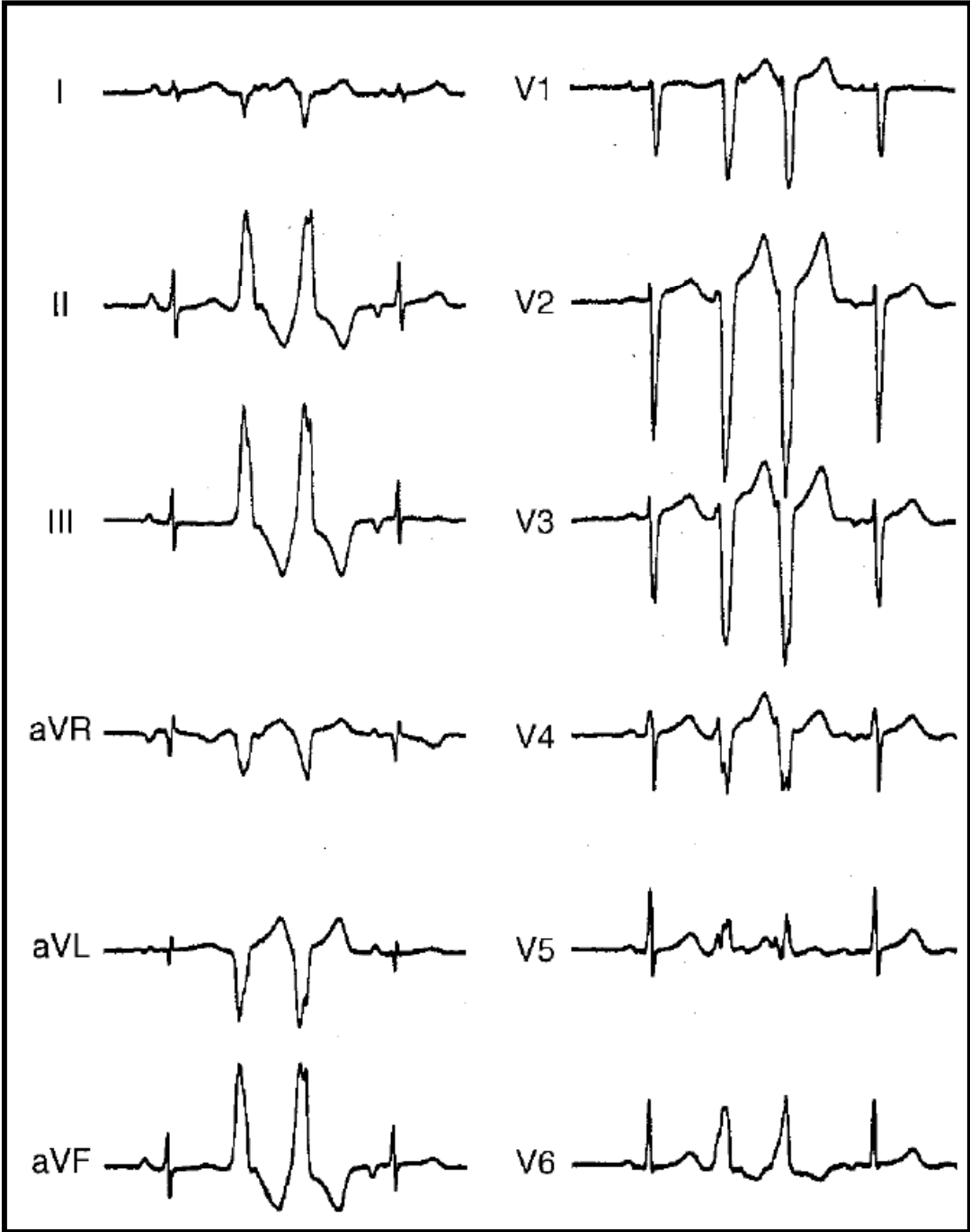
Idiopathic Right VT

Right ventricular outflow tract VT

1. Septal +++++ (anteroseptal+++)
2. Free wall

Other RV sites

RBB origin



RV Outflow Tract VT

- **Mechanism:**
 - cyclic AMP triggered activity +++++
 - reentry +
 - automaticity +

Table III.**Electrocardiographic Characteristics of
Ventricular Tachycardia**

	Success (n = 30)	Failure (n = 5)	P Value
Inferior axis	26 (87%)	3 (60%)	0.20
QRS duration (ms)	142 ± 9	140 ± 10	0.78
R wave amplitude			
II (mV)	1.6 ± 0.4	1.8 ± 0.5	0.49
III (mV)	1.5 ± 0.5	1.8 ± 0.7	0.18
aVF (mV)	1.5 ± 0.4	1.7 ± 0.5	0.58
Absence of R wave V ₁	14 (47%)	0 (0%)	0.13
R wave amplitude in V ₁ (mV)	0.08 ± 0.10	0.28 ± 0.25	0.002
Transitional zone	V ₃ (5), V ₄ (15), V ₅ (8), V ₆ (2)	V ₃ (5)	0.004

Idiopathic Left VT

Fascicular VT

1. left posterior fascicular VT: RBBB-LAD +++
2. left anterior fascicular VT: RBBB-RAD
3. upper septal fascicular VT

Left ventricular outflow tract VT

1. endocardial origin (“True LVOT”)
2. coronary cusp origin
3. epicardial origin

LV Outflow Tract VT

- **Mechanism:**
 - Triggered activity +++++
 - reentry +
 - automaticity

TABLE 1

Number of Patients with Various Types of Idiopathic
Ventricular Tachycardia

VT	Total	M	F	M/F Ratio
RVOT-VT	464	153	311	0.49
LVOT-VT	57	33	24	1.38
LV-VT	227	175	52	3.37
Total	748	361	387	

F = females; M = males. Other abbreviations as defined in text.

Nagakawa JCE 2002

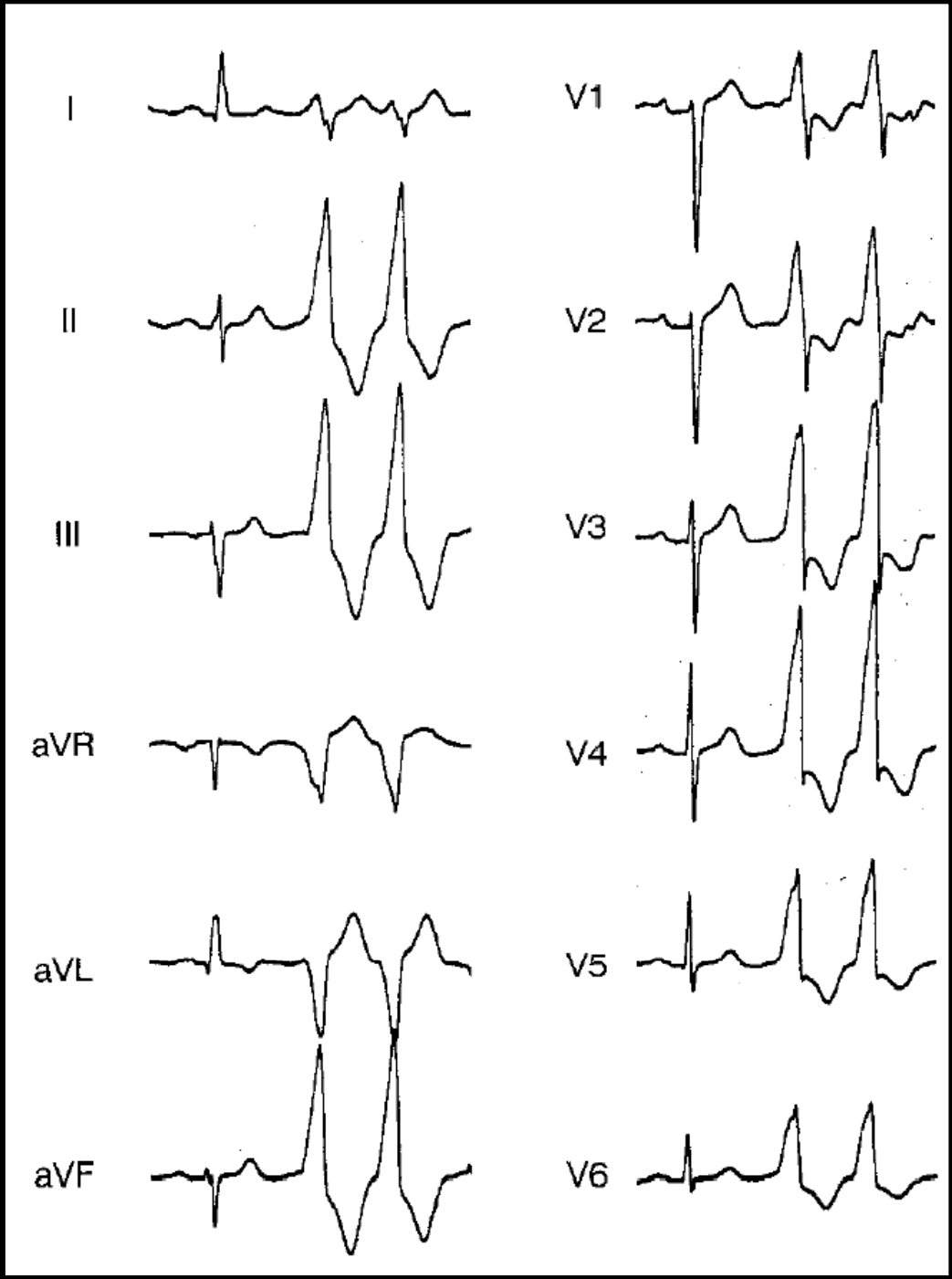
ECG: Coronary Cusp VT

- S in lead I
- Tall R in II, III, VF
- Precordial transition V1-V2, rarely V3
- No S in V5-V6
- LCC+++++ RCC+

Hachiya JCE 6/2002

ECG: LVOT- Endocardial

- S in lead I
- Rs in V5-V6



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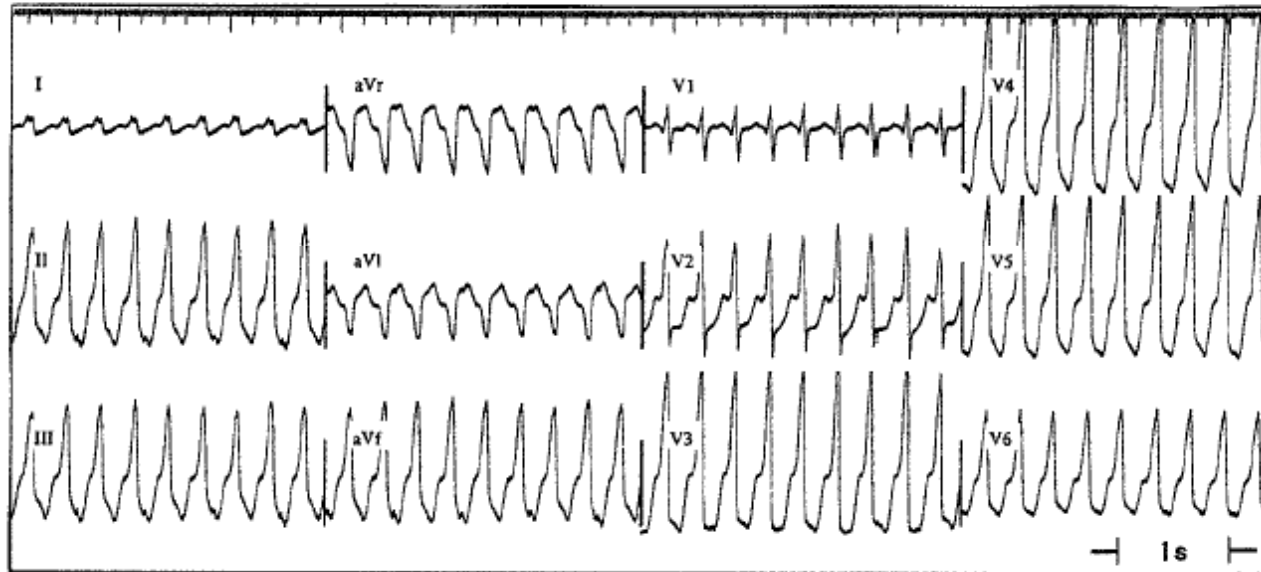
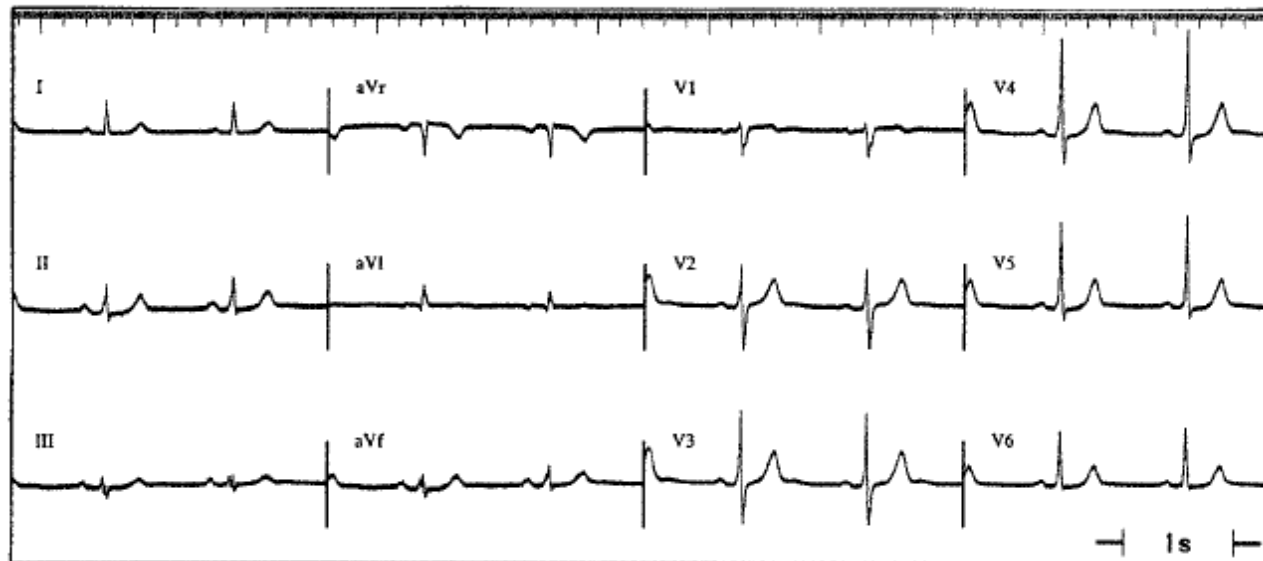
How to Diagnose, Locate, and Ablate Coronary Cusp Ventricular Tachycardia

HITOSHI HACHIYA, M.D., KAZUTAKA AONUMA, M.D., YASUTERU YAMAUCHI, M.D.,
MASAYUKI IGAWA, M.D., AKIHIKO NOGAMI, M.D.,* and YOSHITO IESAKA, M.D.†

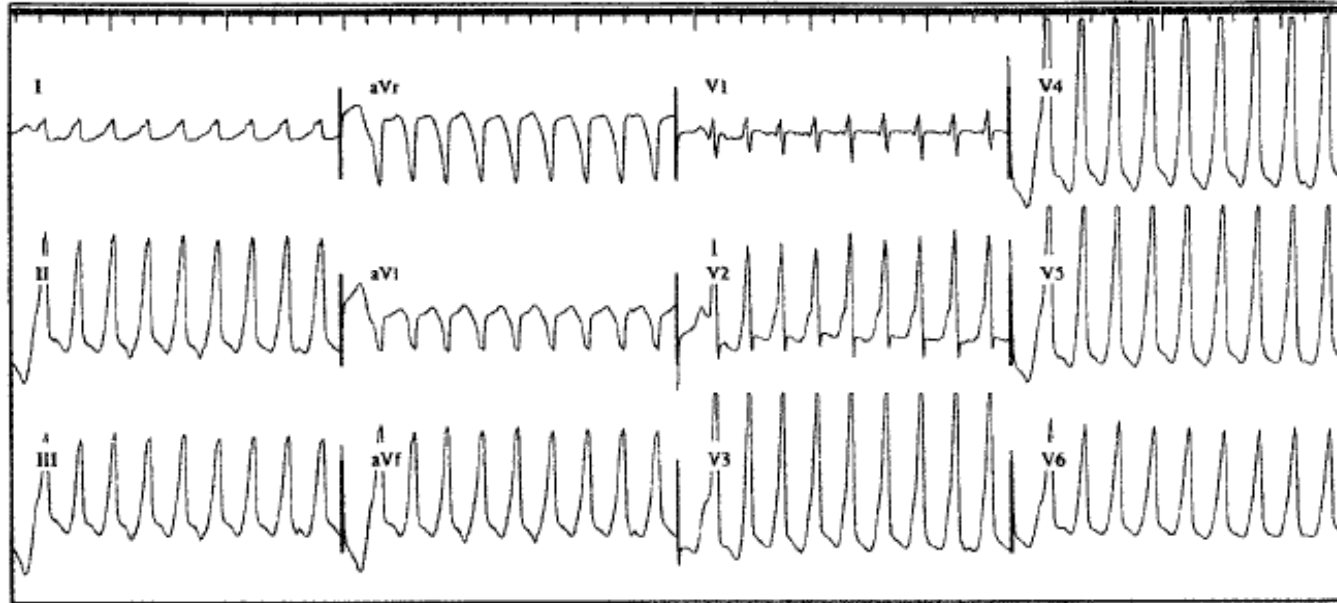
From the Cardiology Department, Yokosuka Kyosai General Hospital, Kanagawa; the *Cardiology Department, Yokohama Rosai Hospital, Kanagawa; and the †Cardiology Department, Tsuchiura Kyodo Hospital, Ibaraki, Japan

Coronary Cusp VT Ablation

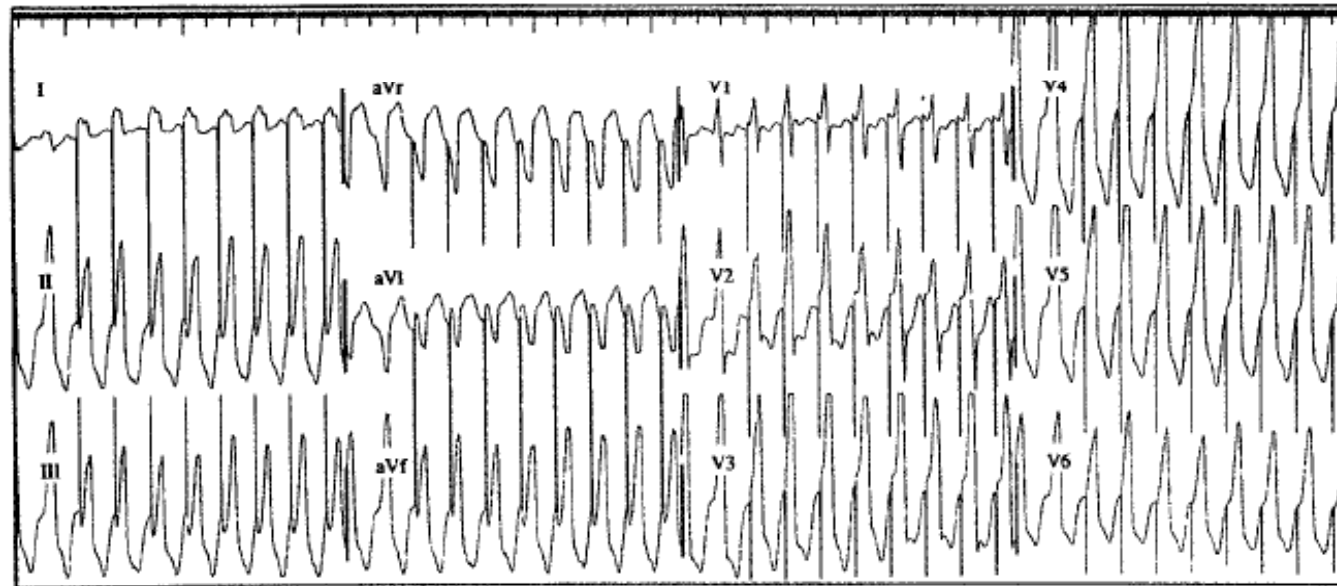
- 33 pts (18 LVOT-endo, 15 coronary cusp)
- 15 Cor Cusp VT: 2 Right CC, 13 Left CC
- ECG:
 - S in Lead I (rS, RS, QS)
 - Preordial transition zone: V1+++, V2, V3
- Mechanism:
 - triggered activity: 4 pts
 - reentry: 1 pt (RCC)
 - automaticiy ? 10 pts
- Successful RF ablation: 14/15

A**VT****B****SINUS RHYTHM**

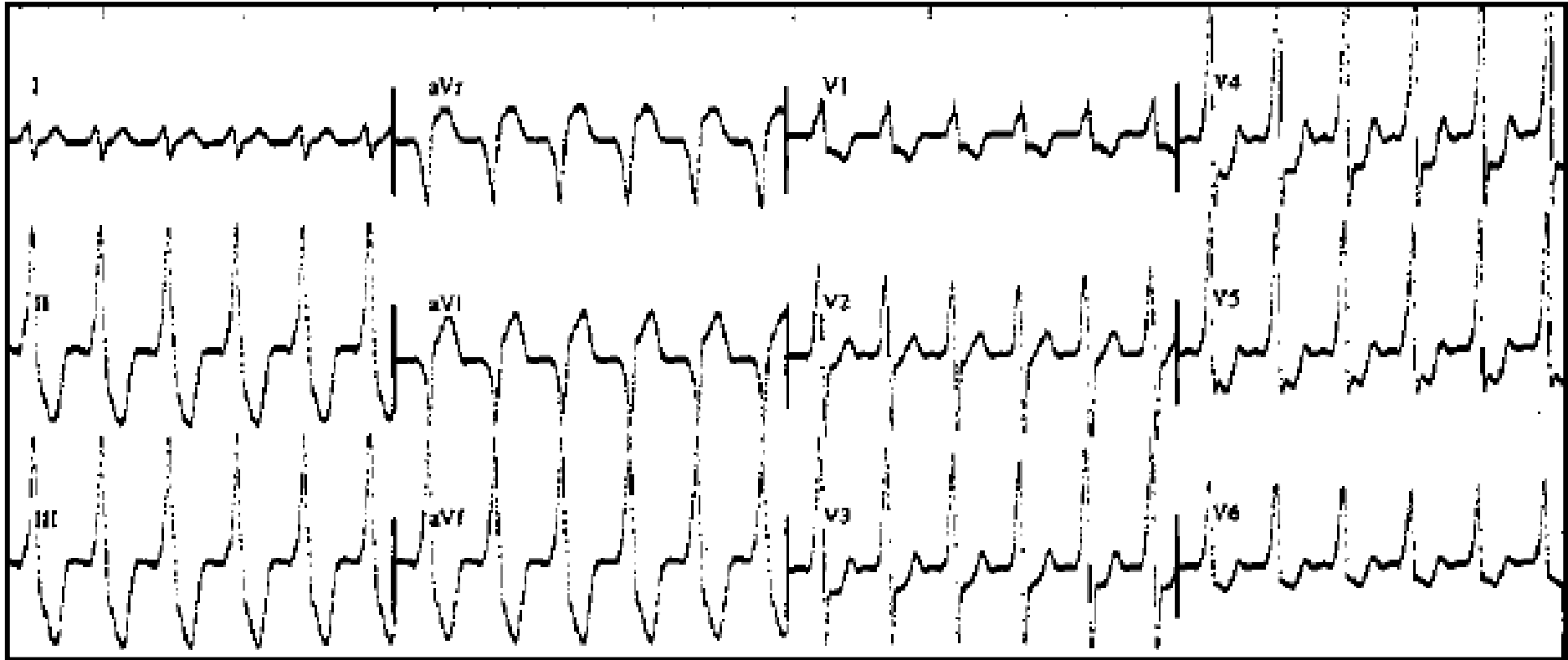
VT



PACE MAPPING AT AO (RCC)



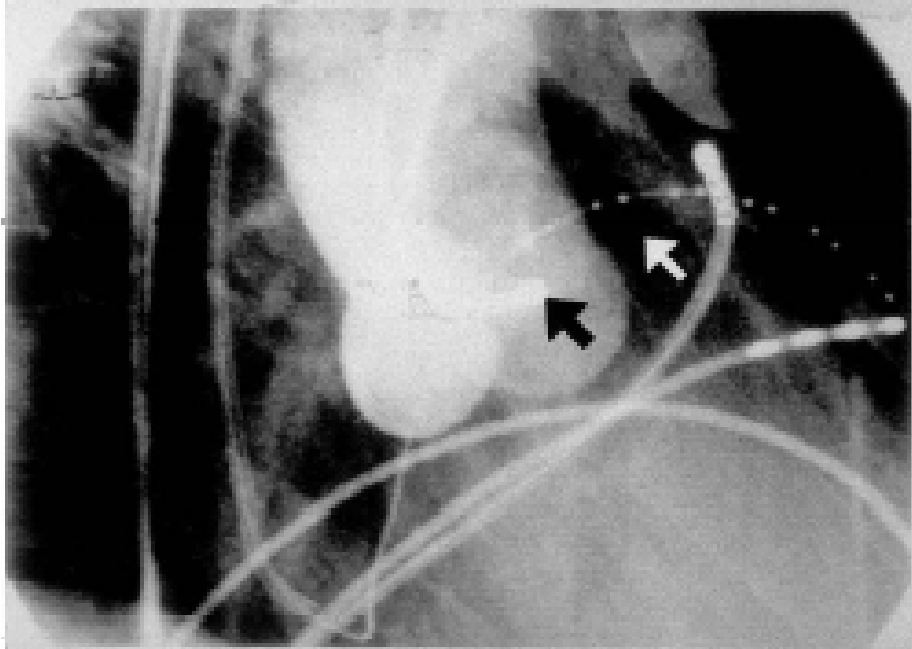
LEFT CORONARY CUSP VT



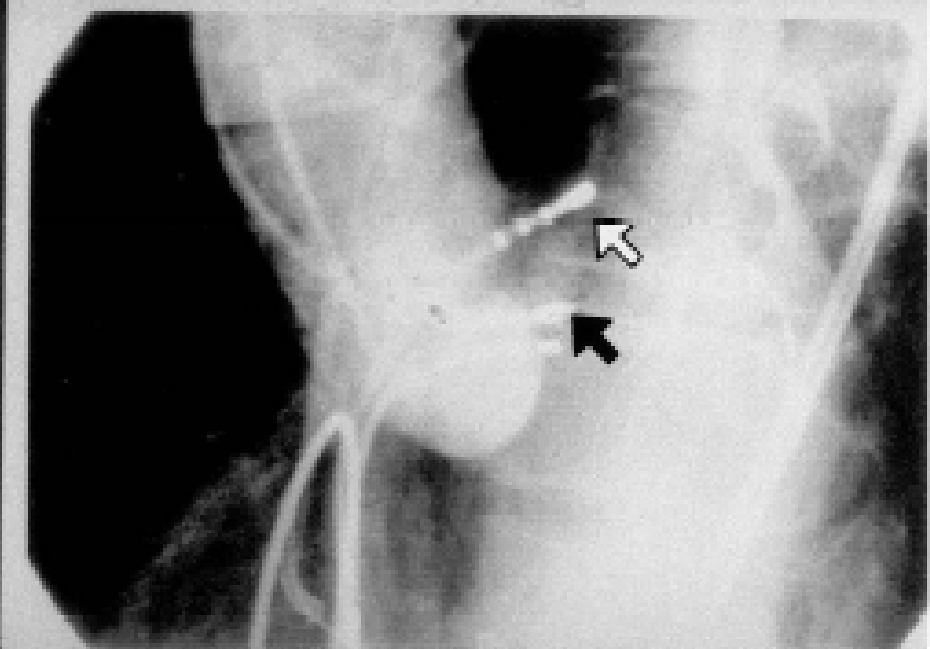
Hachiya JCE 2002

RF ABLATION OF LEFT CORONARY CUSP VT

RAO35°

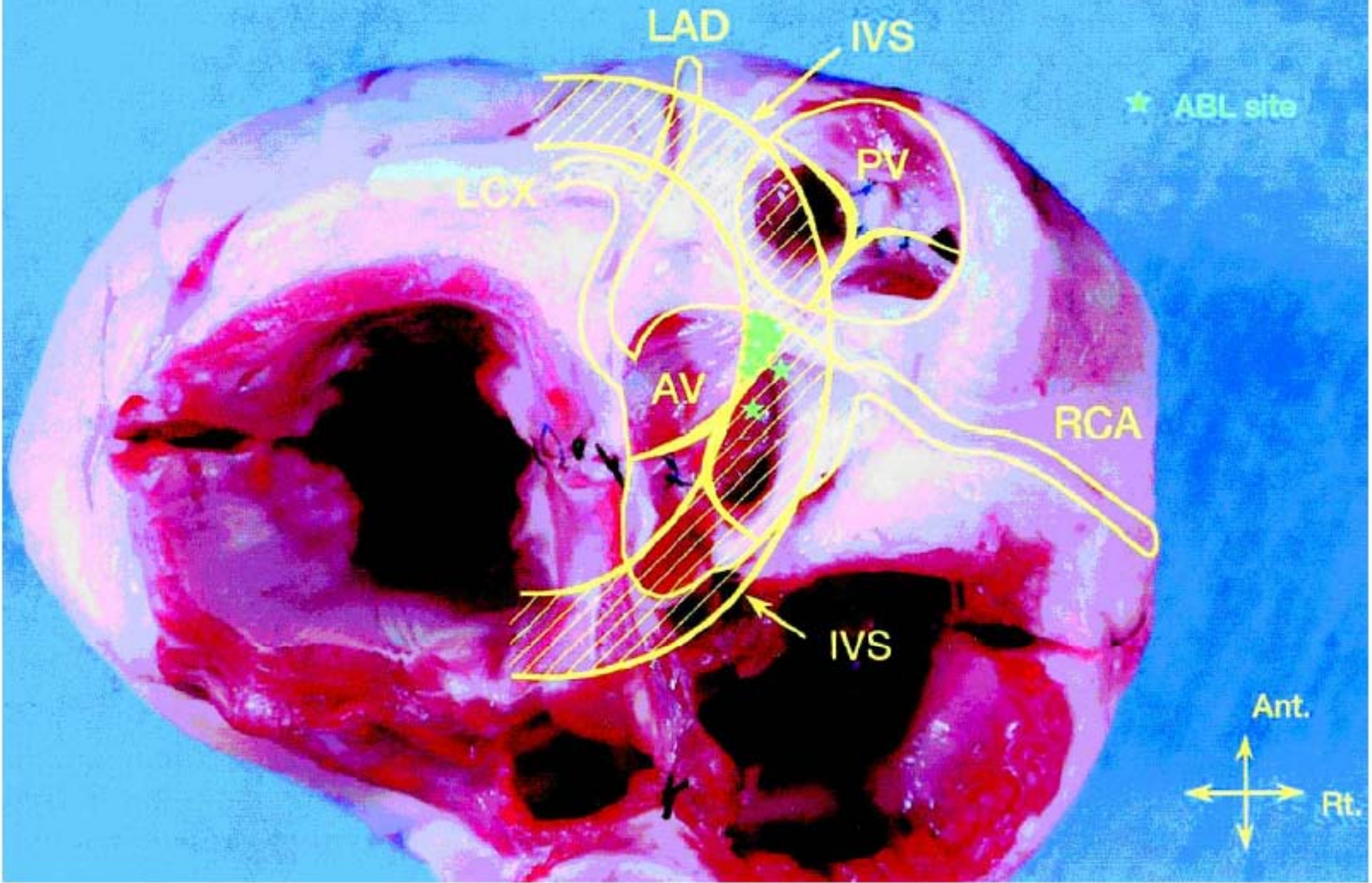


LAO45°



Hachiya JCE 2002

ANATOMY OF OUTFLOW TRACT



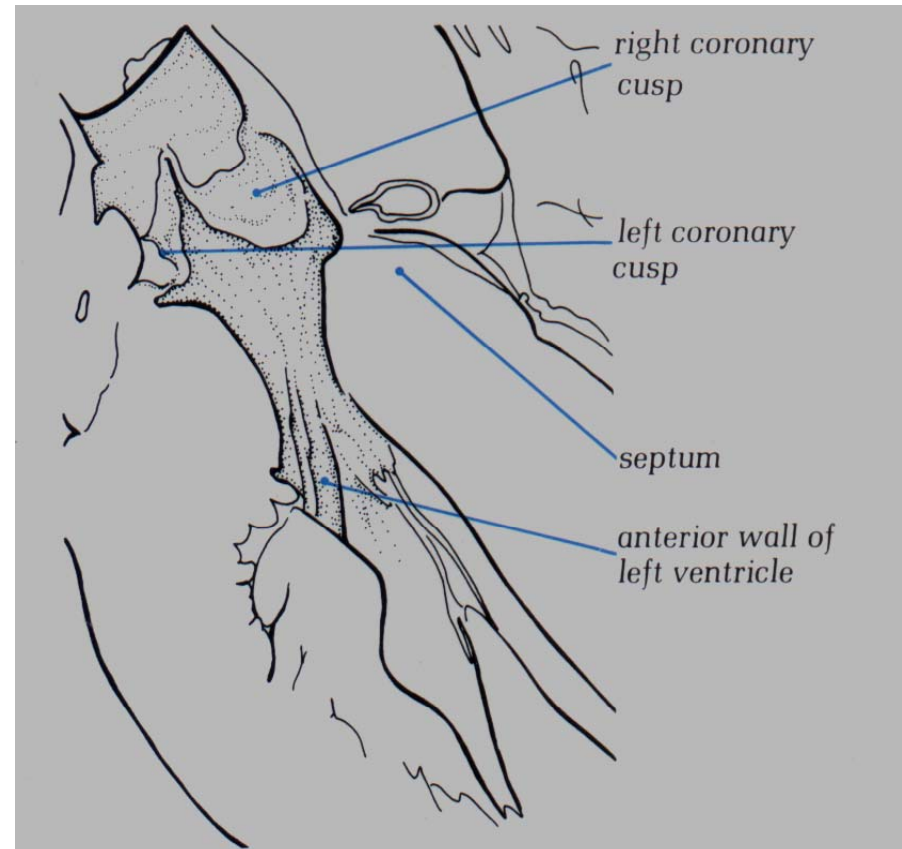
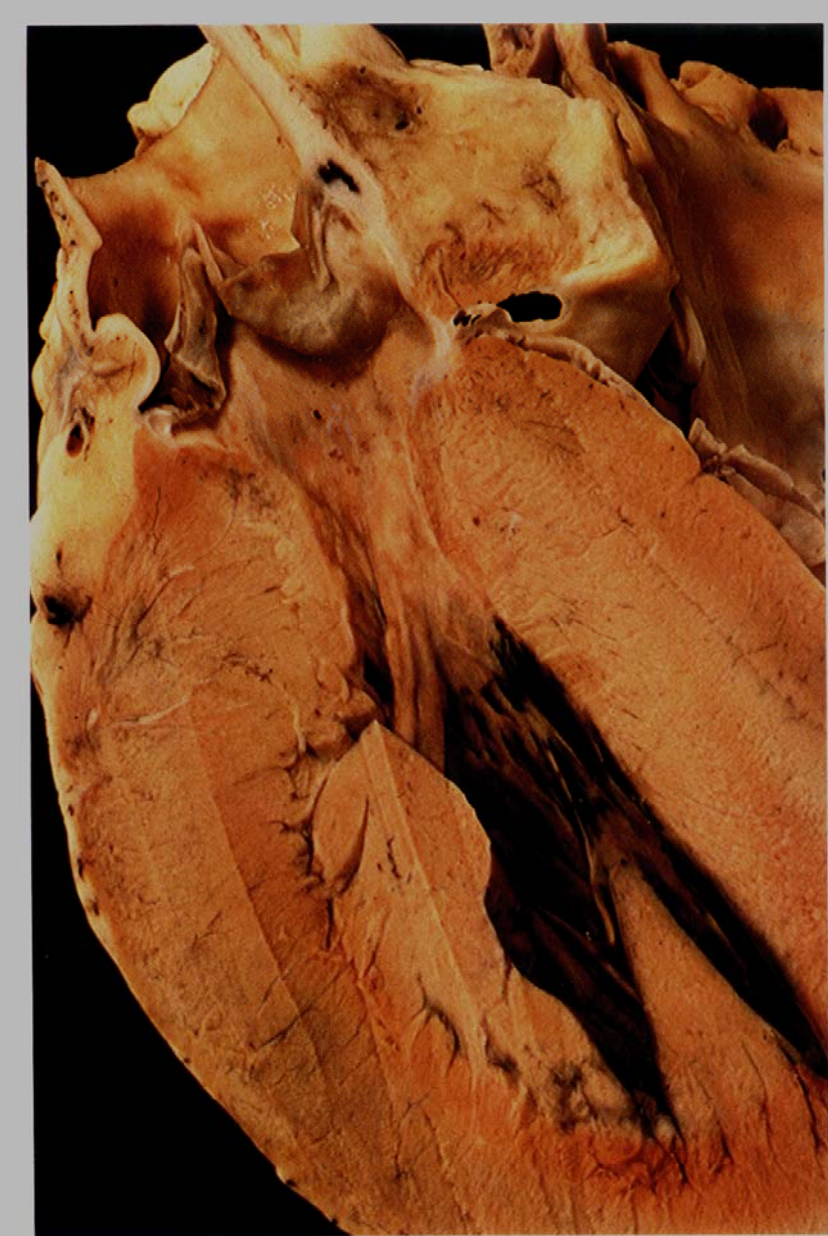


Fig. 4.23 The anterior half of the left ventricular outflow tract viewed from behind. The posterior part is shown in fig. 4.24. Note that the anterior quadrants are muscular.

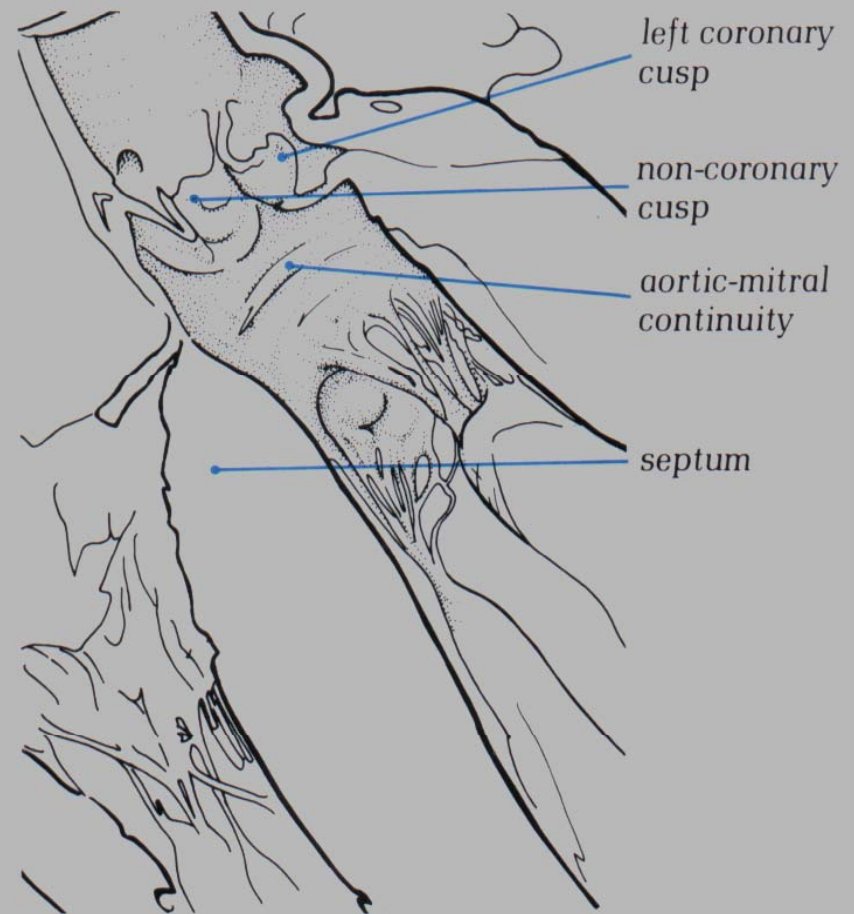
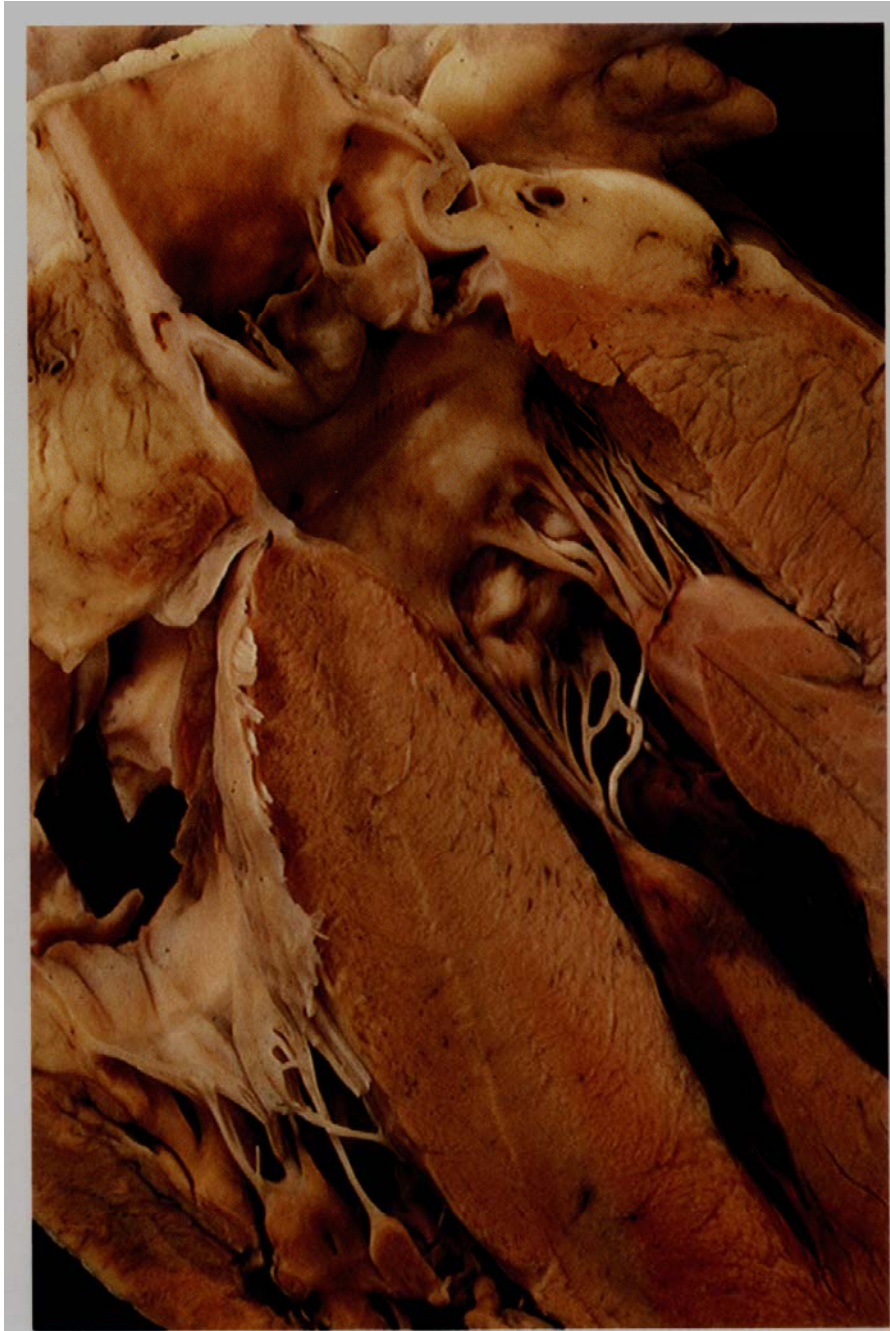


Fig. 4.24 The posterior half of the left ventricular outflow tract shown in fig. 4.23. Note the continuity between aortic and mitral valves.

THE END