

Successfully Restoration of Sinus Rhythm by Elimination of Paroxysmal Atrial Fibrillation and LAA Rhythm in A Sick Sinus Patient with Prolonged Sinus Pause

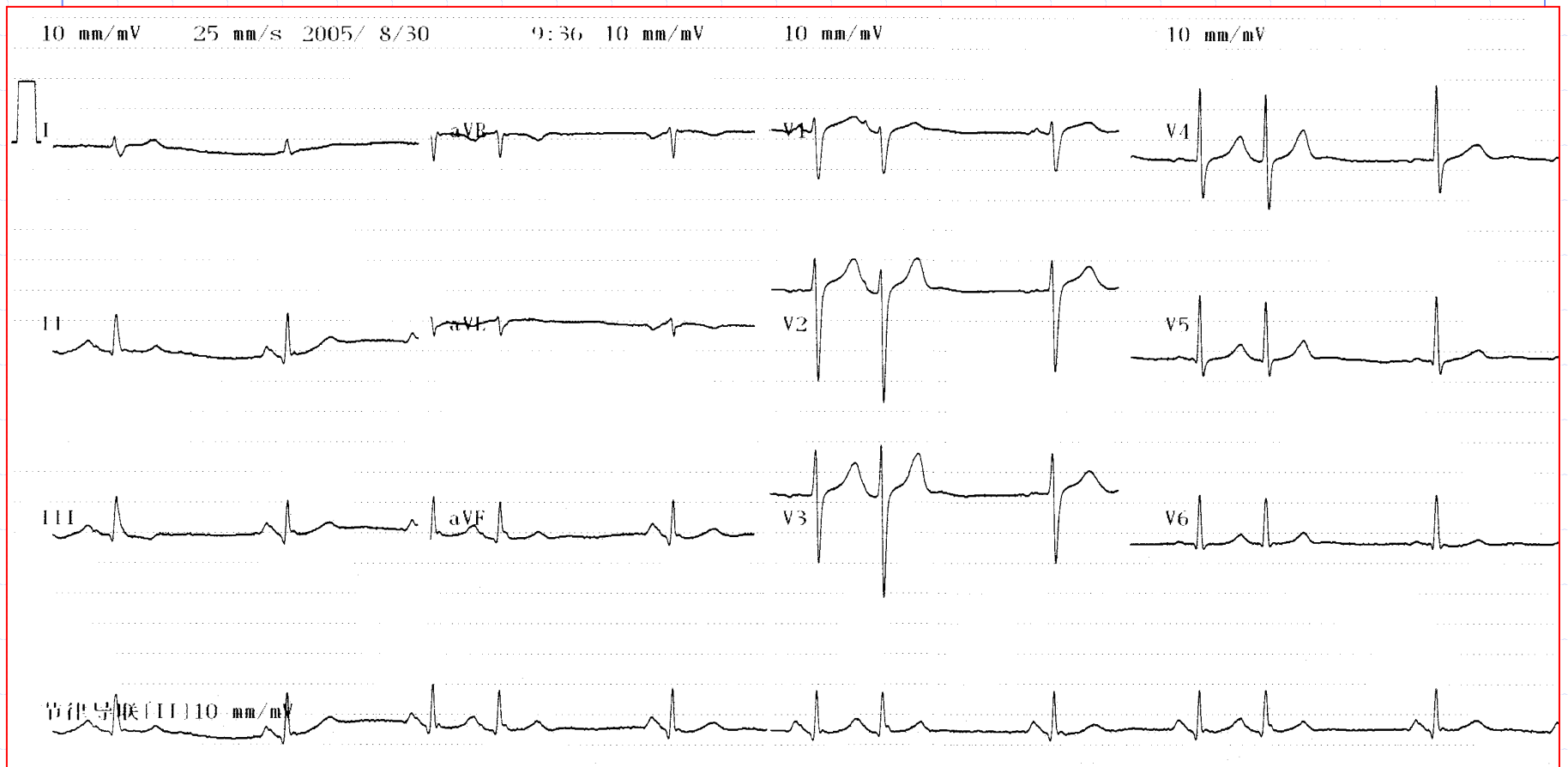
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Lianjun Gao, MD

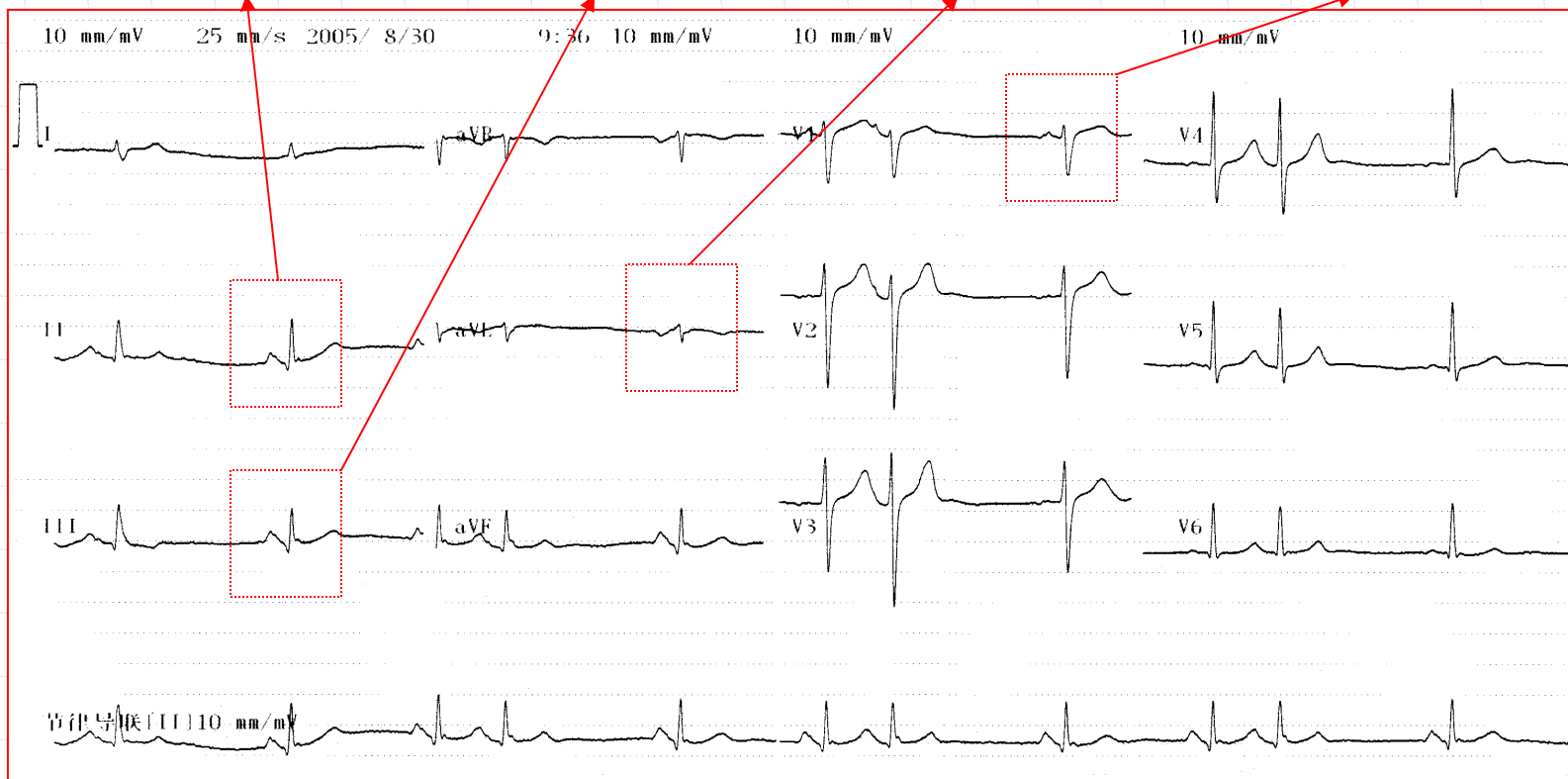
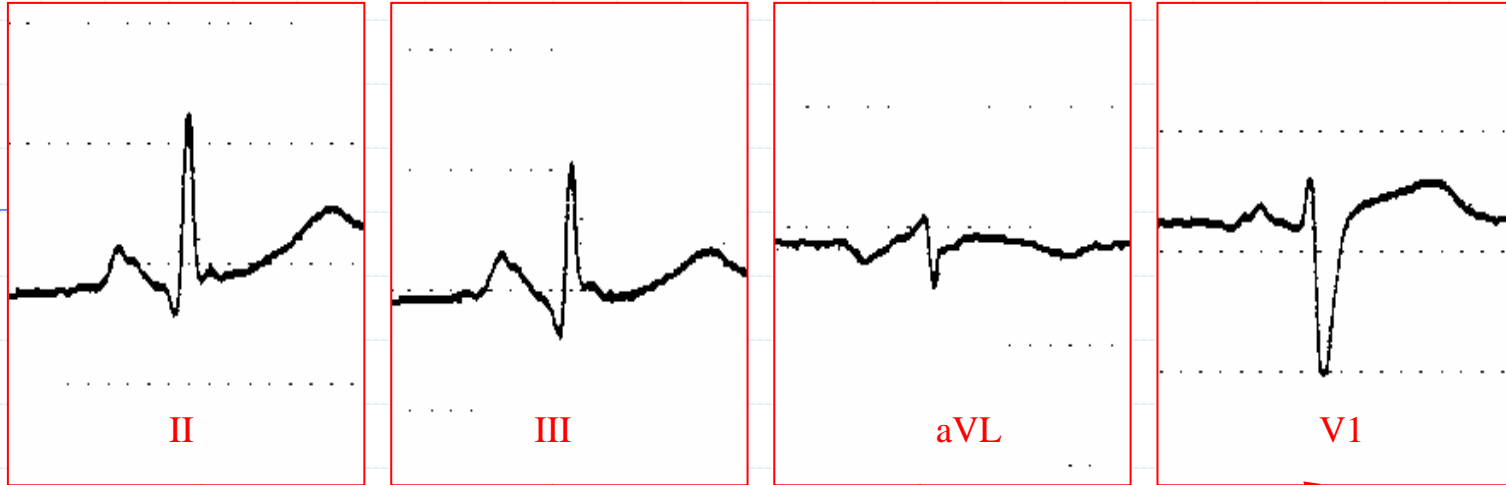
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Male, 70yrs, palpitation and dizziness for 2yrs, Syncope attacks for 3 months

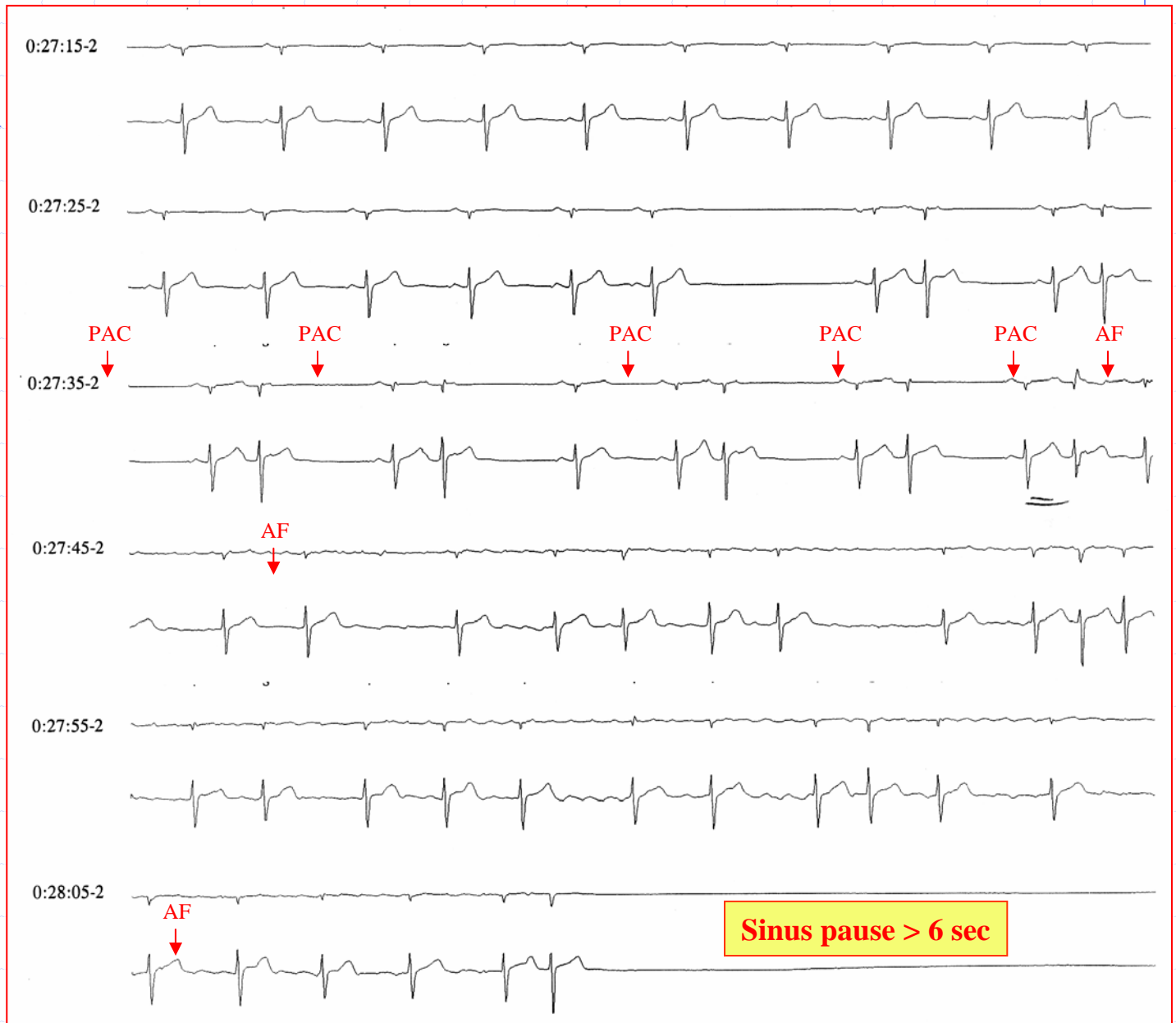
Baseline :ECG diagnosis?



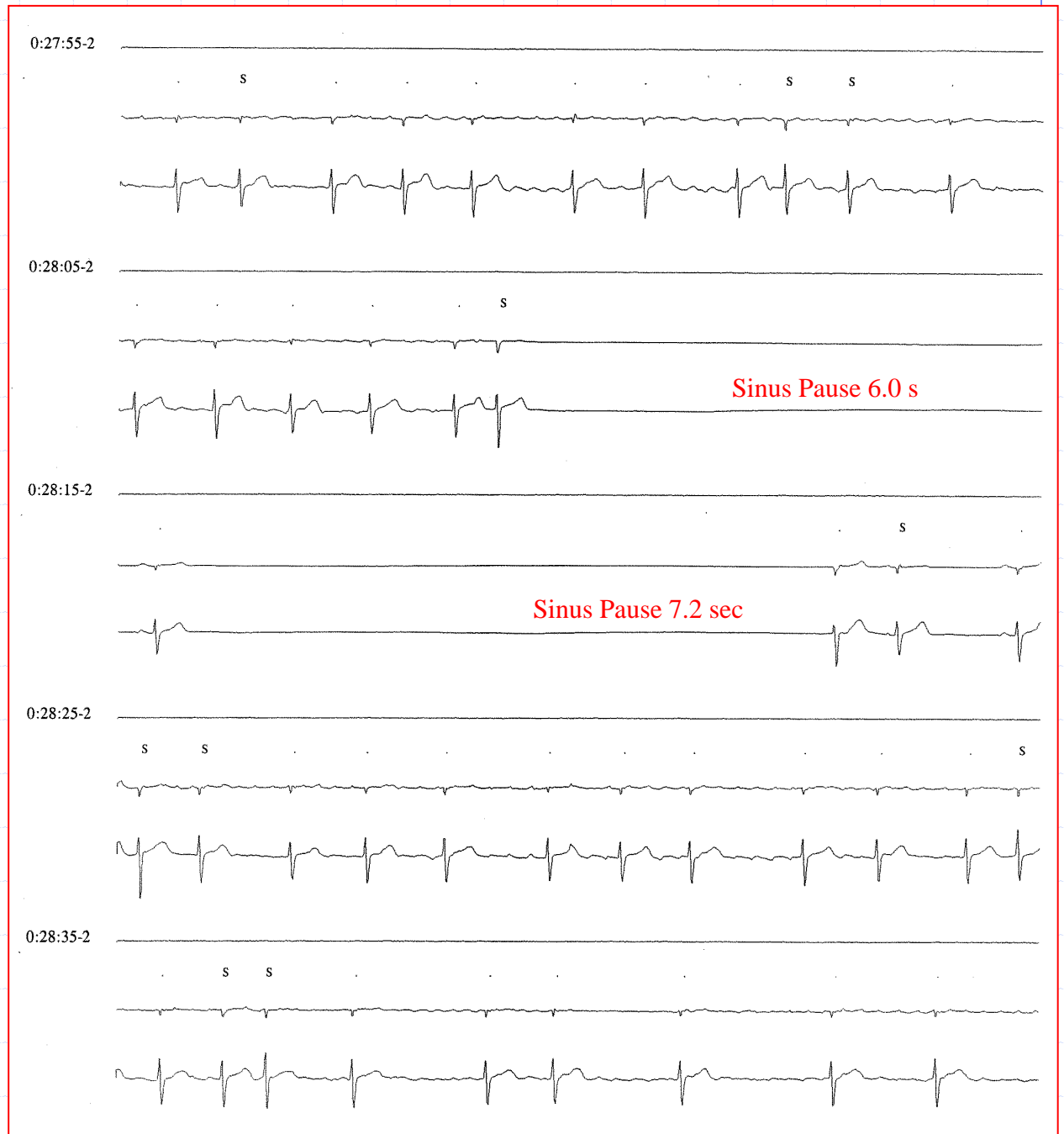
Please observe the morphology of P wave in detail



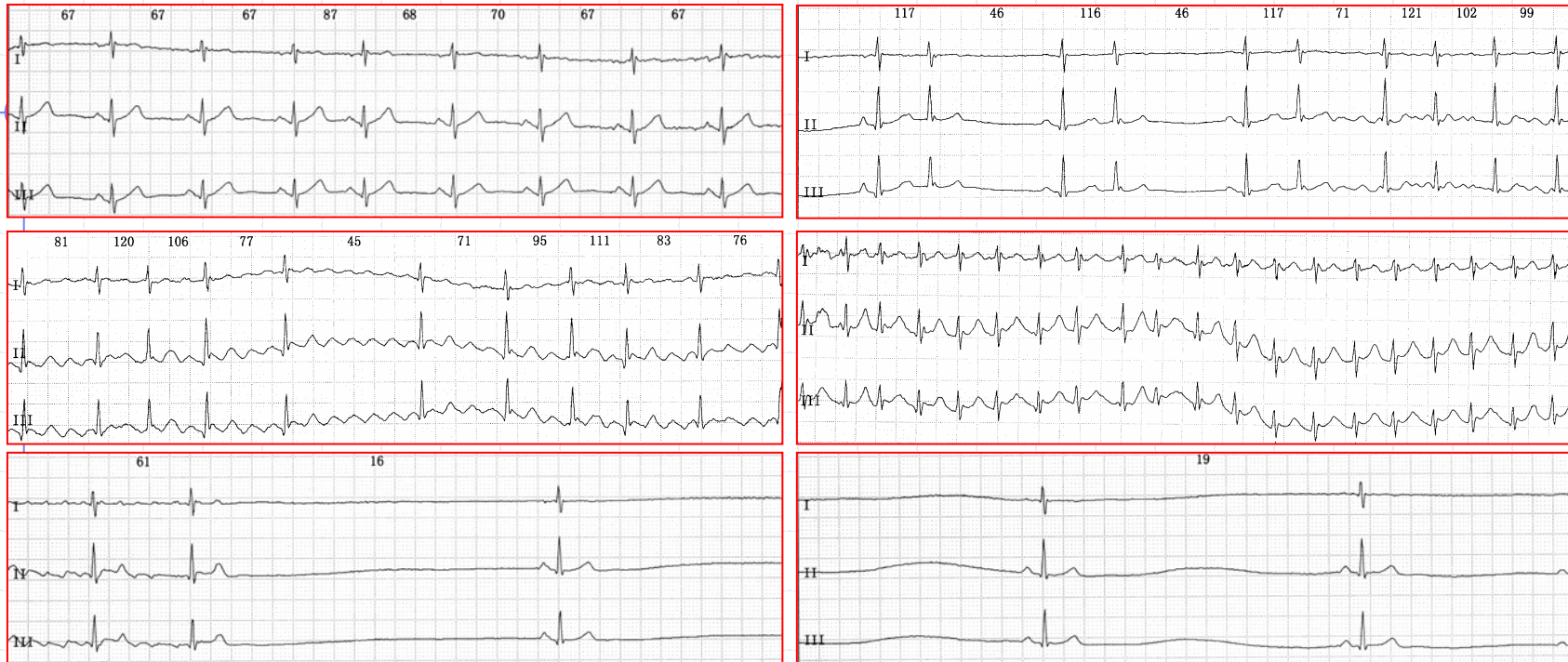
Holter recordings:
7 weeks before ablation



Holter recordings:
7 weeks before ablation



Holter ECG the day before the procedure



停搏时间：

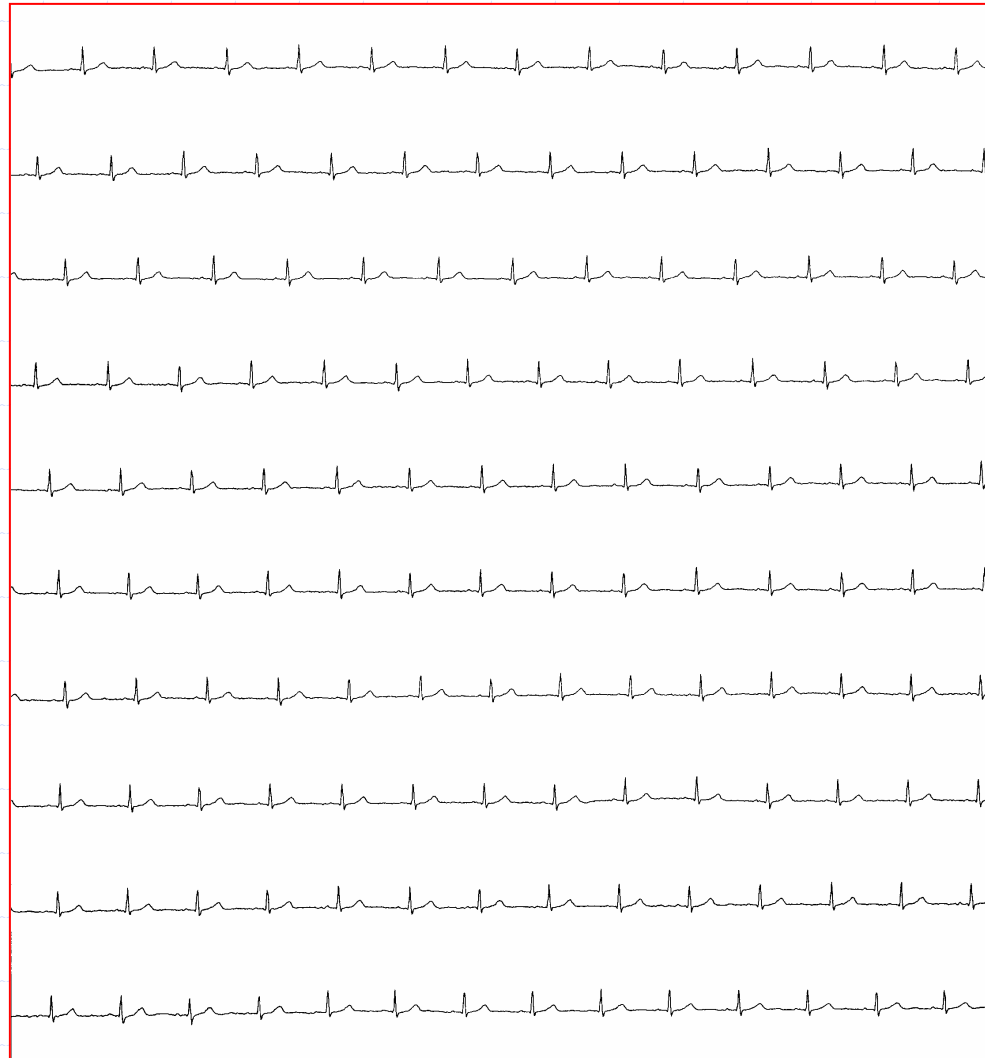
RR间期大于 **2500 ms** 的停搏发生次数 **47**：

最长RR间期: **14515 ms**

发生时间:**03:33:20**

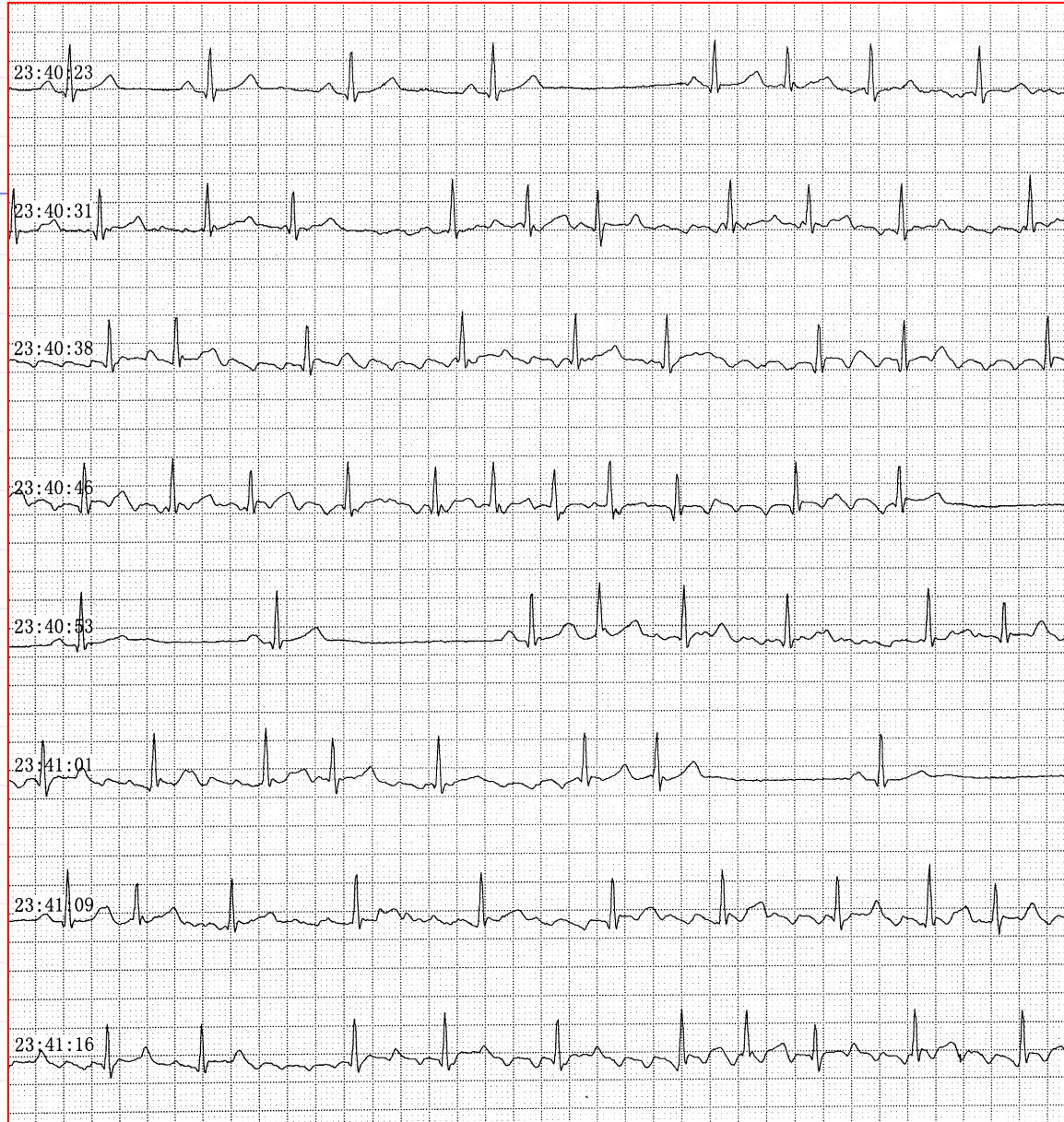
Totally **47 times** of prolonged sinus pause more than 2500 ms, the longest RR interval is **14515 ms**, which occurred at 03:33:20

Holter ECG the day before the procedure



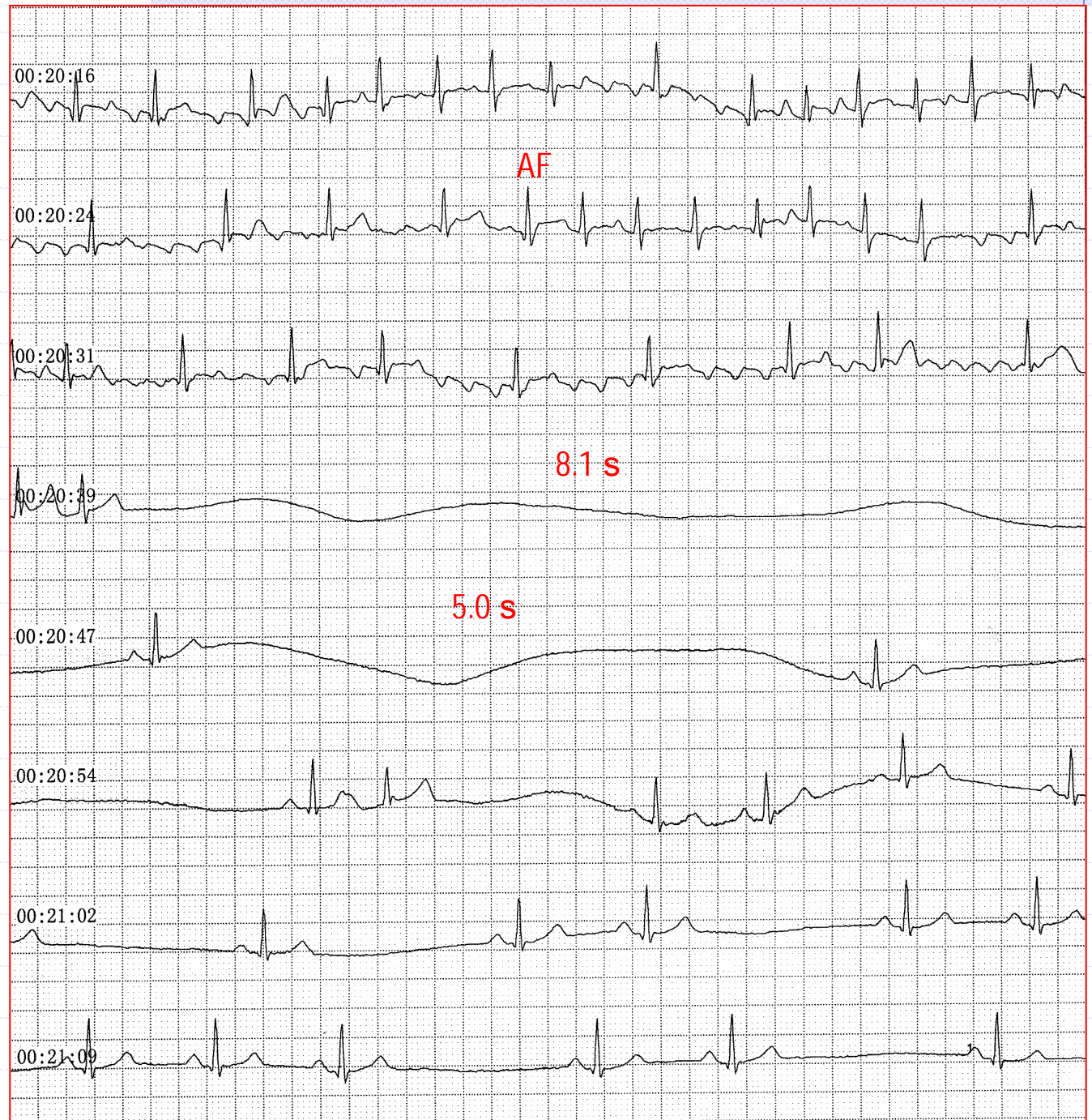
In the same Holter recordings, no prolonged sinus pause happened when sinus rhythm is ok.

Holter ECG the day before the procedure

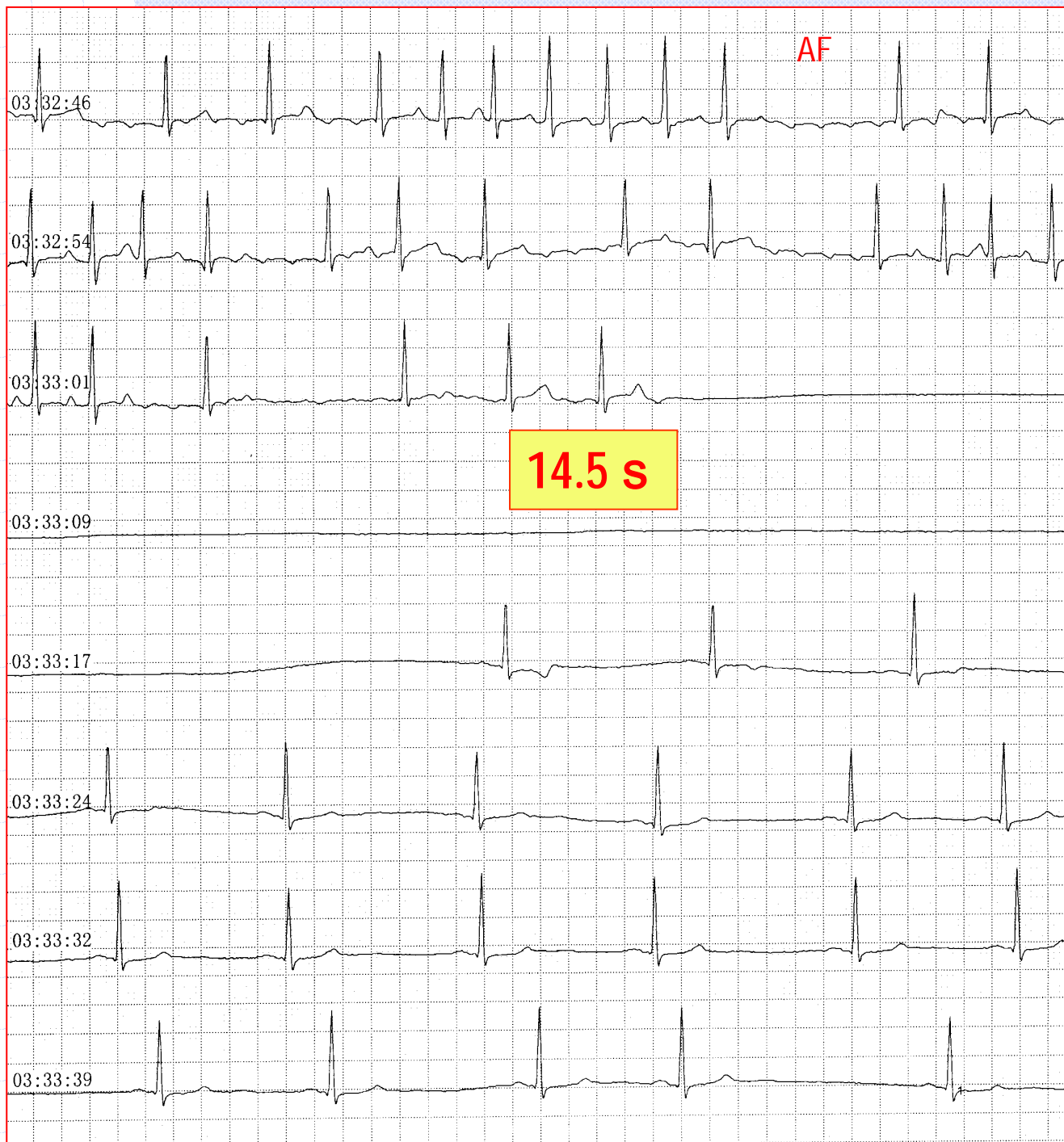


In the same recordings, frequent episodes of AF were observed

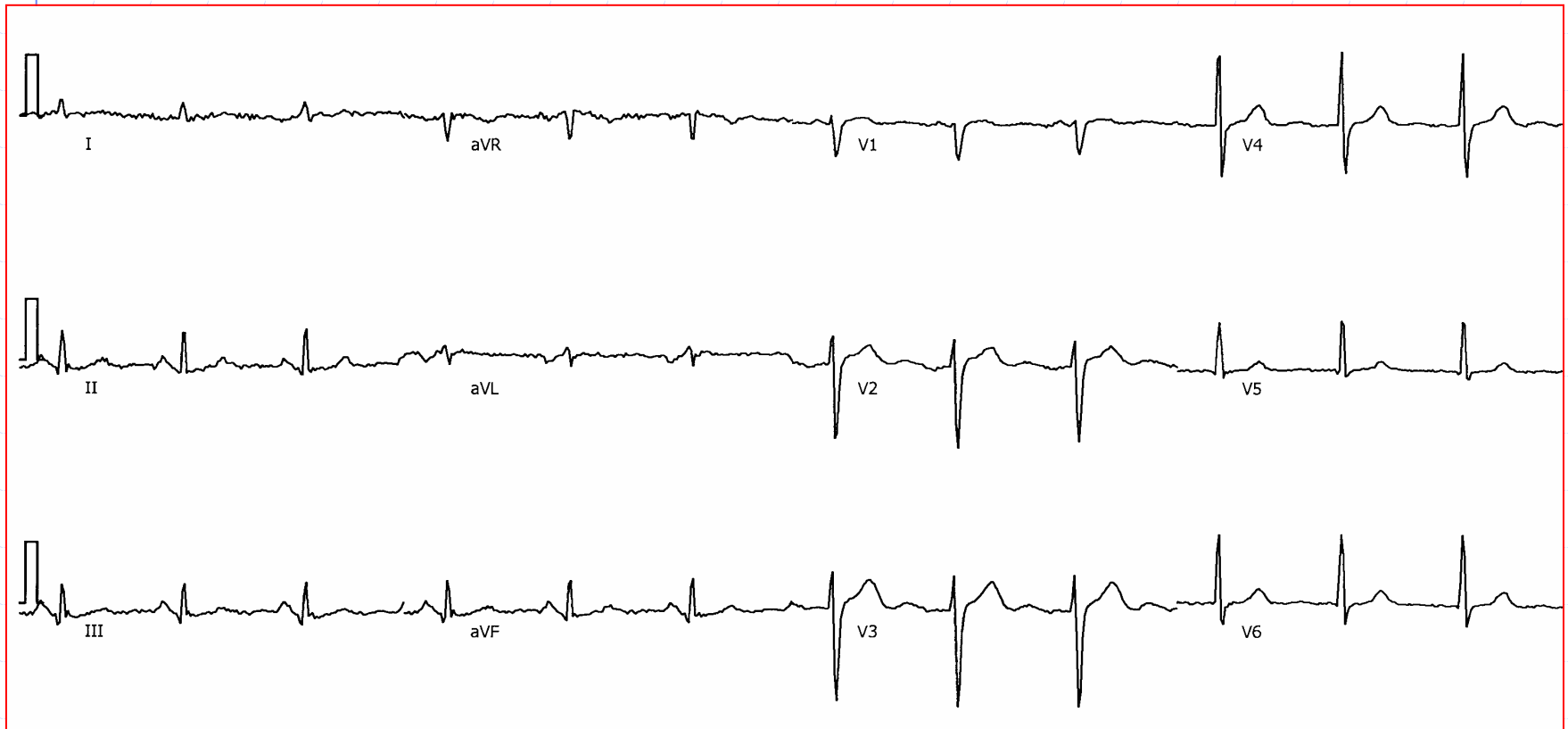
Sinus arrest following PAF termination



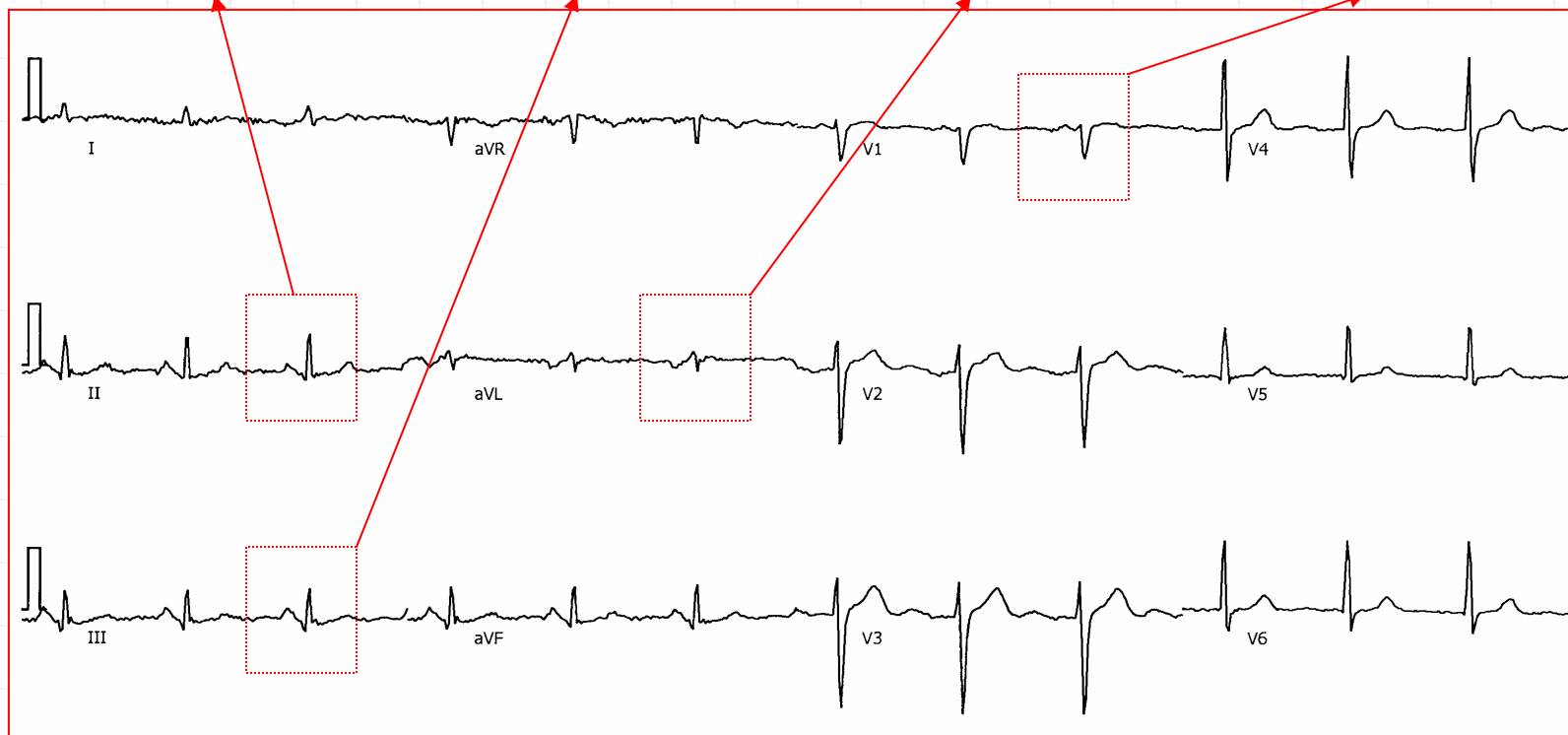
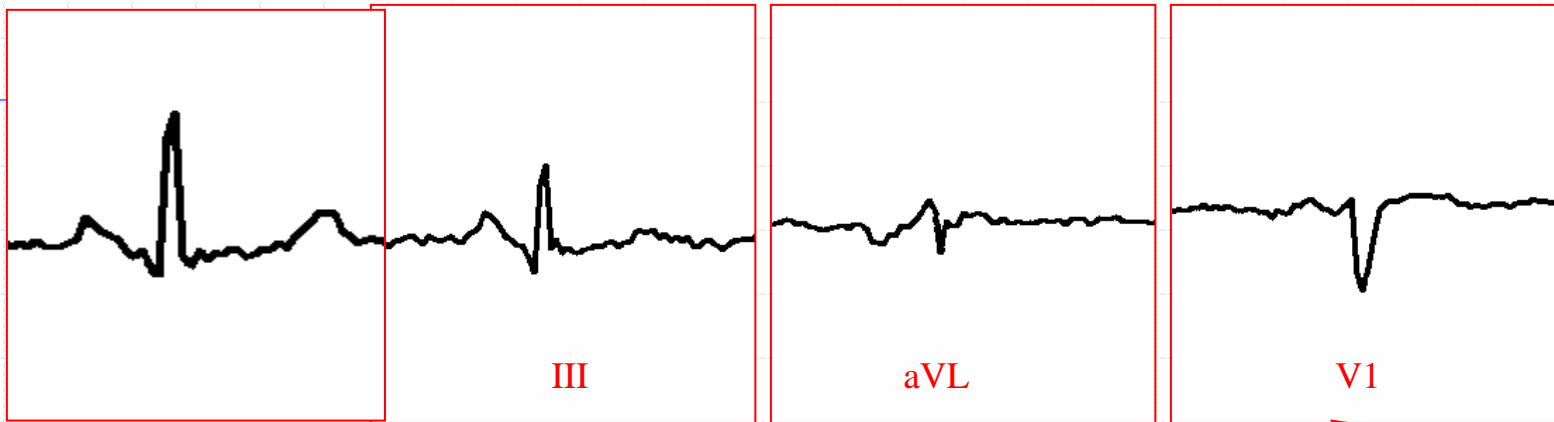
Sinus arrest following PAF termination

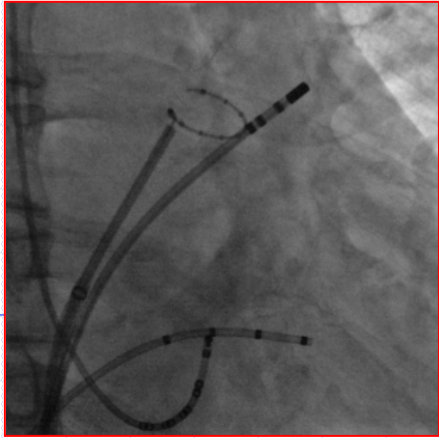


ECG during EP study

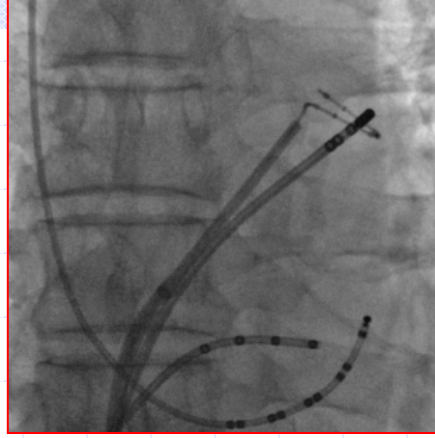


ECG during EP study: please observe the morphology of P wave

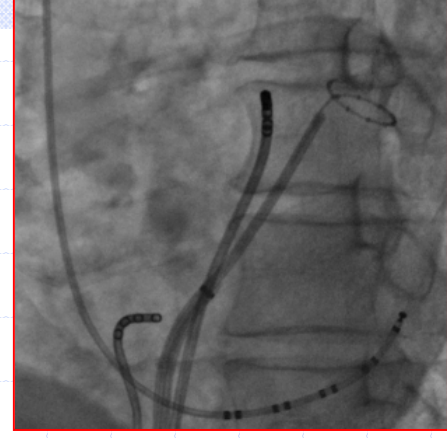




RAO 30



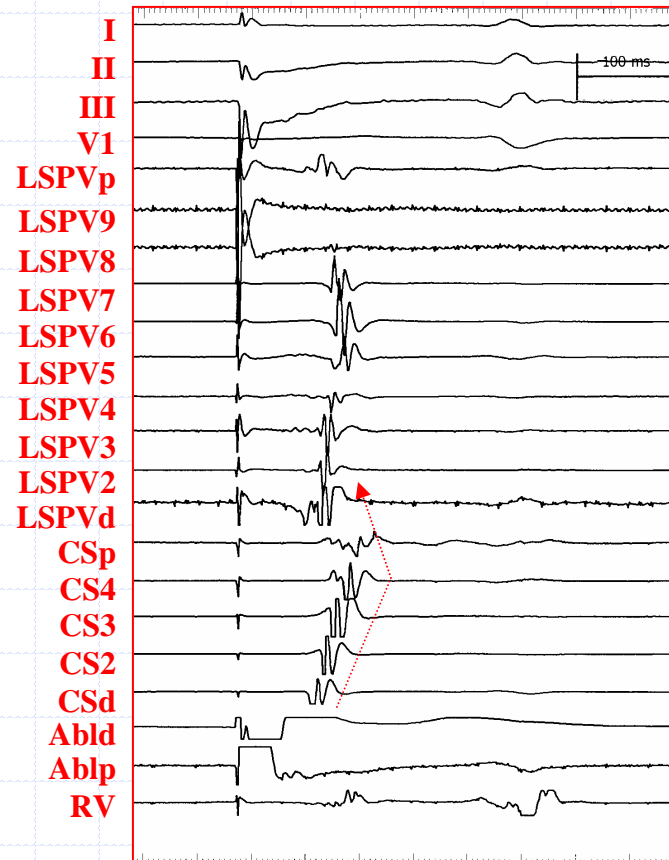
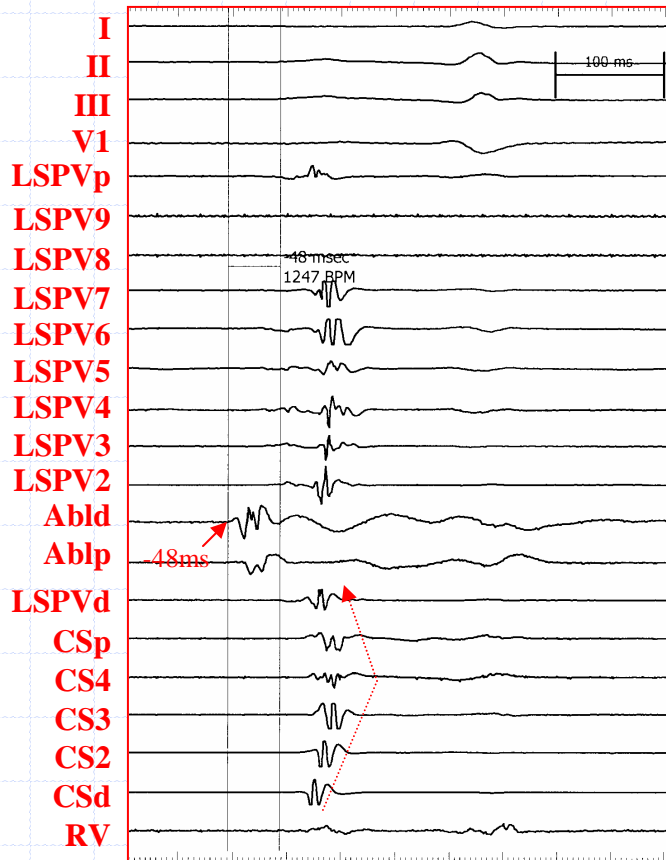
PA



LAO 45

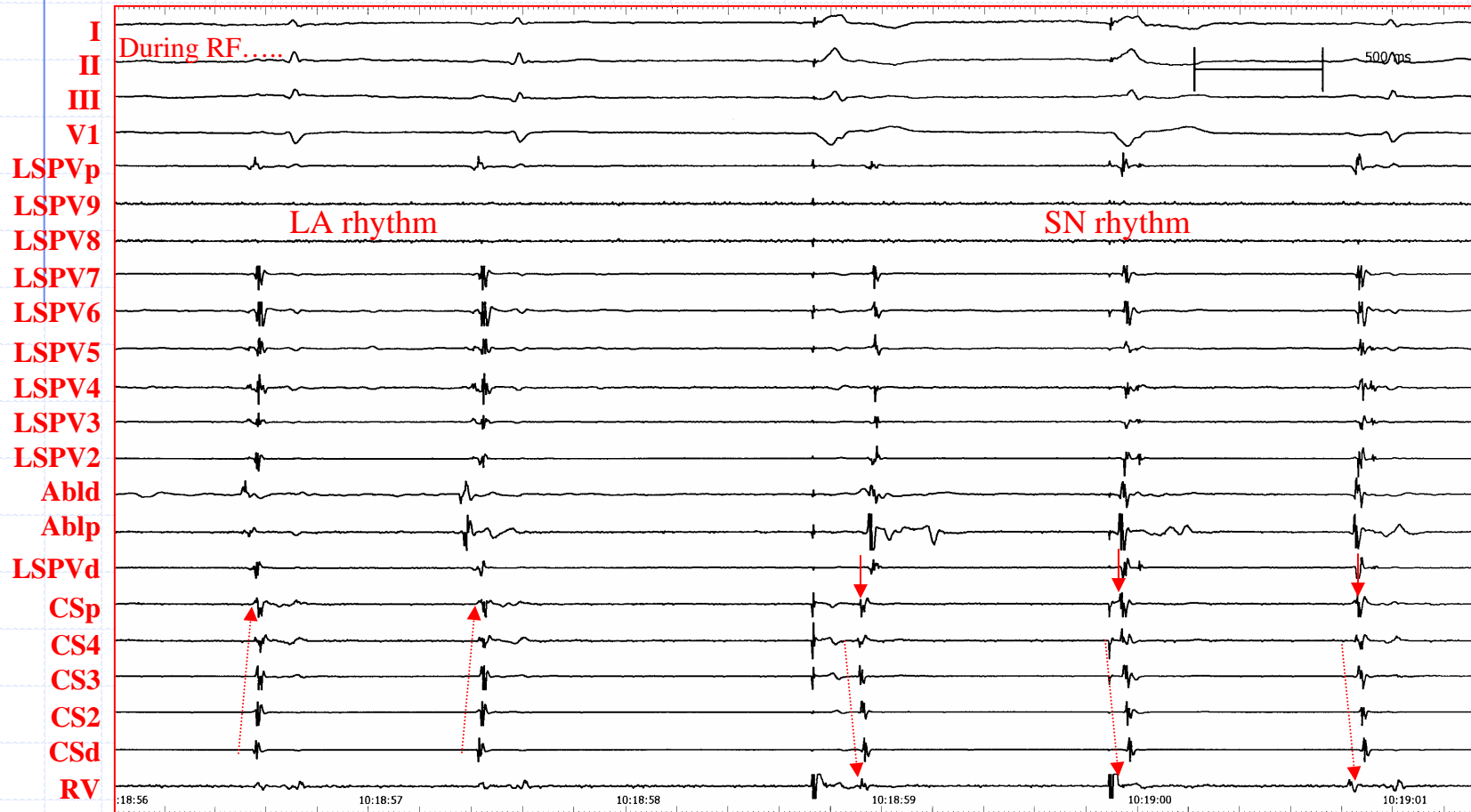
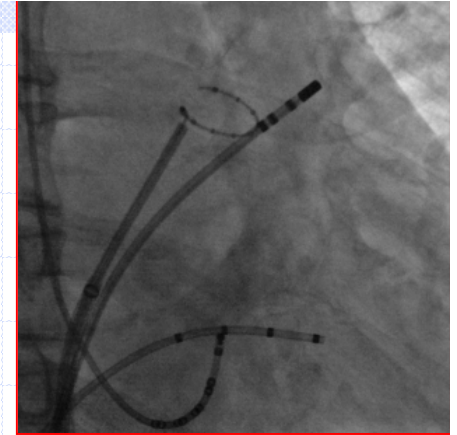
LAA mapping

LAA pacing

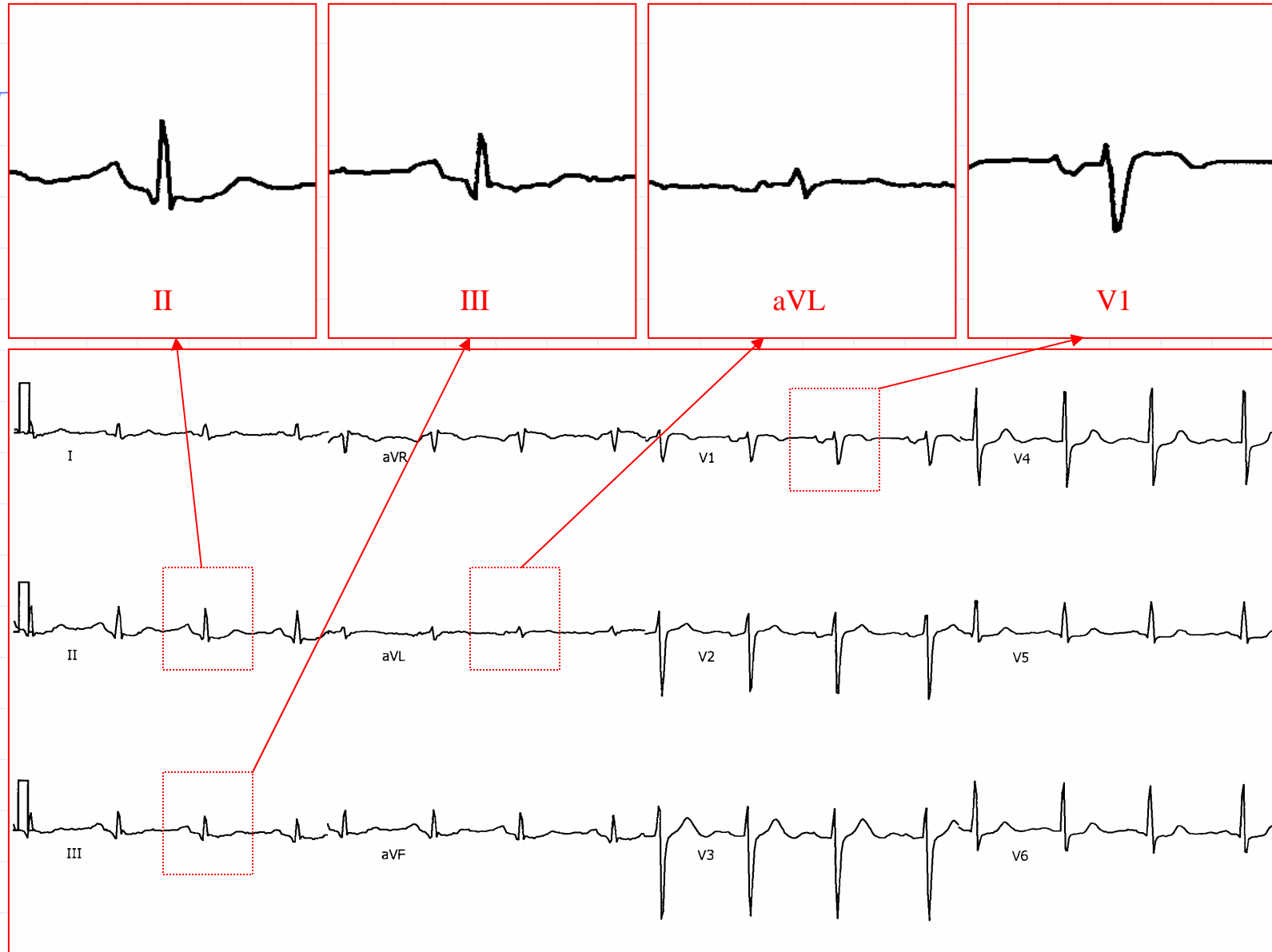


LAA
Rhythm

Recovered to Sinus Rhythm during LAA ablation

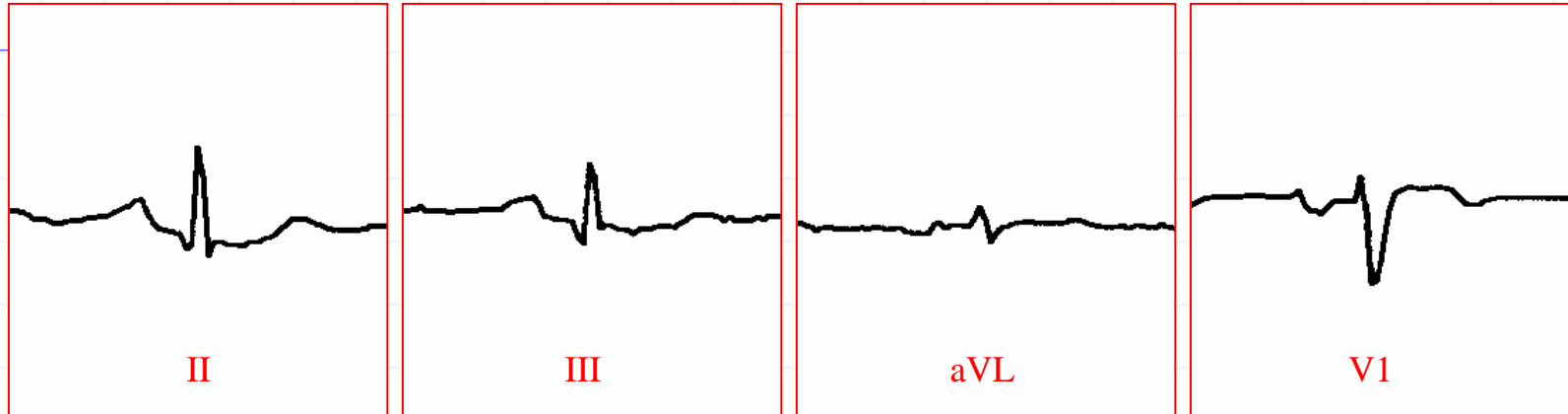


ECG post LAA focal ablation (P wave)

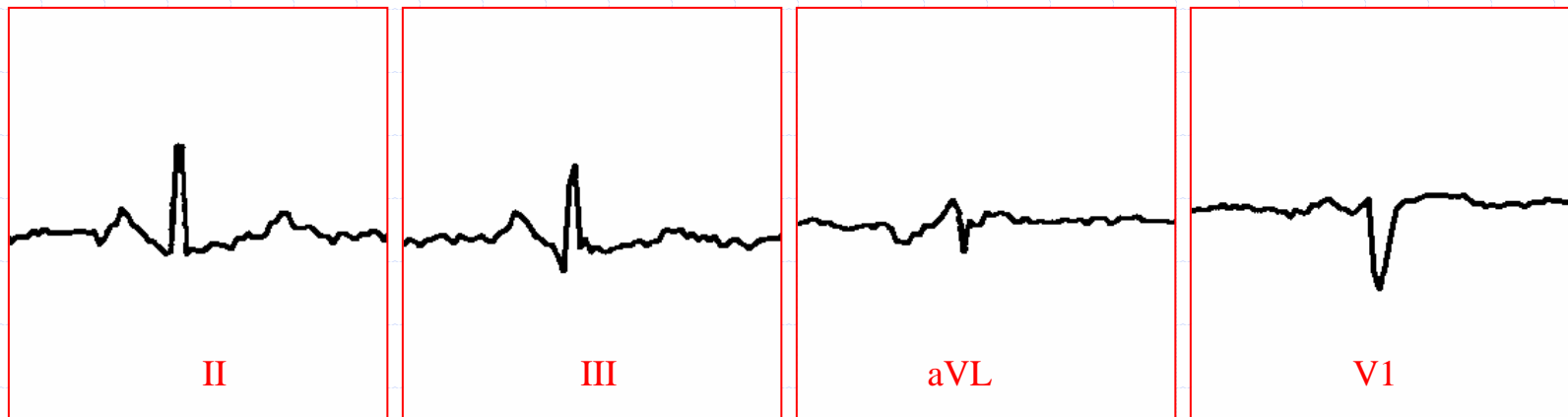


Comparison of the P wave

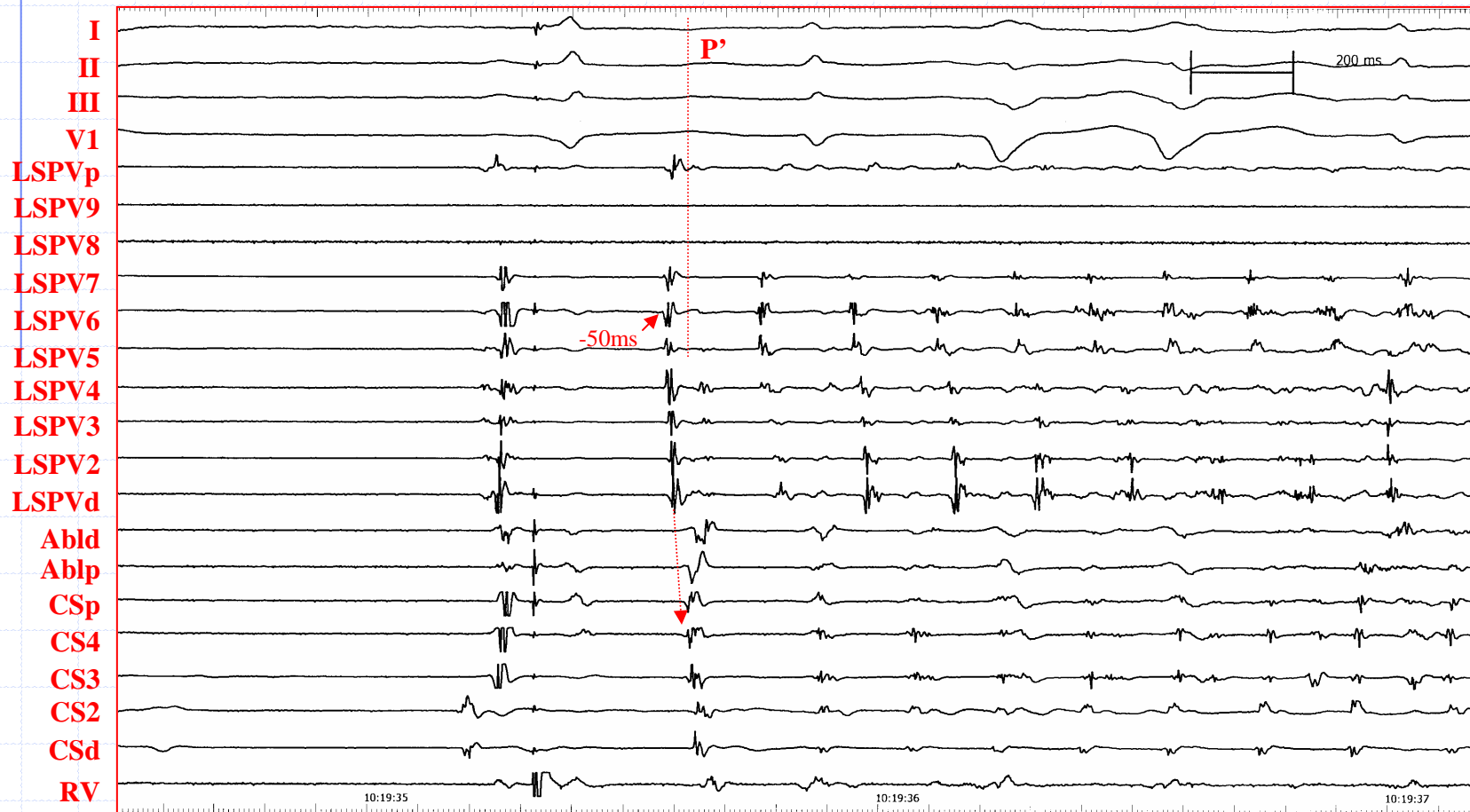
SR



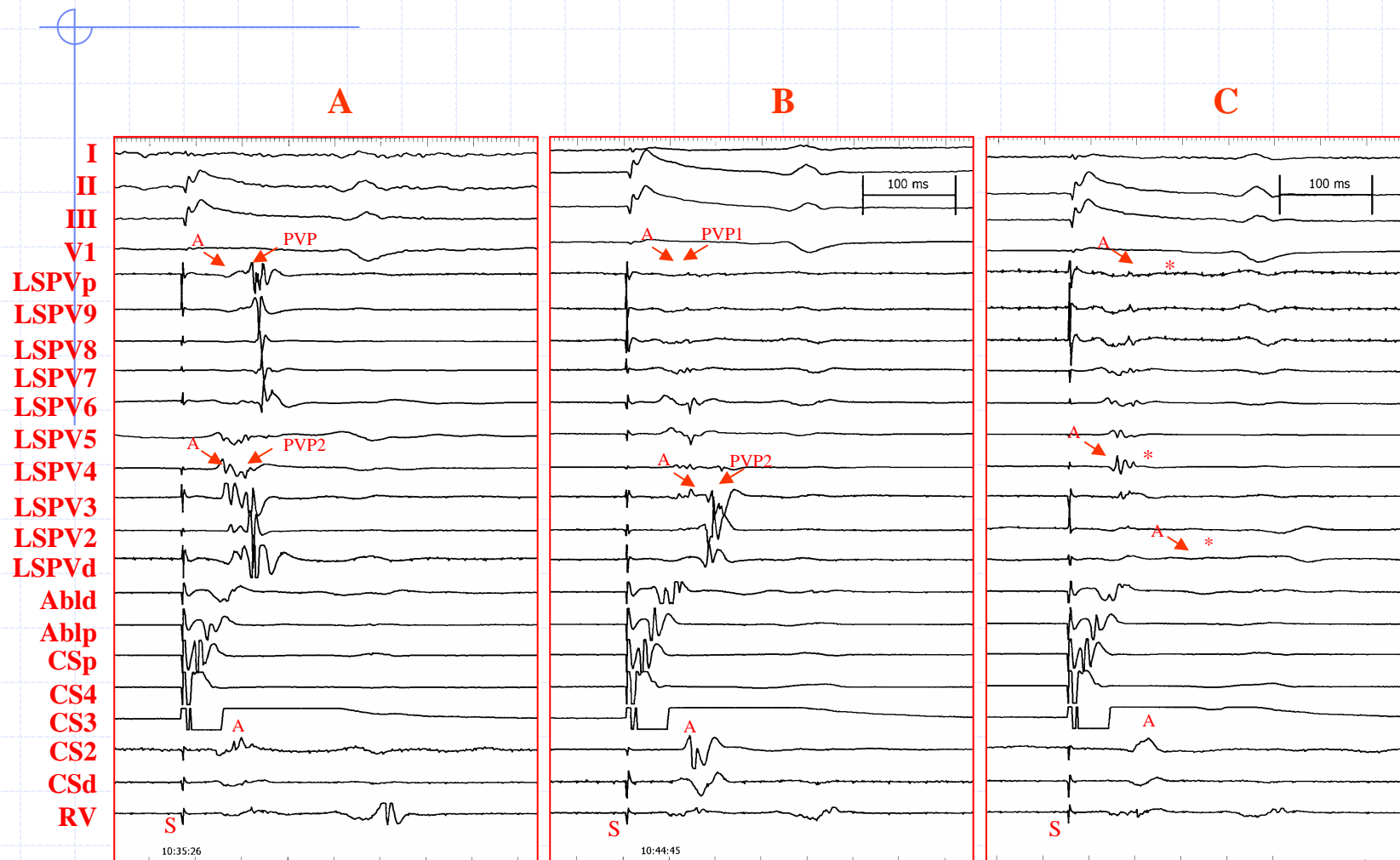
LAA R



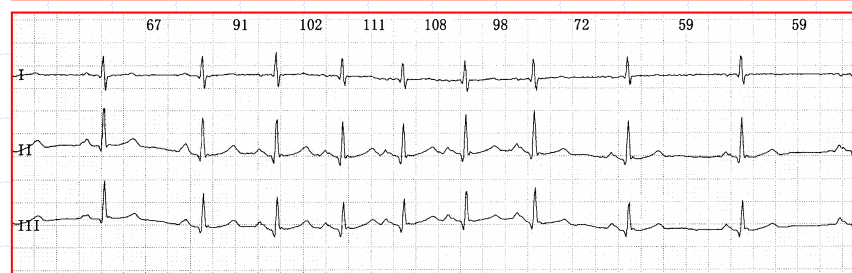
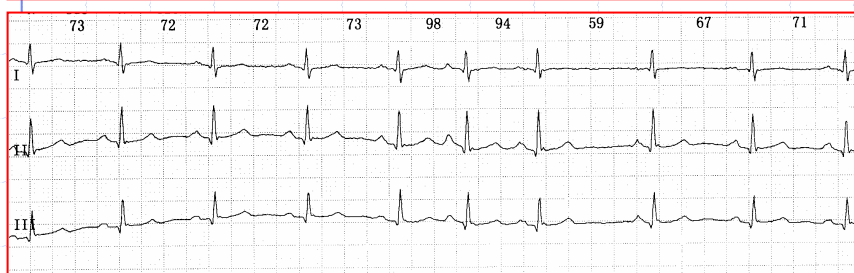
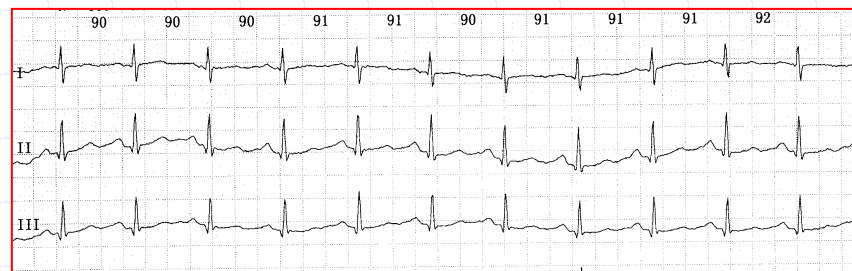
AF initiated by LSPV potential after LAA ablation



LSPV segmental isolation



Holter ECG after ablation: no pause



心 率：
 平均心率： 77
 最低心率： 67 发生时间： 03:45:35
 最高心率： 91 发生时间： 20:23:17
 总心搏数： 91620 *110890/24h*
 异常心搏数： 150
 异常心搏数千分比： 1

结 论： 日期： 09/27/05

1. 偶发房早，部分连发出现 室上性总数： 150
2. 短阵房速2阵，最长由5个房早组成，发生于3:51，率109次/分
3. 全天无房颤及窦性停搏发生
 RR间期大于 2000 ms 的停搏发生次数 0:

Report:

average heart rate: 77bpm,
 lowest: 67bpm.

1. APC: 150/24hrs.
2. Two episodes of AT with no more than consecutive 5 APC.
3. No sinus pause was observed.

Conclusions

After Follow-up for 1.5ys, the patients remain to be normal sinus rhythm, and no prolonged sinus pause was recorded.

No blackspell or Syncope attack. No cardiac pacemaker implanted.

These results suggested that in some patients with tachy-brady syndrome, PAF can be eliminated by catheter ablation, and normal sinus node function could be restored after the procedure, which argues the necessity of the pacemaker implantation in a subset of tachy - brady syndrome patients.