

A medical monitor screen showing multiple vital signs waveforms. At the top is a green ECG trace. Below it is a yellow plethysmography (Pleth) trace. At the bottom is a white SpO2 trace. The background is dark blue with a grid. The text 'ACLS ECG Demo' is overlaid in the center in white. In the bottom right corner, there is a Facebook logo and the text '臨床筆記'.

ACLS ECG Demo

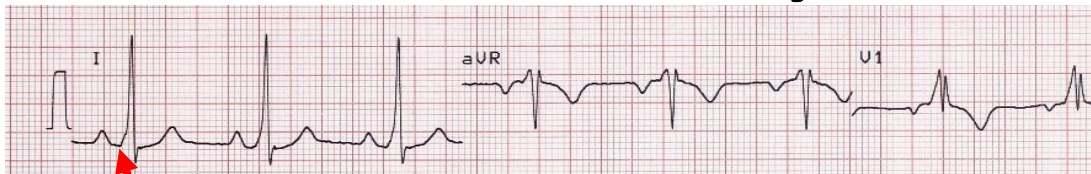
NSR (Normal Sinus Rhythm)



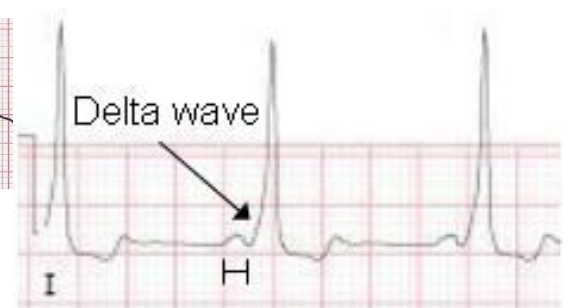
Sinus Tachycardia)



WPW Syndrome

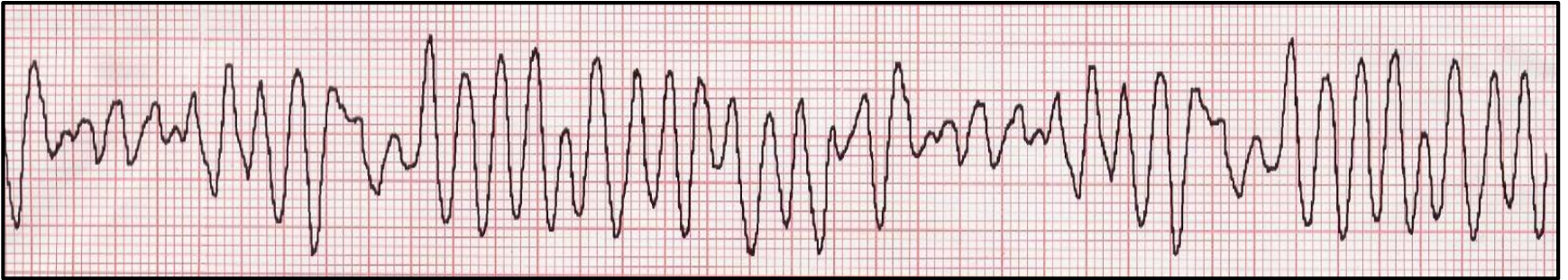


Delta Wave

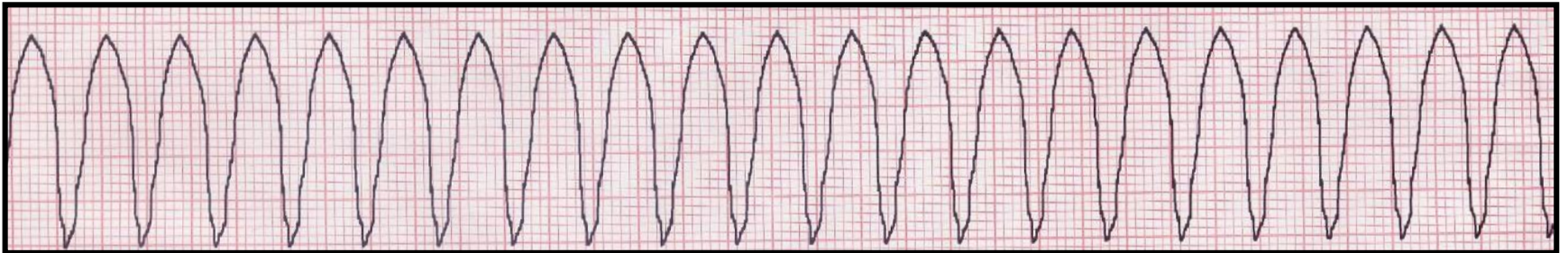


PR interval < 120 ms

VF (Ventricular Fibrillation)



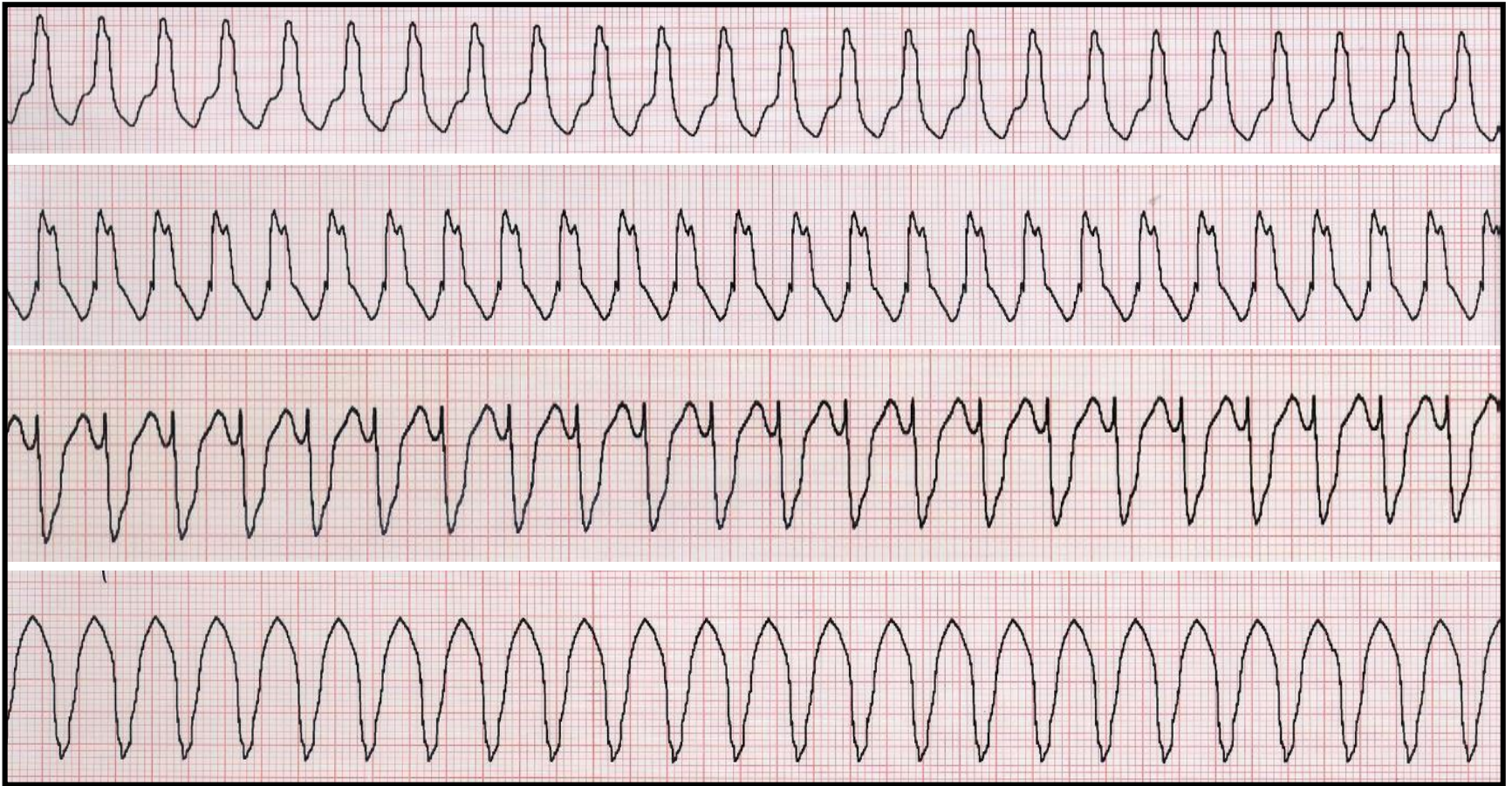
Ventricular Tachycardia (VT)



Pulseless VT: pVT

去顫電擊 → CPR → IV route → Epi → 電擊 → Endo → Amiodarone 300 mg IVP

Ventricular Tachycardia (VT)

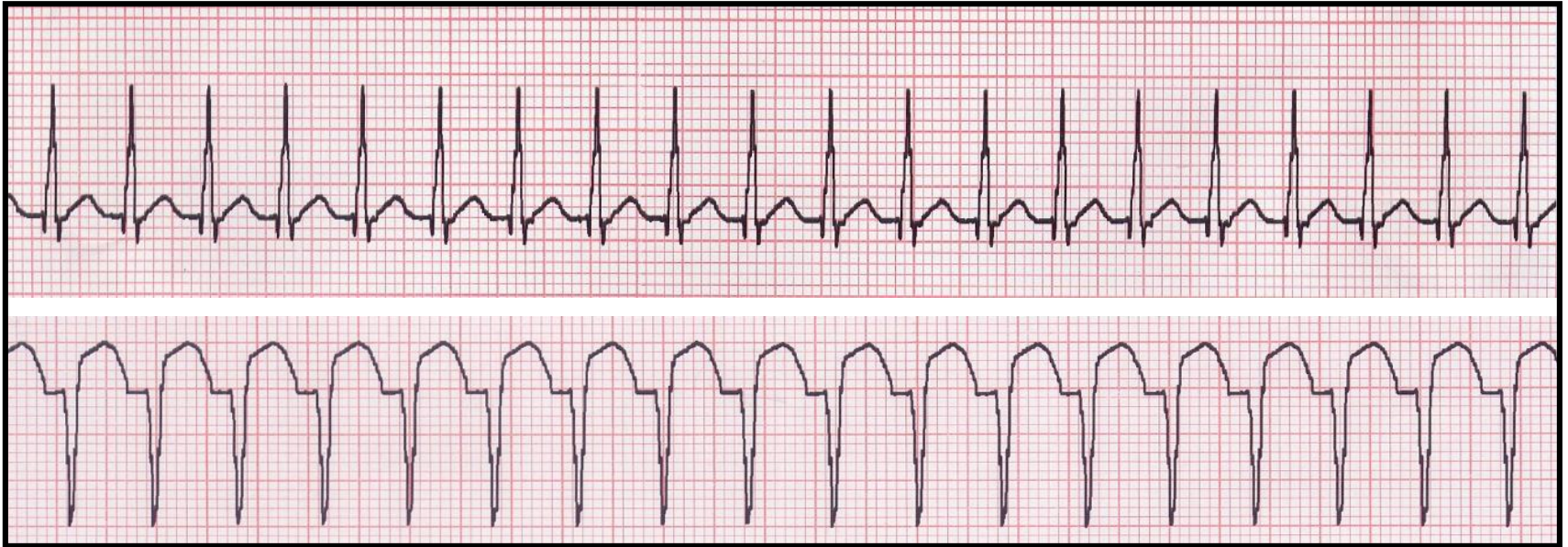


Pulse VT:

Stable Vital signs: Amiodarone 150 mg IV slow push over 10 min

Unstable Vital signs: 同步電擊 100 Joules → Amiodarone 150 mg IV

PSVT: Paroxysmal Supra-Ventricular Tachycardia



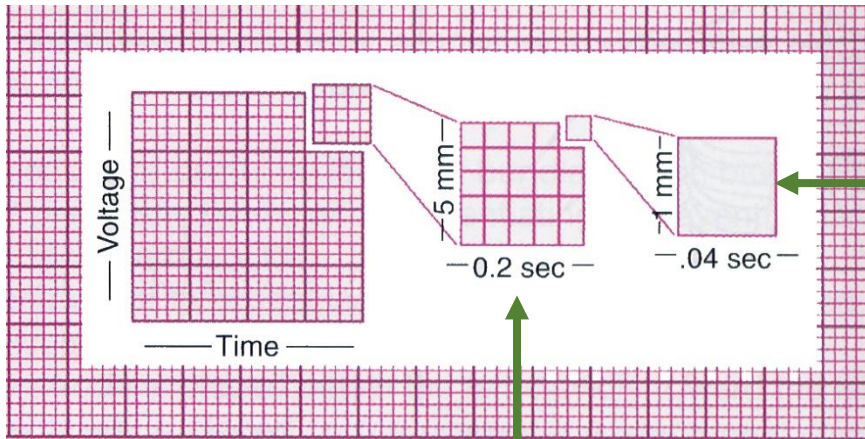
Stable Vital Signs:

Carotid Massage → Adenosine (6, 12, 12mg) IVP → Verapamil (2.5mg → 5mg) IV slow

Unstable Vital signs:

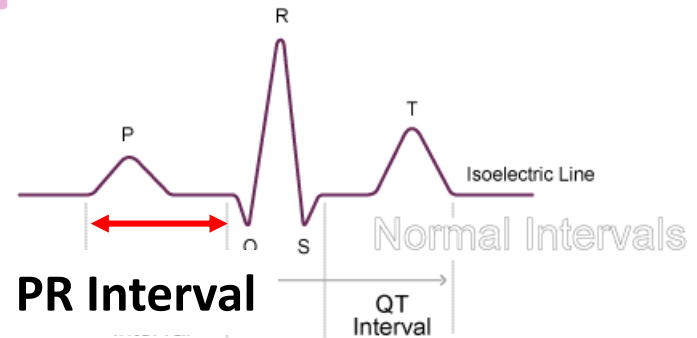
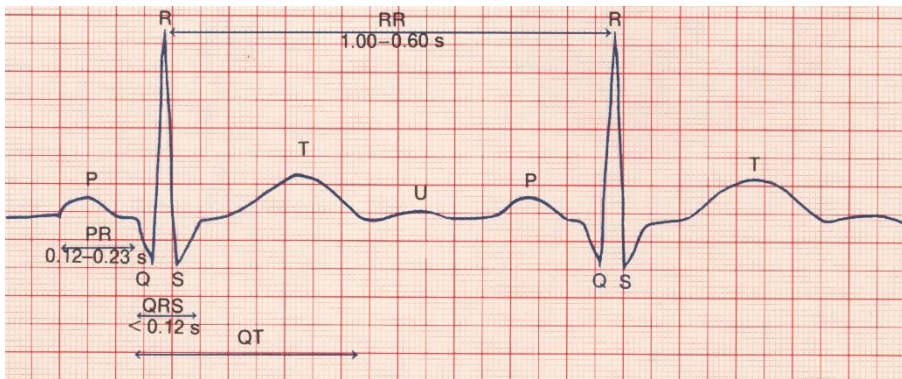
Synchronized Cardioversion 50 Joules

正常心電圖



每一小格：0.04秒

每一大格：0.2秒 (0.04 X 5)

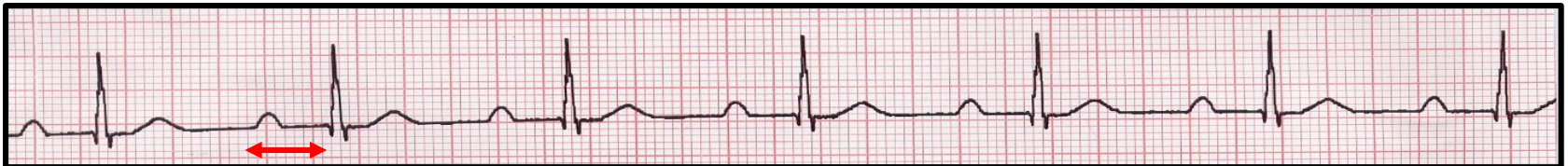


從P波起點至QRS起點 (Normal <math>< 0.2</math> 秒)

1st AV Block

第一度房室傳導阻滯

PR Interval 超過0.2秒 → 第一度房室傳導阻滯(1st degree AV block)



$$0.04 \times 7 = 0.28$$

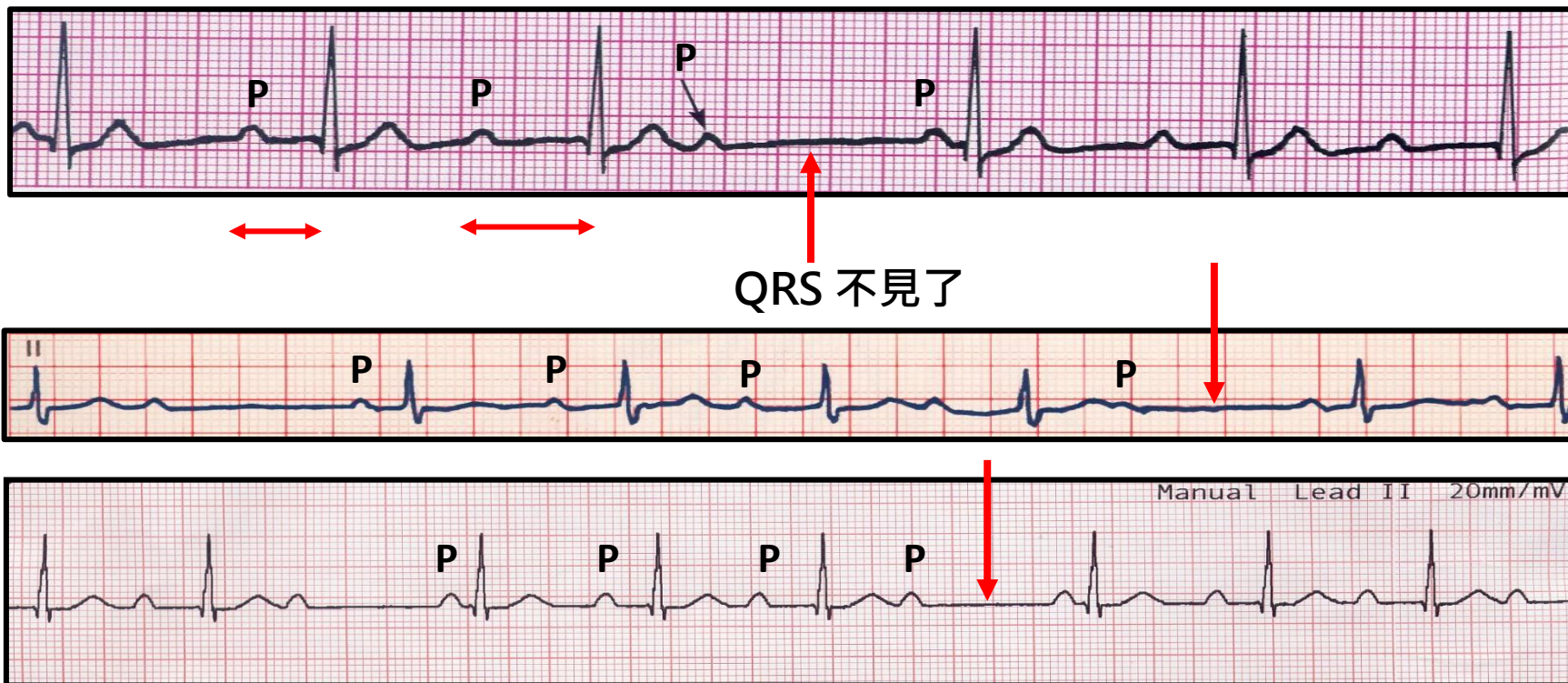


$$0.04 \times 6 = 0.24$$

2nd AV block, Type 1

第二度房室傳導阻滯,第一型

每個 **PR間隔愈來愈延長**，一直到**P後面沒有出現QRS波**。(Non-Conducted P)
R-R間隔各不相同 (又稱Wenckebach現象，其傳導阻滯是發生在AV node)



2nd AV block, Type 2

第二度房室傳導阻滯,第二型

1. PR 間隔固定，但有些 P 之後，突然沒有跟著 QRS 波。
2. QRS 形狀保持不變，但有些 P 之後，少了 QRS

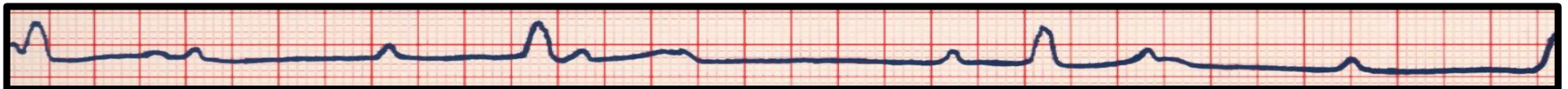
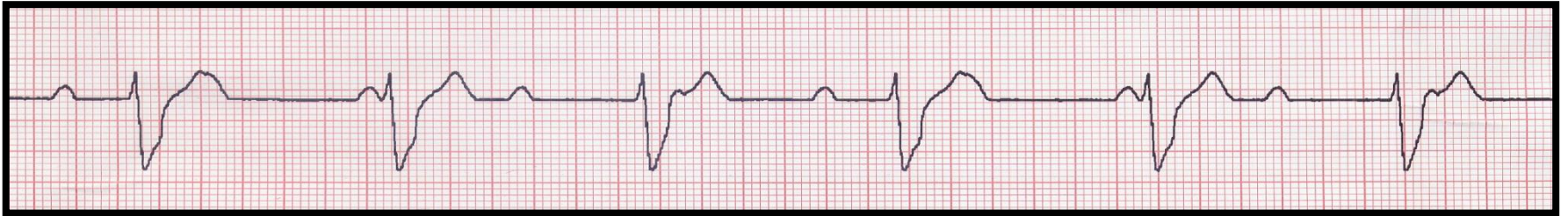


其導阻滯是發生在AV node以下(QRS較寬)，容易引起心室逃心律，潛在危險性較高。

3rd AV Block

第二度房室傳導阻滯

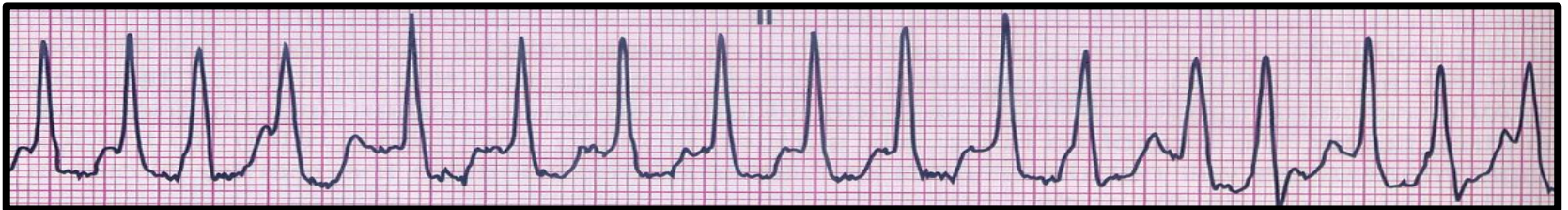
P 與QRS波之關係互不相關，各跳各的。



Af (Atrial Fibrillation)

心房顫動

沒有P 波；QRS 與 QRS 間隔不規則



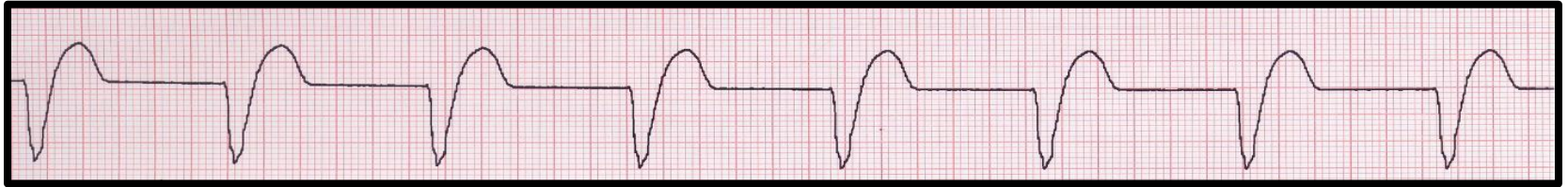
AF (Atrial Flutter)

心房撲動

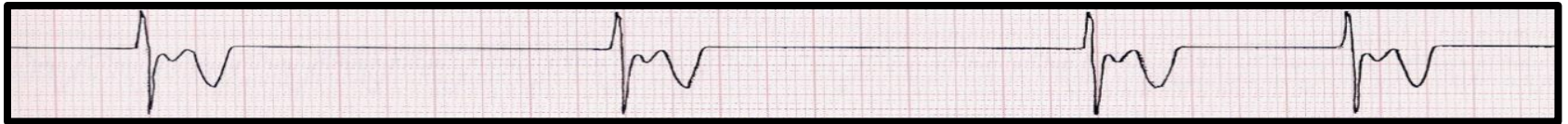


IDVR (Idioventricular Rhythm)

如果沒有脈搏 → PEA

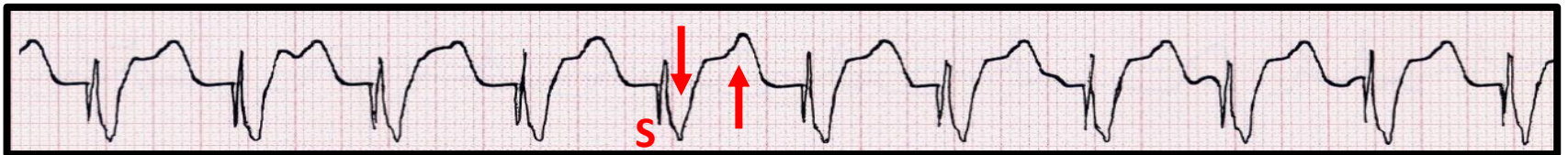


Junctional Rhythm



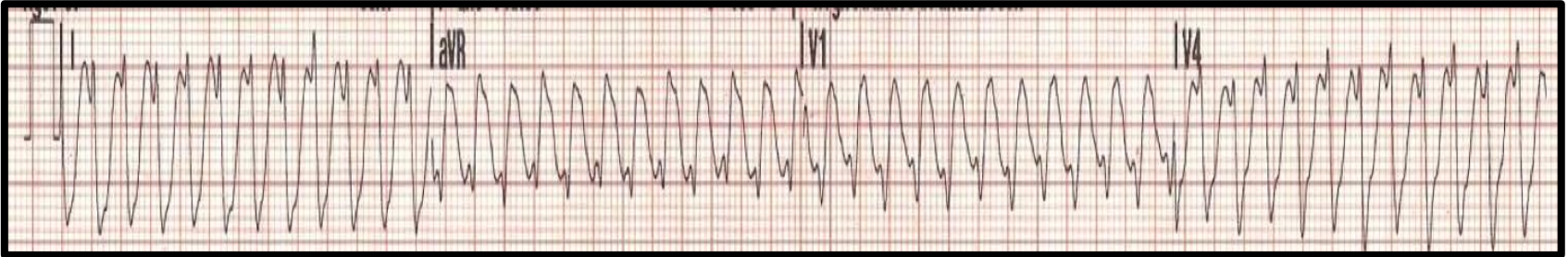
Pacemaker Rhythm

有效的pacing wave會形成Spike (S)之後的QRS與T的方式互為上下相反。



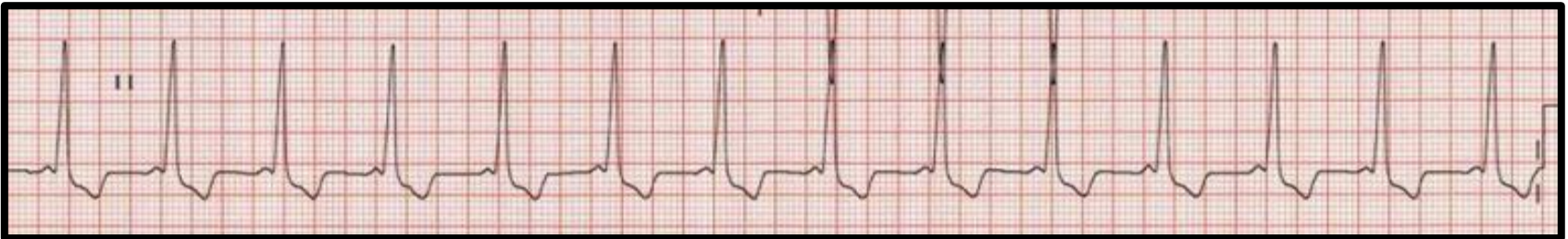
QRS 向下 T波向上

Af with RVR in WPW



治療:

1. Procainamide 20 mg/min IV drip (total dose: 17 mg/kg)
2. if Unstable: Cardioversion: 100 – 120 Joules



Torsade de Pointes



治療:

1. **MgSO₄ 1-2 gm IV push 30秒**
2. Isoproterenol IV drip with 2-10 mcg/min
3. Overdrive pacing (by TCP)

情況不穩定時，改用去顫電擊200 Joules

