

# Troubles du rythme et de la conduction

Patrick Ecollan

SMUR PITIE

DAR PITIE SALPETRIERE

PARIS

Peco

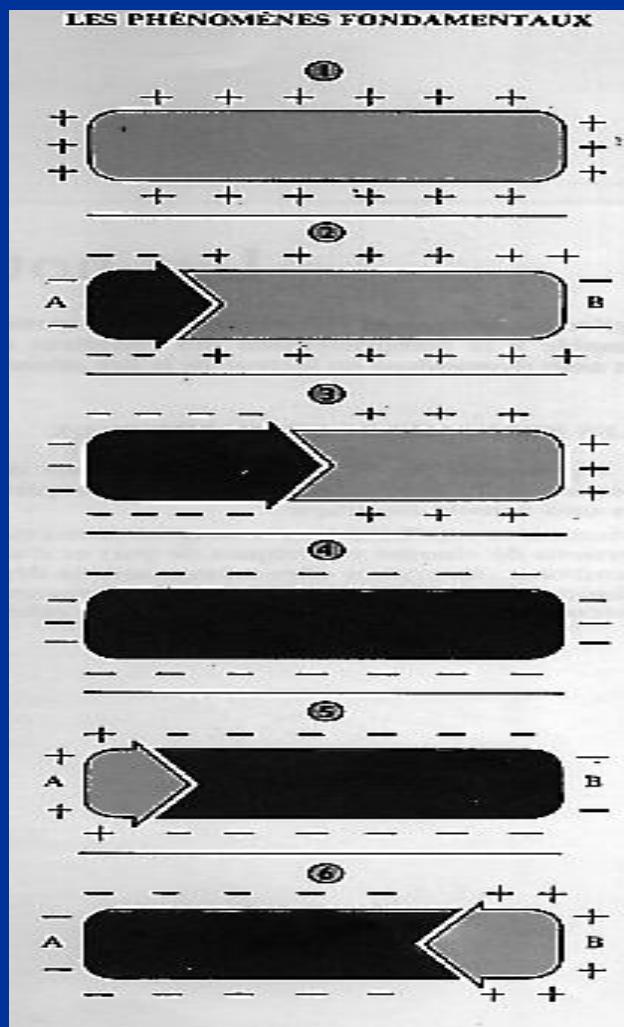
# Tachycardie/Bradycardie

- Fréquence cardiaque :
  - moins de 50 cycles / min
  - plus de 150 cycles / min
  - parfois entre 50 et 150 !

# Notion électrocardiographique de base

1

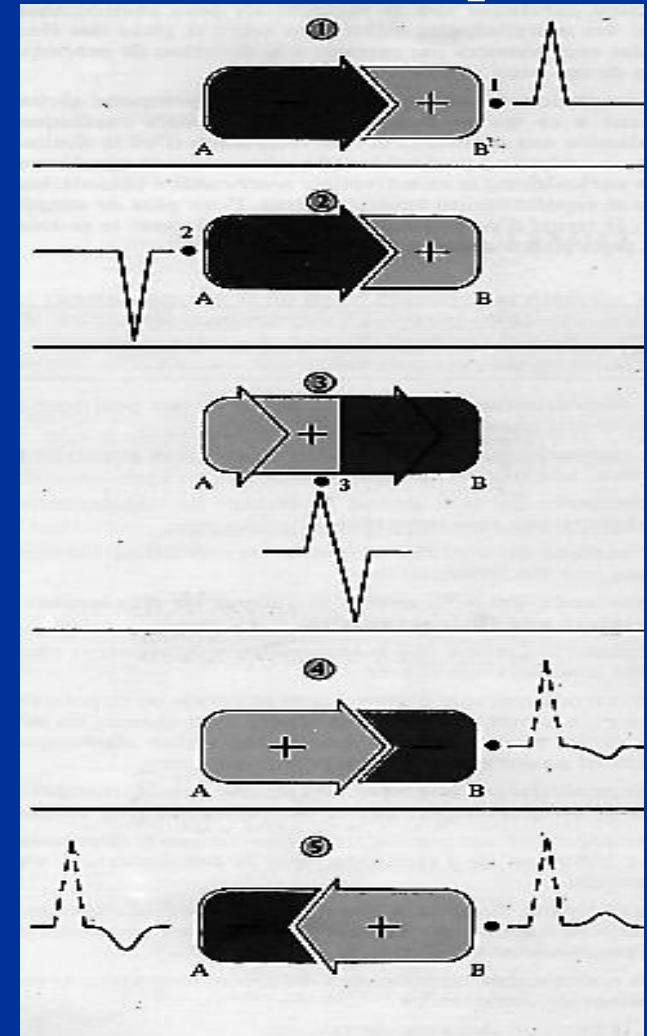
## La cellule cardiaque



Dépolarisation

Repolarisat<sup>i</sup>n

## Le vecteur cardiaque

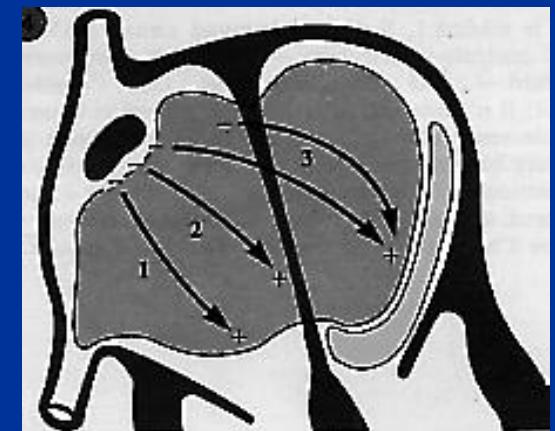
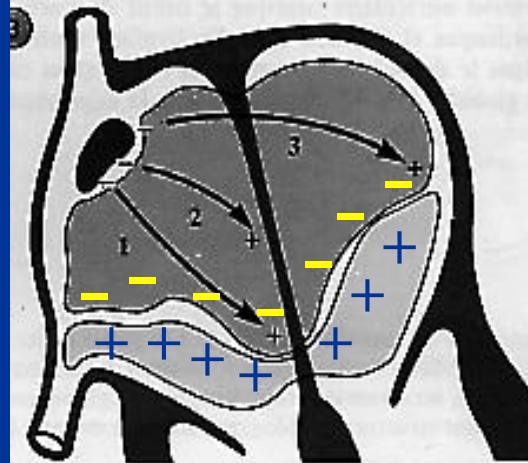
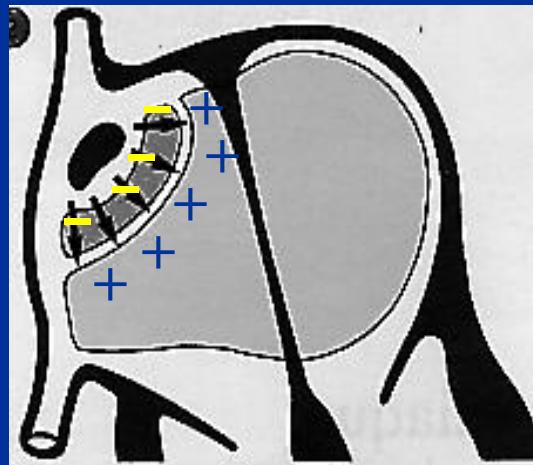


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# Notion électrocardiographique de base

2

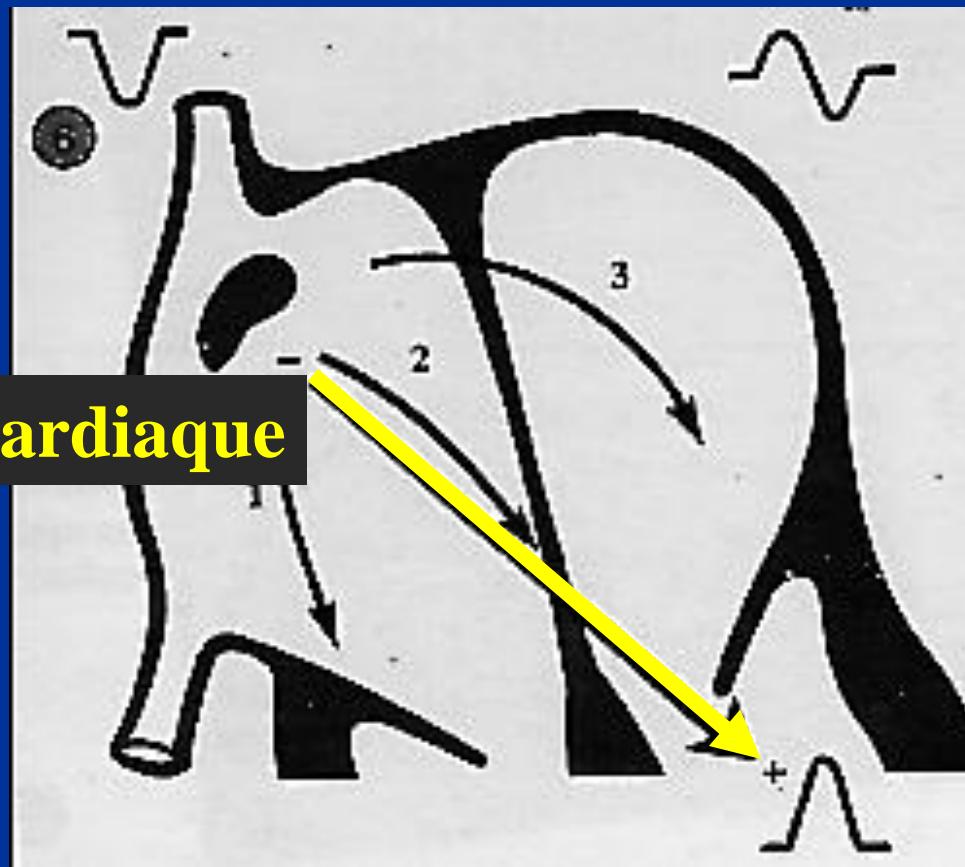
## Dépolarisation des oreillettes



# Notion électrocardiographique de base

3

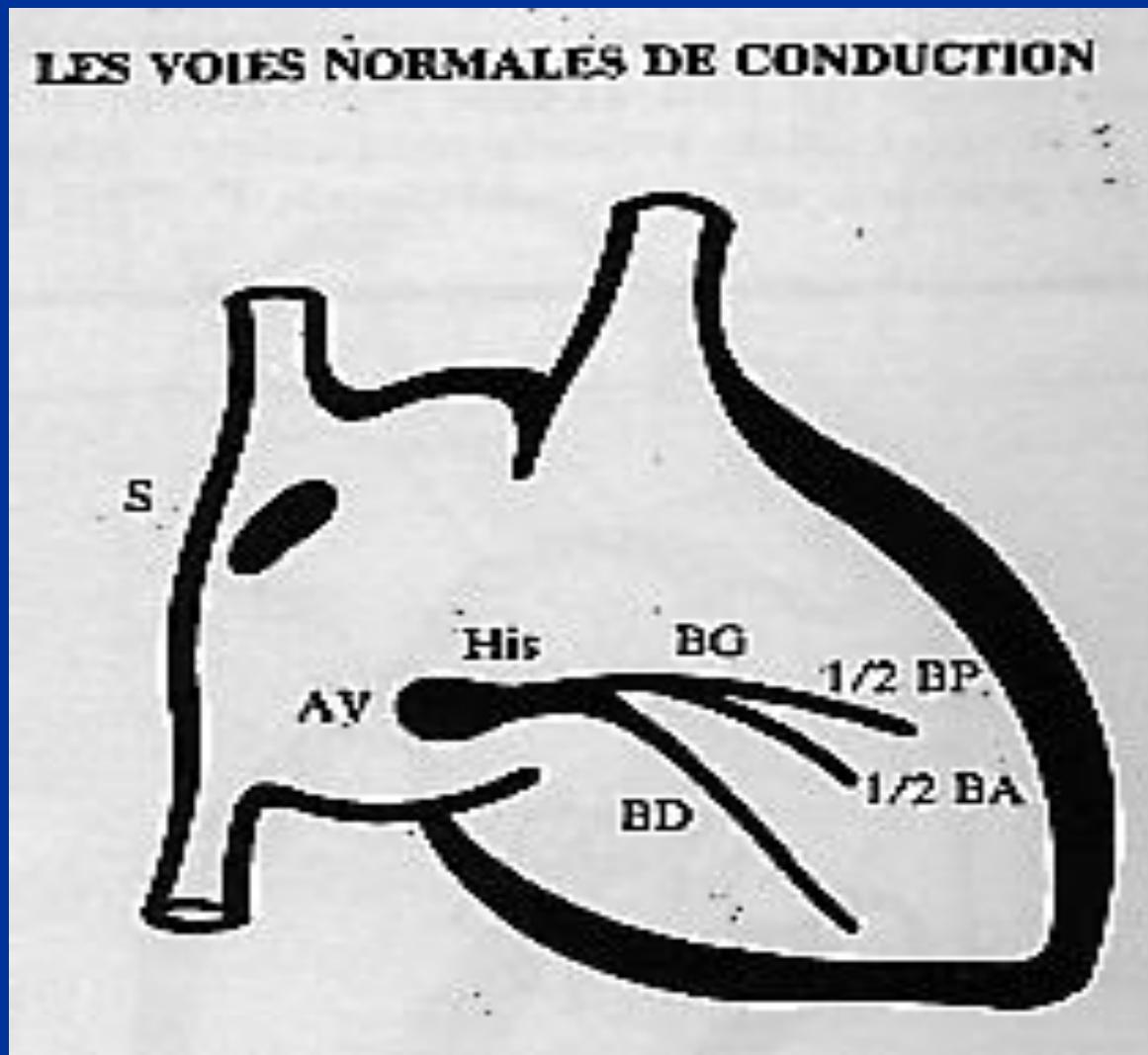
## Aspect électrocardiographique



Le vecteur cardiaque

# Notion électrocardiographique de base

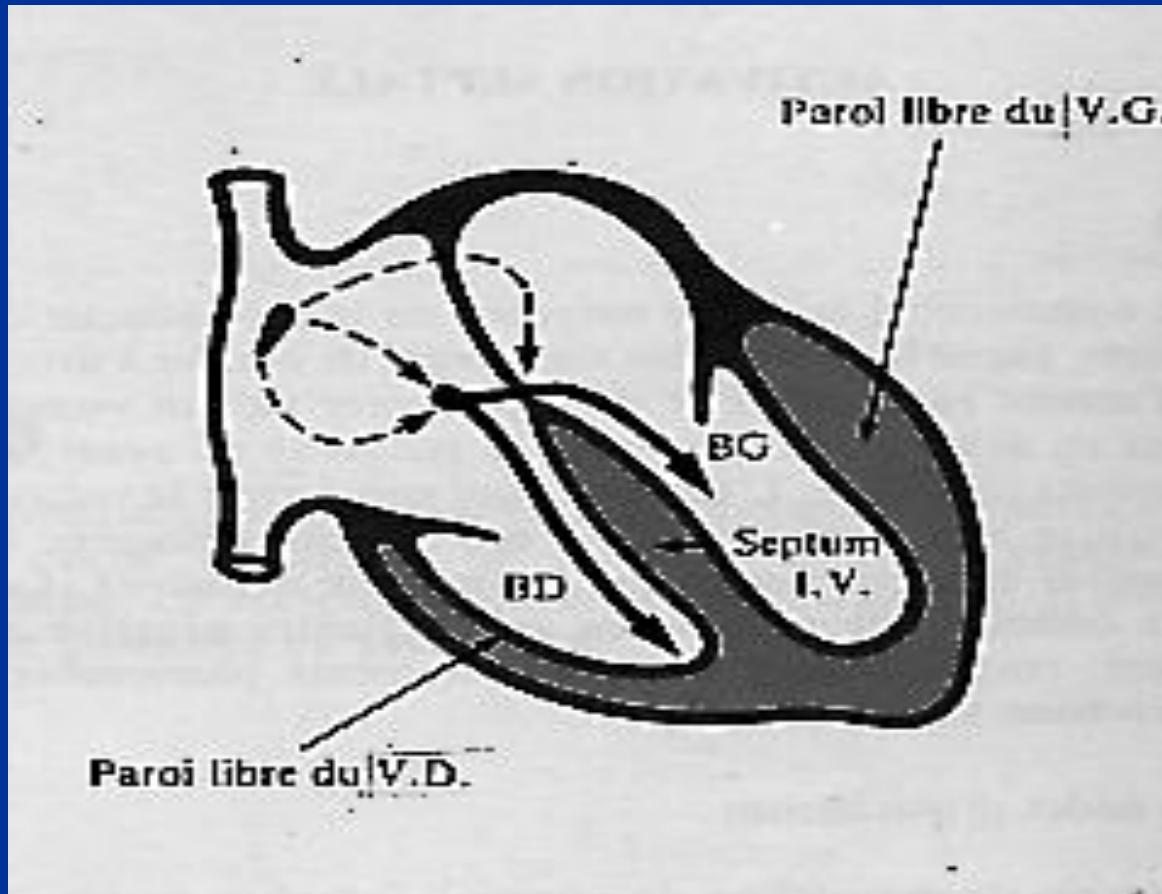
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# Notion électrocardiographique de base

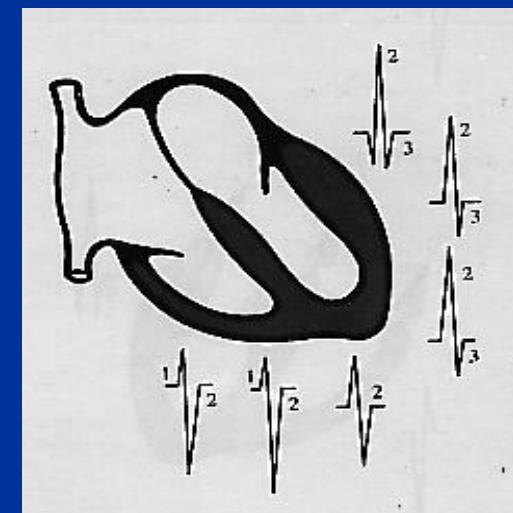
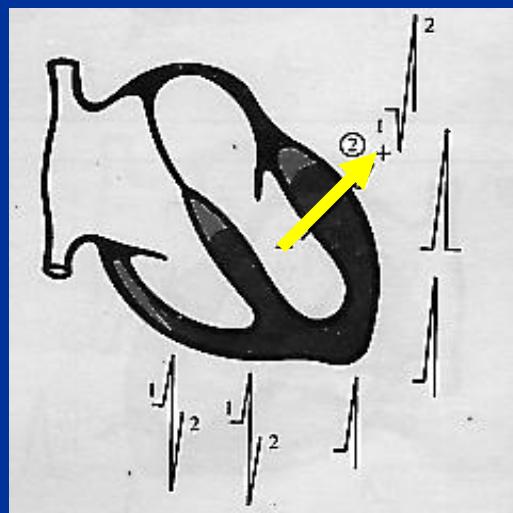
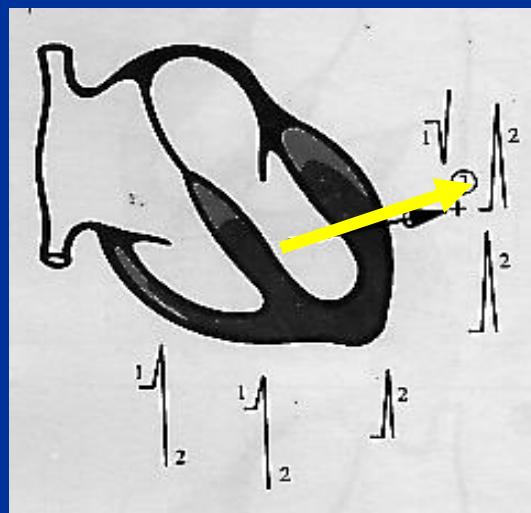
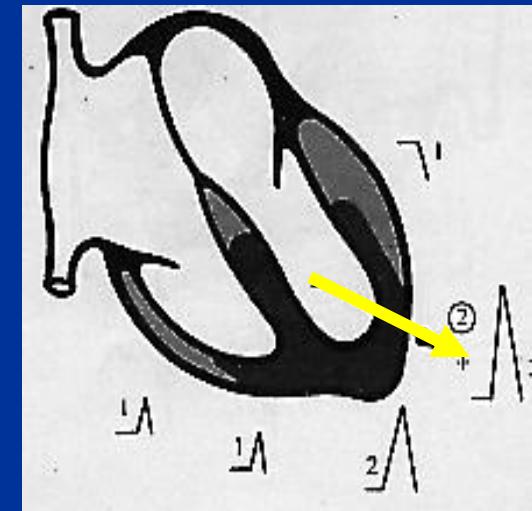
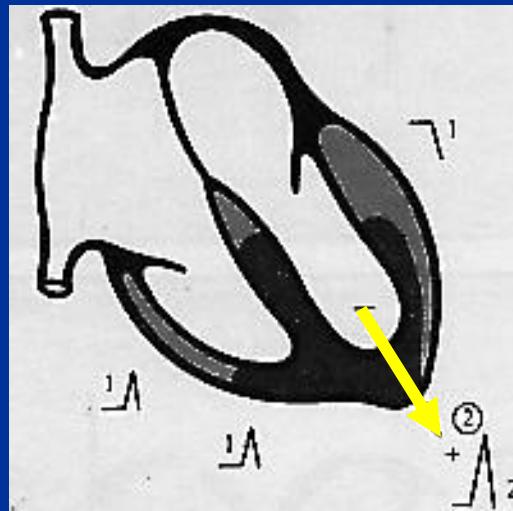
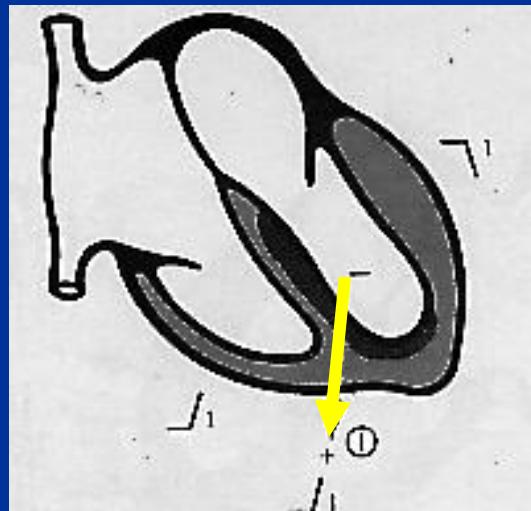
5

## Dépolarisation ventriculaire



# Notion électrocardiographique de base

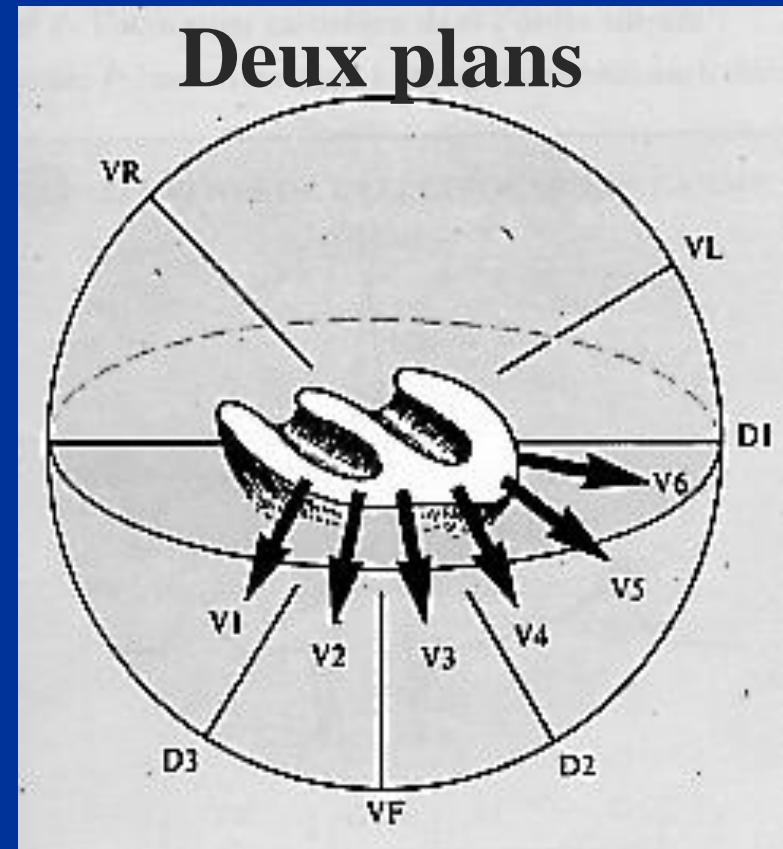
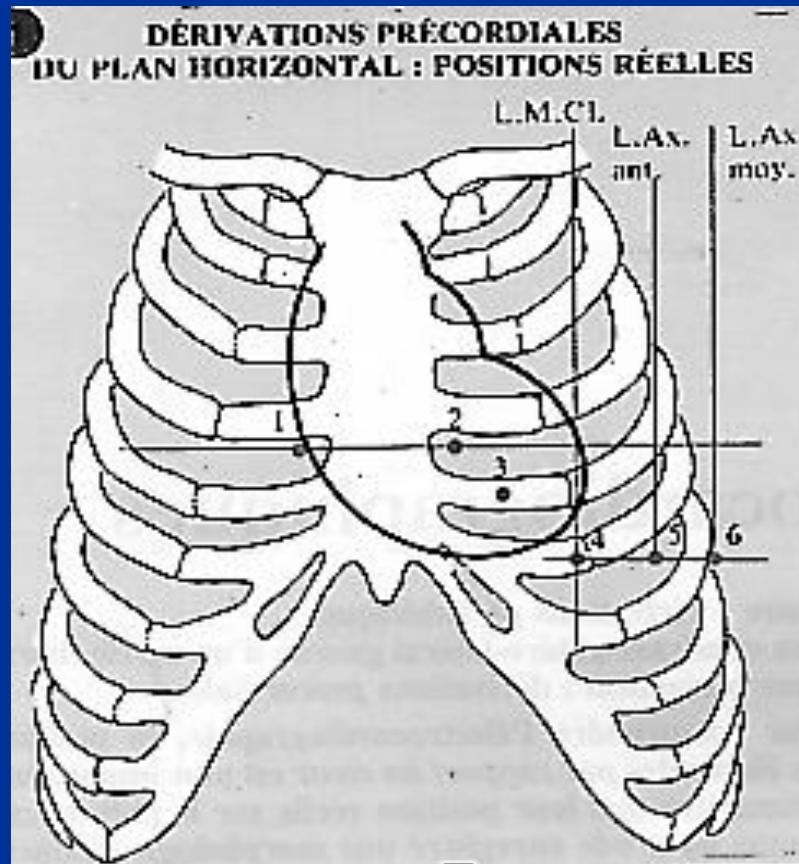
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# Notion électrocardiographique de base

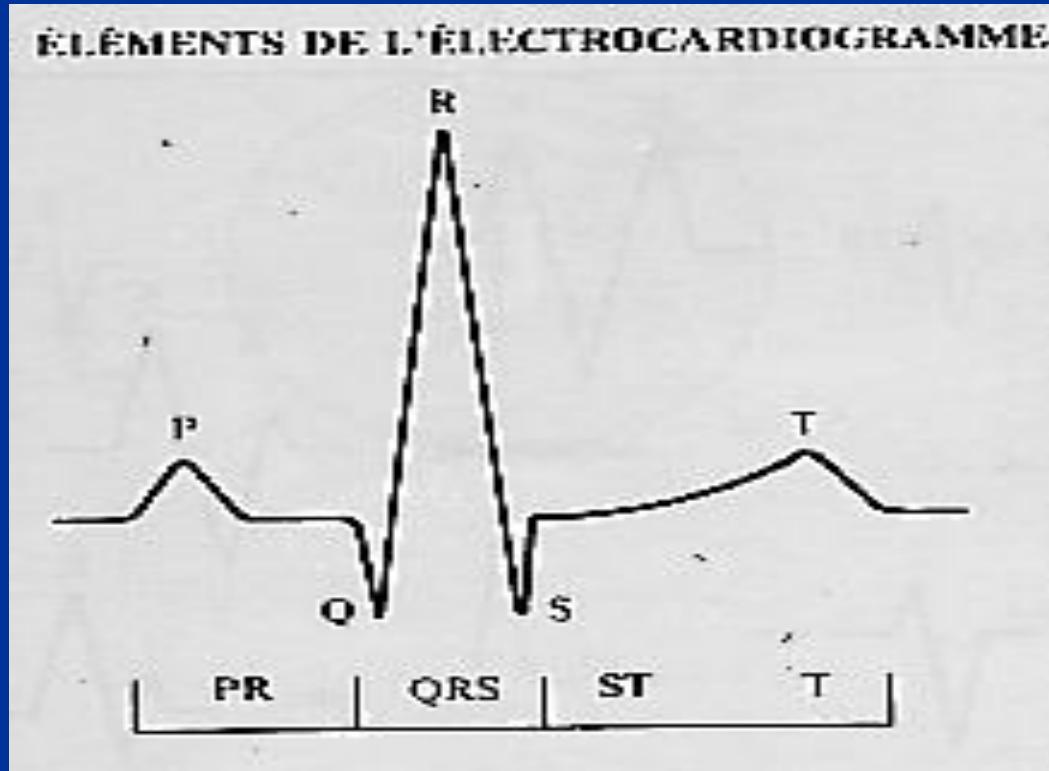
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## Les dérivations

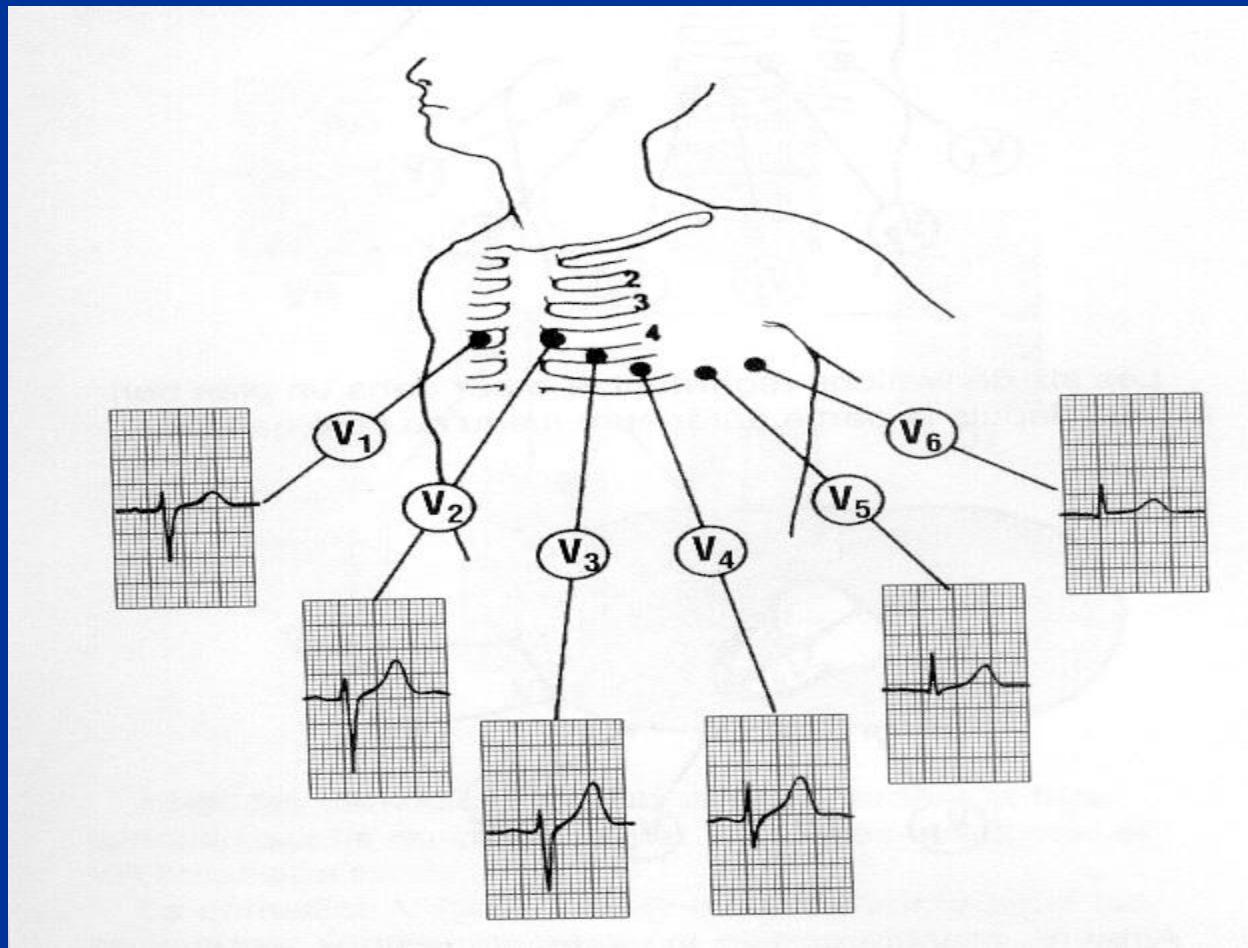


# Aspect ECG des variations du vecteur cardiaque

(dérivation à la pointe du cœur)



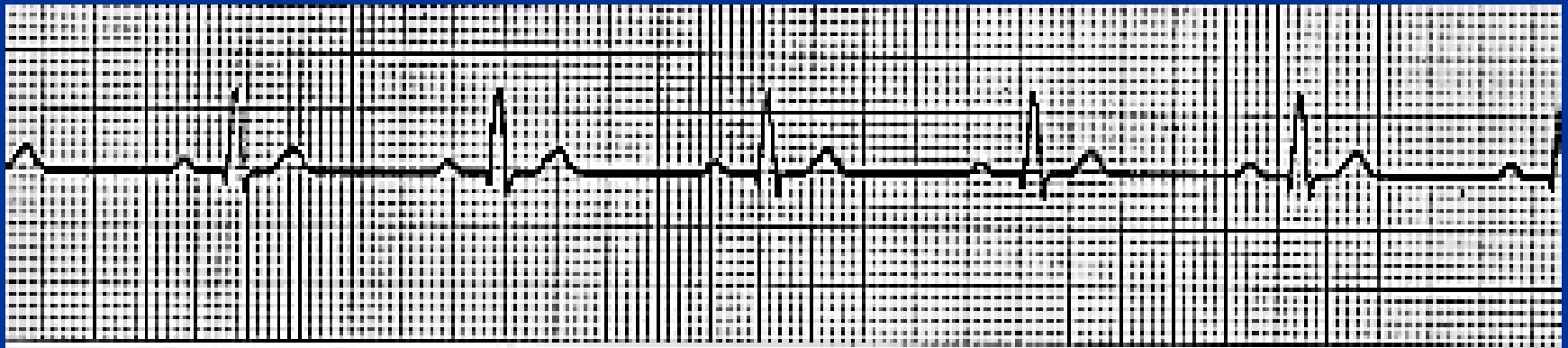
# Aspect ECG dans les dérivations précordiales



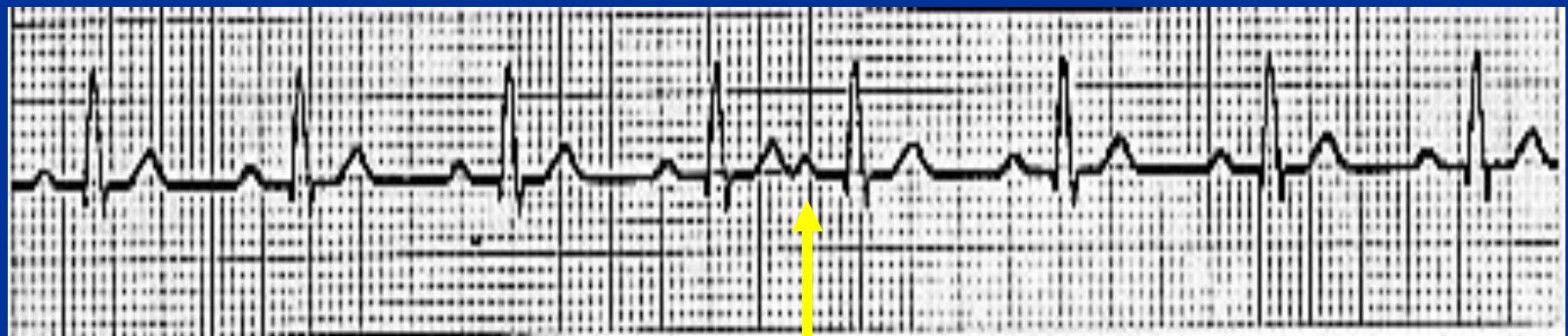
# Interprétation d'un ECG

- Valeur d'un ECG de référence
- Utilisation d'un tracé multi-pistes

# Rythme sinusal



# Extrasystole auriculaire



P différente et précoce

# Extrasystole Ventriculaire

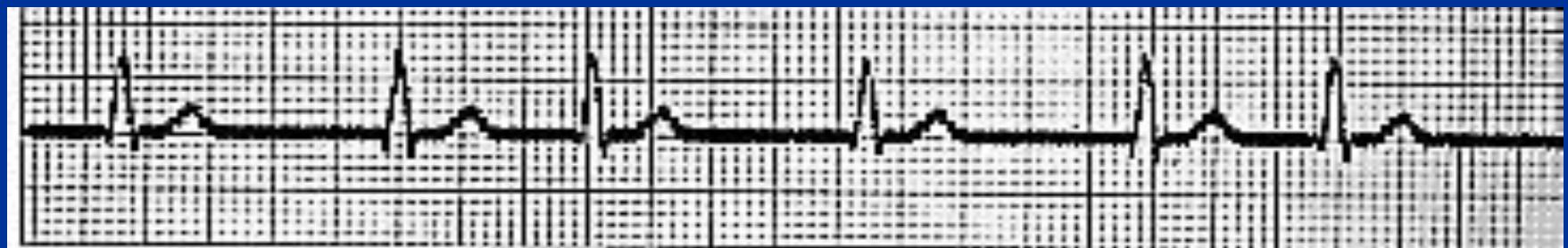
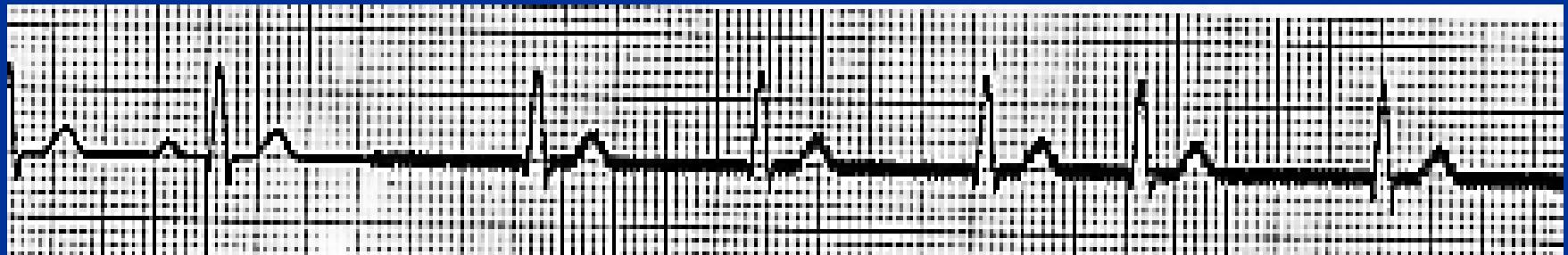


ESV (QRS large sans onde P)

# Bradycardie sinusale



# Arythmie complète par fibrillation auriculaire (AC/FA)



# Bloc sino-auriculaire



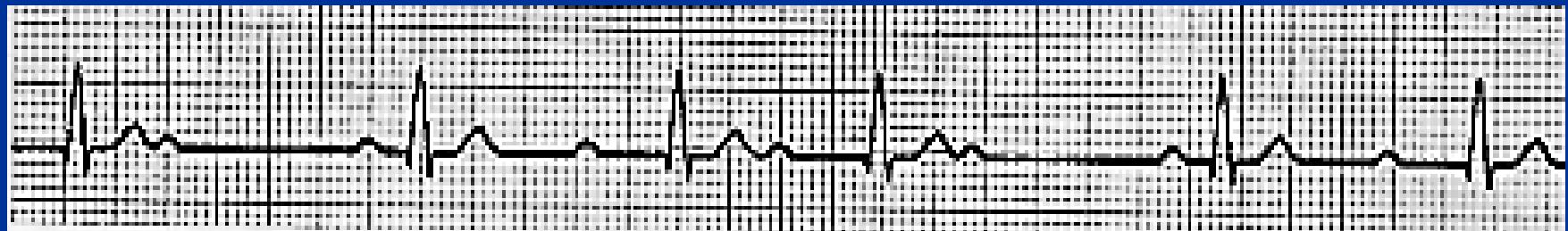
P ?

# Bloc auriculo-ventriculaire

BAV I



BAV II type 1 (période Lucciani-Wenckebach)

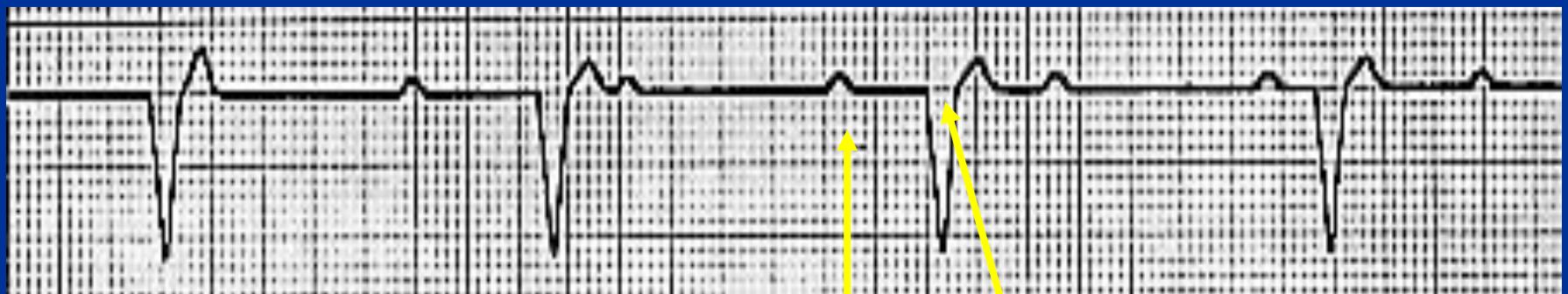


BAV II type 2

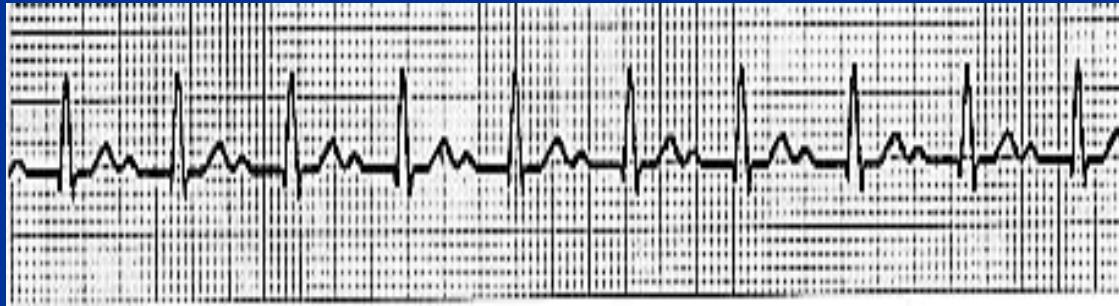


# Bloc auriculo-ventriculaire

**BAV III**



Dissociation complète des P et QRS souvent élargies  
PR non constant



## Tachycardie sinusale

Ondes P (partant du sinus) parfois difficiles à voir

## Tachysystolie auriculaire

Ondes P partant d'un foyer auriculaire ectopique

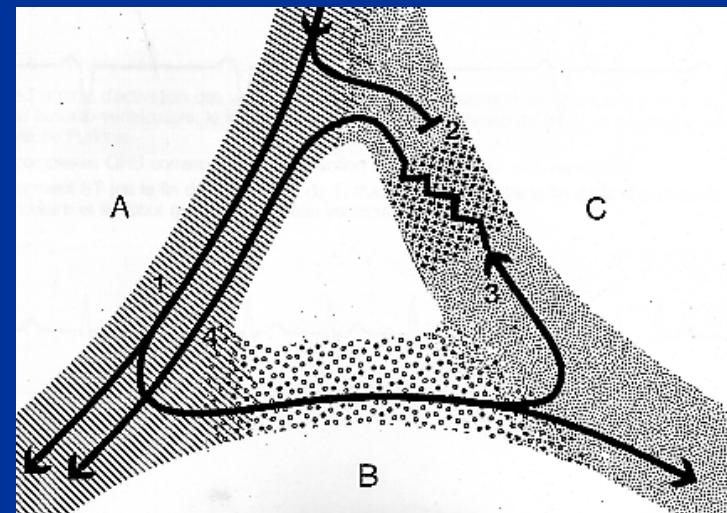
# Flutter



# Tachycardies jonctionnelles 1

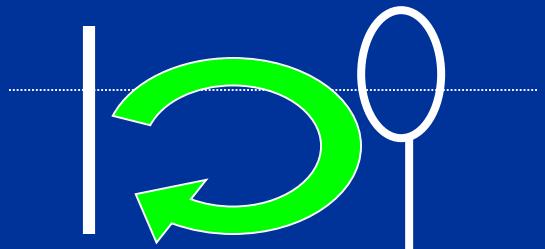


À l'intérieur du nœud A-V  
2 fibres de conduction  
A et C forme par saut  
de dépolarisation (B) une  
boucle auto-entretenue



# Tachycardies jonctionnelles 2

Boucle possible avec voies normales et faisceau accessoire (WPW)

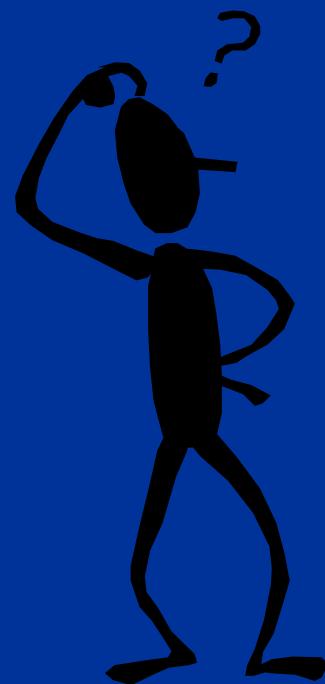


ECG hors tachycardie

PR court et onde delta

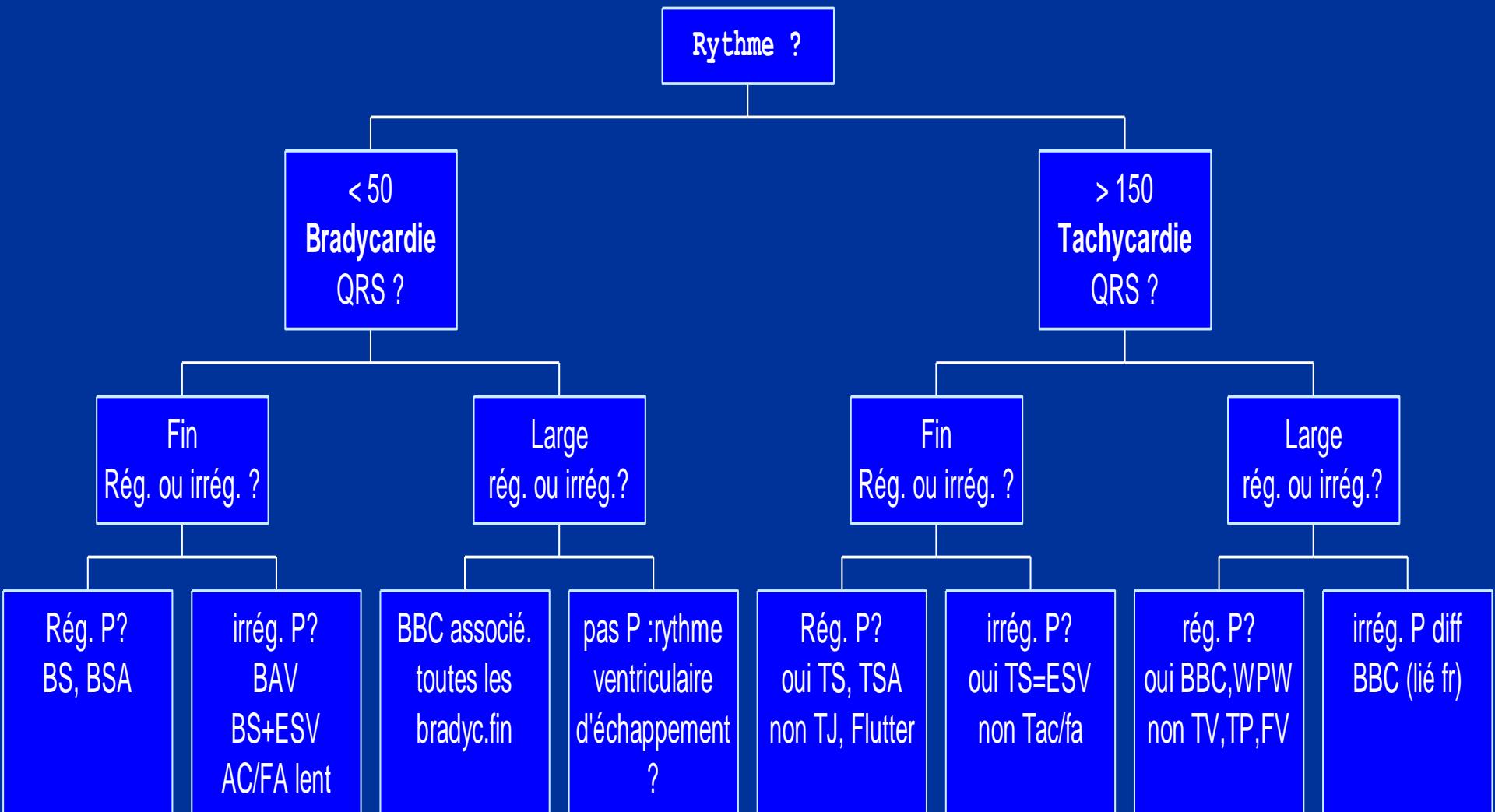


# Conduite diagnostic



- Pour une interprétation pratique
- 4 questions:
- ① Quel rythme?
  - ② Largeur du QRS? ( $>$  ou  $<$  0.08 s)
  - ③ Aspect régulier ou irrégulier ?
  - ④ existe-t-il des ondes P ?

# Algorithme des troubles du rythme



# Conduite Pratique

- Le problème est de savoir si :  
**DANGER immédiat ou non ?**  
**Si QRS fin peu de risque**  
**si QRS large et Tachycardie ATTENTION**  
**à la *TACHYCARDIE VENTRICULAIRE***

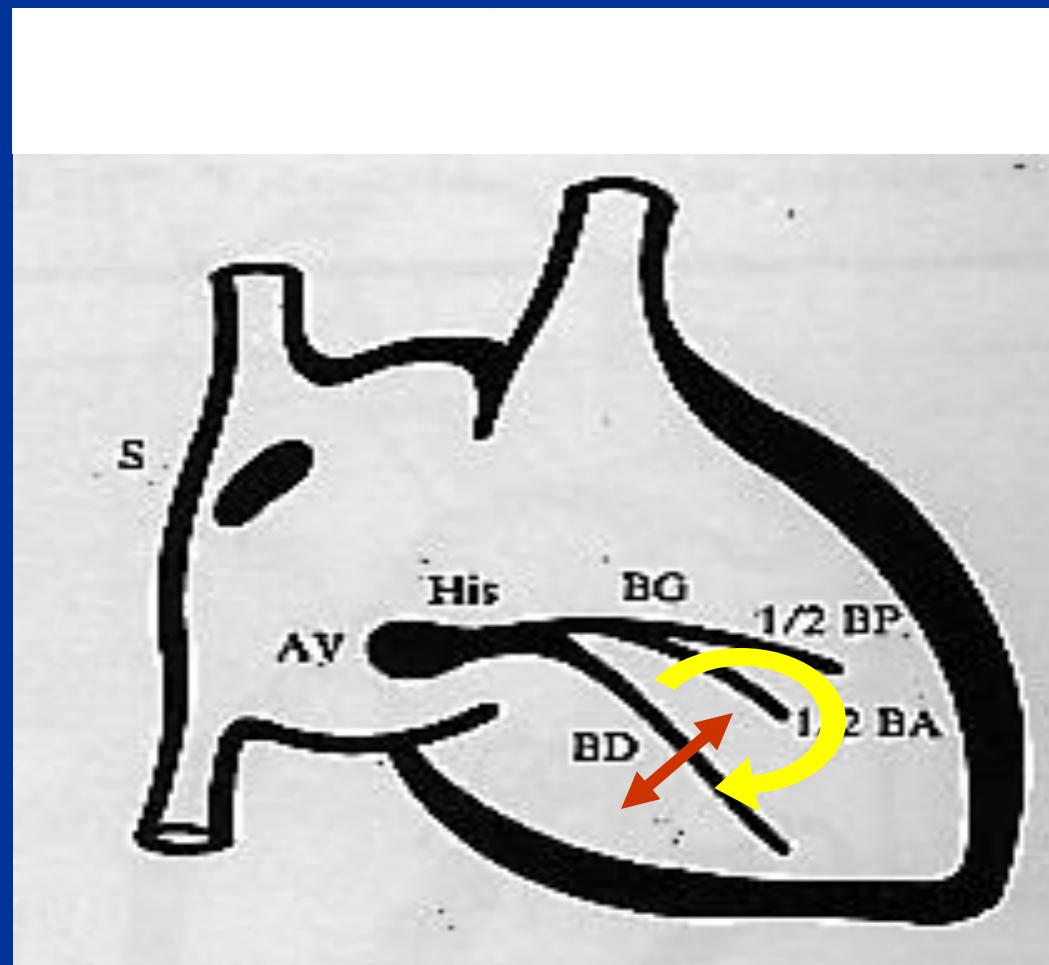


Peco

# Tachycardie à QRS Large

- **Bloc de branche complet (onde P)**
- **Syndrome de préexcitation antiD (onde P)**
- **Tachycardie Ventriculaire**

# Bloc de Branche (1)



# Bloc de Branche (2)



Aspect élargie du QRS précédé d 'une onde P

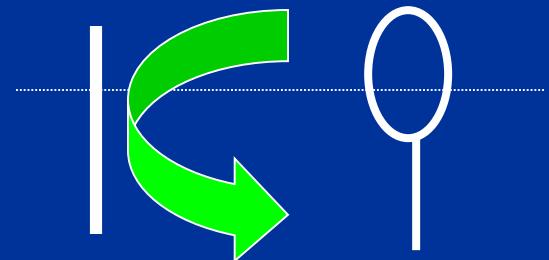
QRS > 0,12 s

retard V1 → BBD

retard V6 → BBG

# Tachycardie jonctionnelles

Boucle possible avec voies normales et faisceau accessoire (WPW)



ECG en tachycardie



# Diagnostic Tachycardie Ventriculaire



Aspect élargie du QRS sans onde P

# Diagnostic Tachycardie Ventriculaire

- Les captures et fusions sont des QRS normaux qui passent entre 2 complexes ventriculaires



- L 'existence de capture ou de fusion signe le diagnostic sinon incertitude!

# Fibrillation ventriculaire



# Pacemaker



# Classification de Vaughan-Williams

Inh. sodique	béta B	inh. potassique	inh. Calcique	autres
classe I	classe II	classe III	classe IV	autres
A. Disopyramide Quinidine Procainamide Ajmaline (Cibenzoline)	β-bloquants	Sotalol Amiodarone Bretylium	Verapamil Diltiazem	Digitale Adénosine triphasphate
B. Lidocaïne Mexiletine				
C. Propafenone Flecainide Cibenzoline				

# Classification clinique de TOUBOUL

- Sur la conduction auriculo-ventriculaire:
  - Bétabloquants, digitaliques, inh. Calciques, ATP
- Sur le myocarde auriculaire et/ou ventriculaire
  - Classe I
- Sur le myocarde et la conduction
  - Cordarone, Rythmol, Sotalex.

# Les dangers des anti-arythmiques

- Tous ionotropes négatif
- Éviter les associations
- Si « conduction » effet bradycardisant
- Certains allongent le QT (TP) (sérécor, longacor)
- Certains élargissent le QRS (Ic:flécaïne cipralan, rythmol)
- La cordarone donne des dysthyroidies

# Quelques ECG

3 minutes de réflexion

Une feuille et un crayon si besoin

RYTHME?

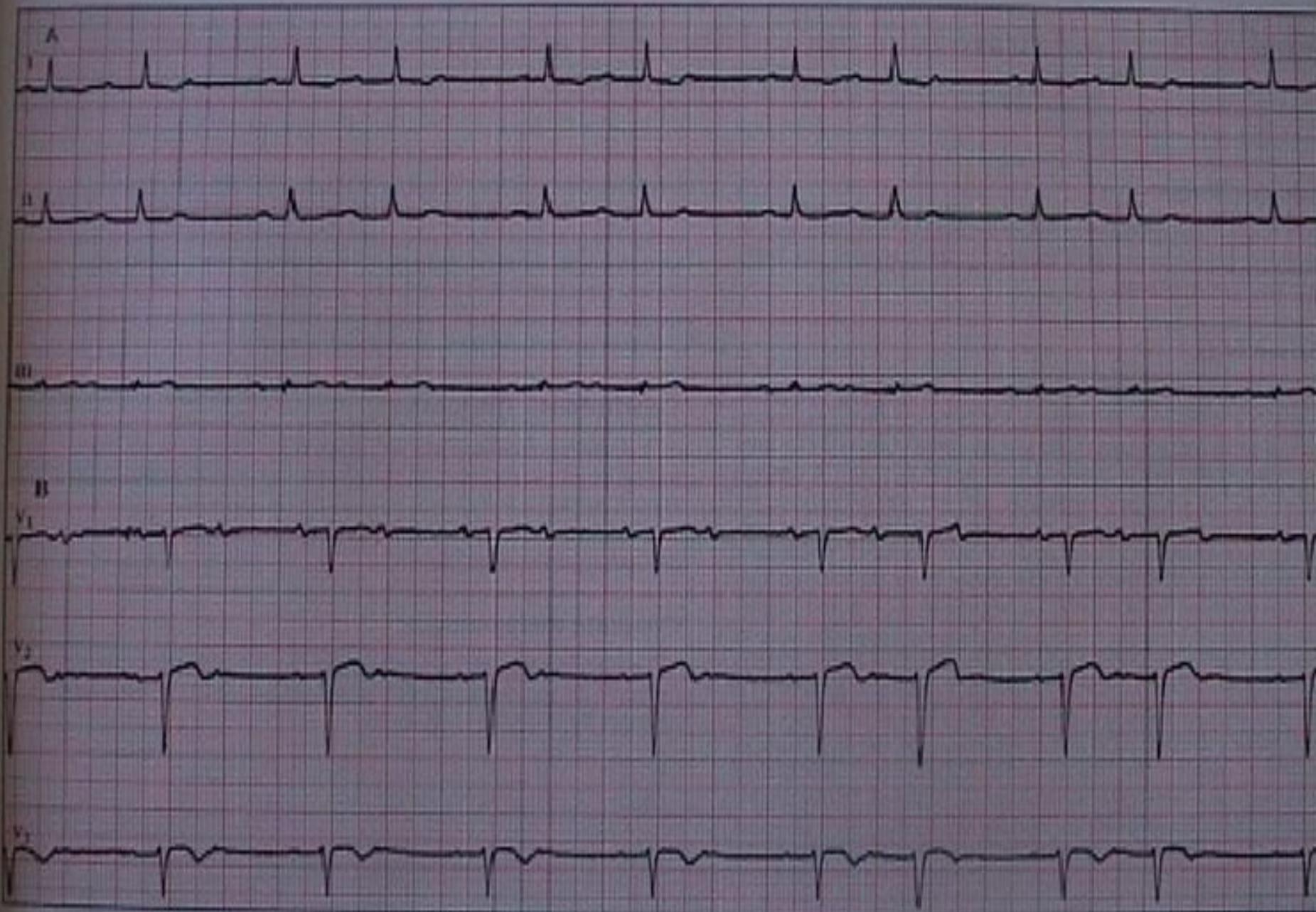
QRS?

Régulier?

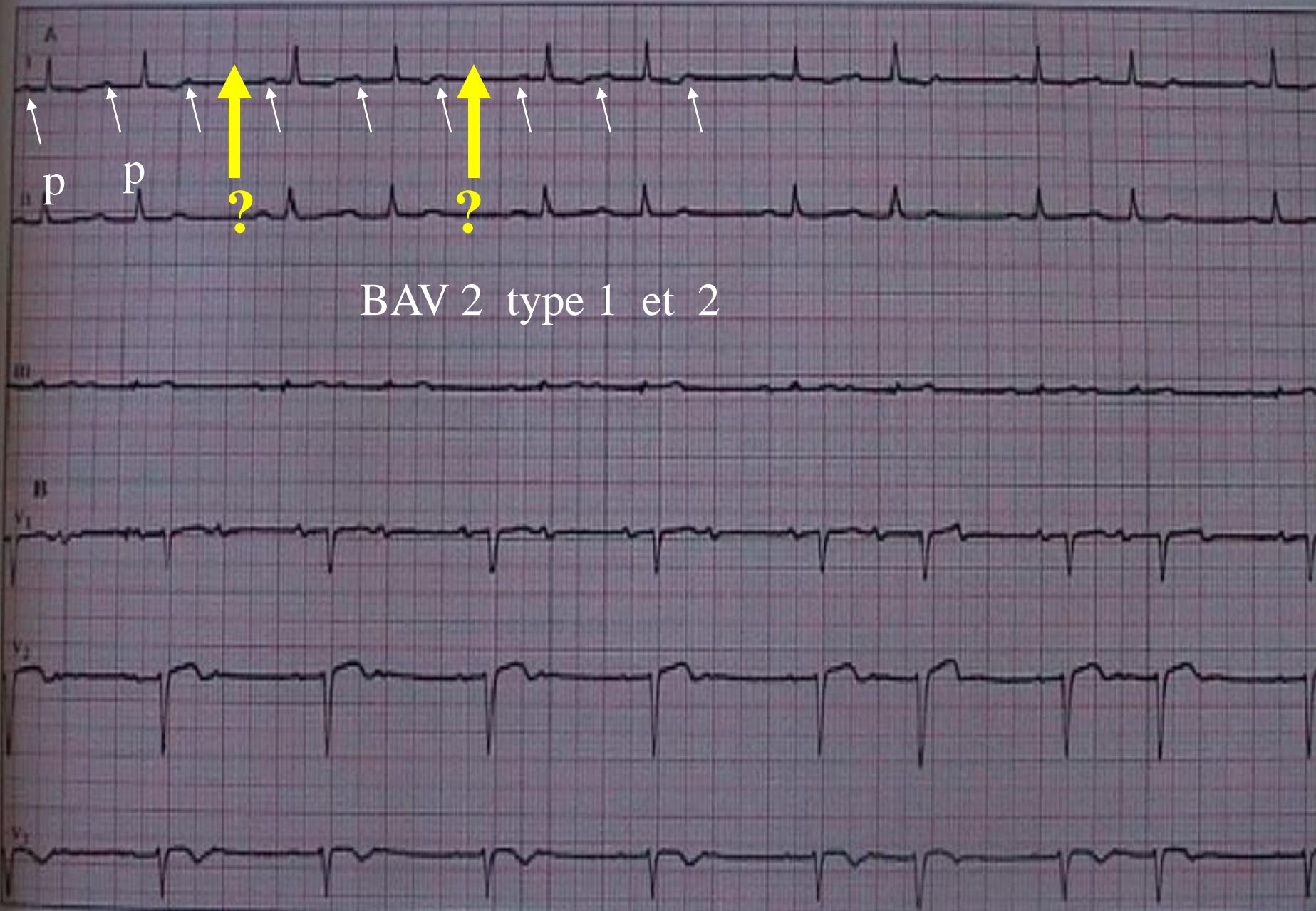
P?

A VOUS !!

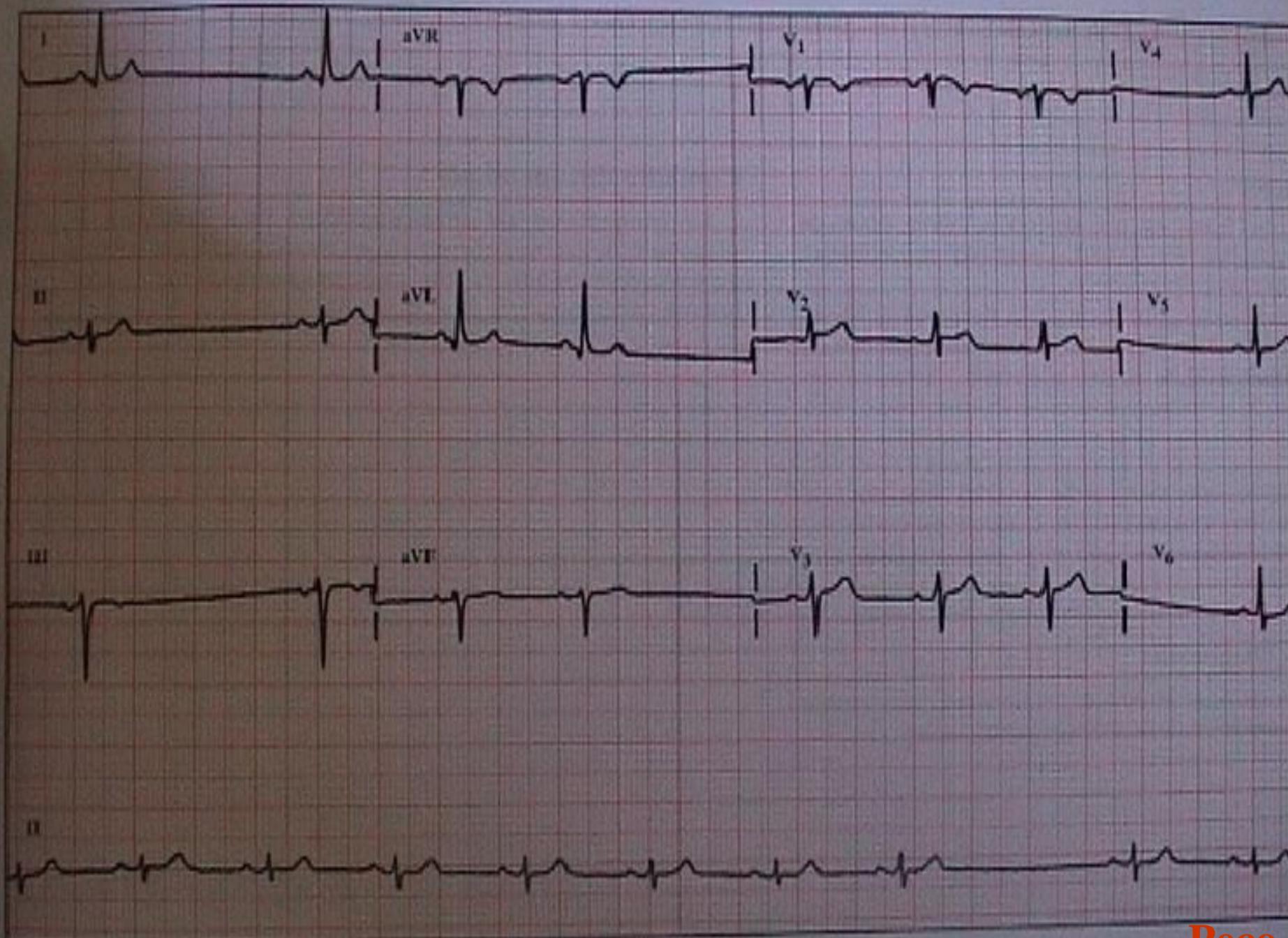




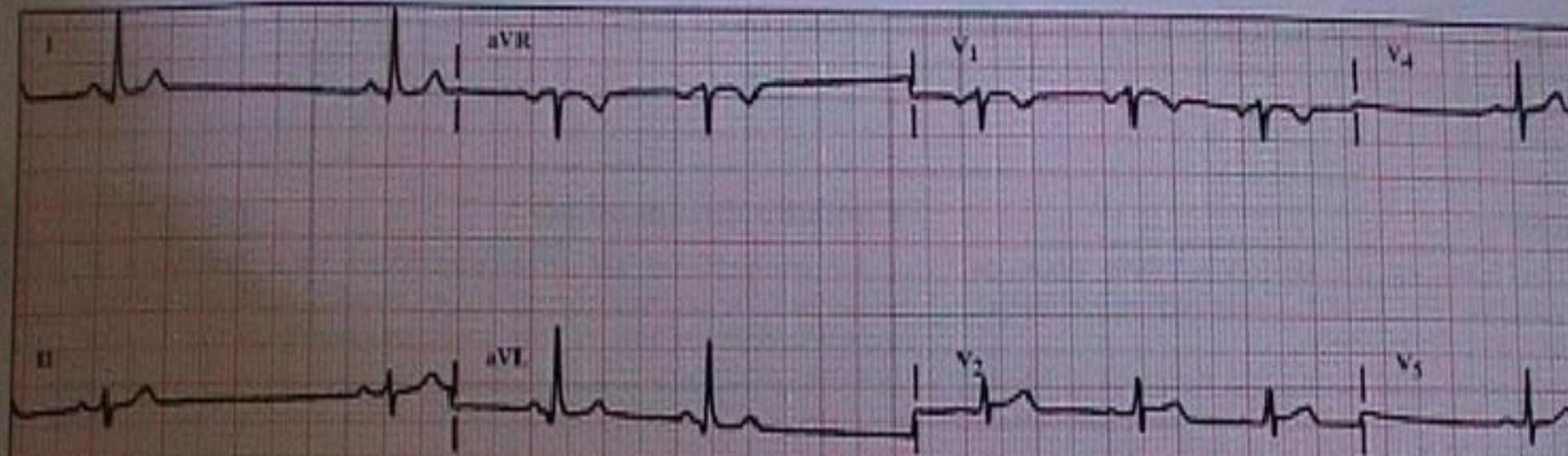
Peco



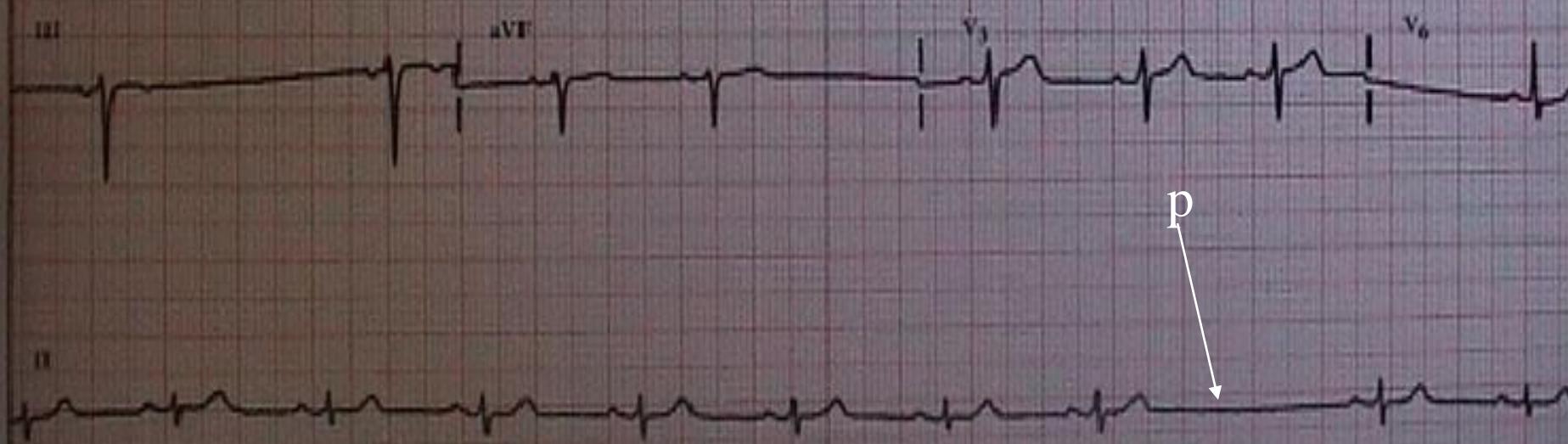
BAV 2 type 1 et 2



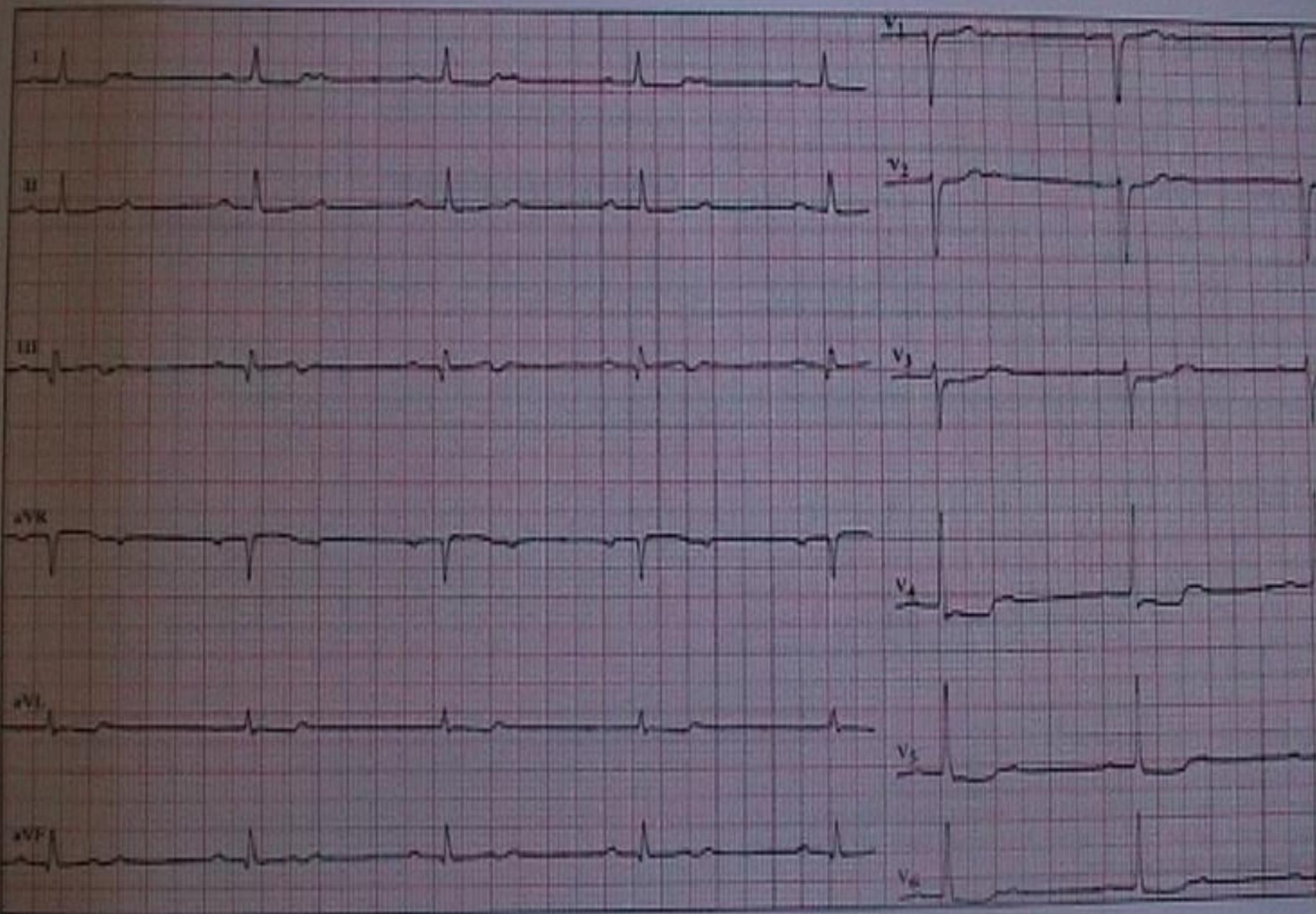
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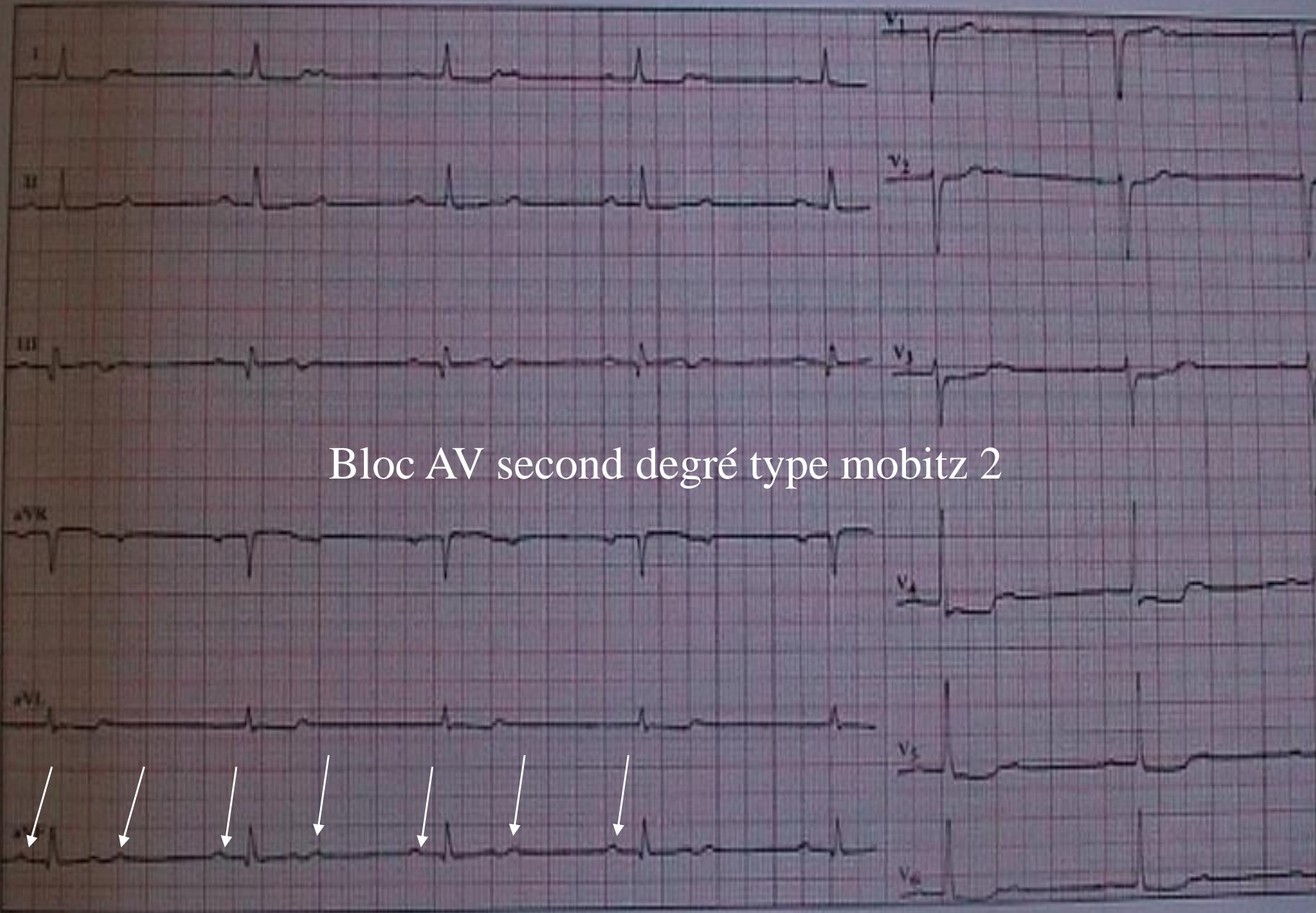


Bloc sino Auriculaire intermittent

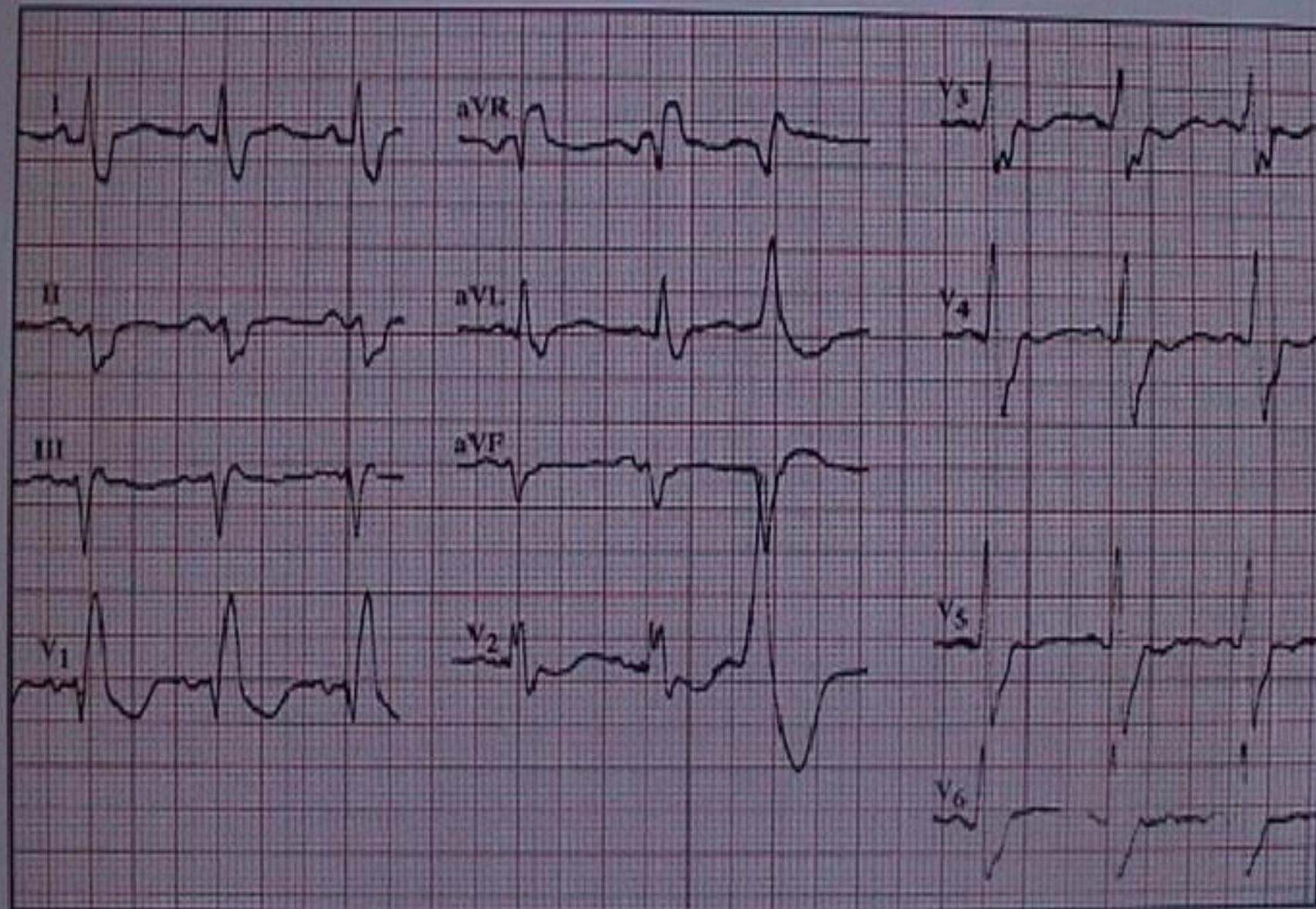


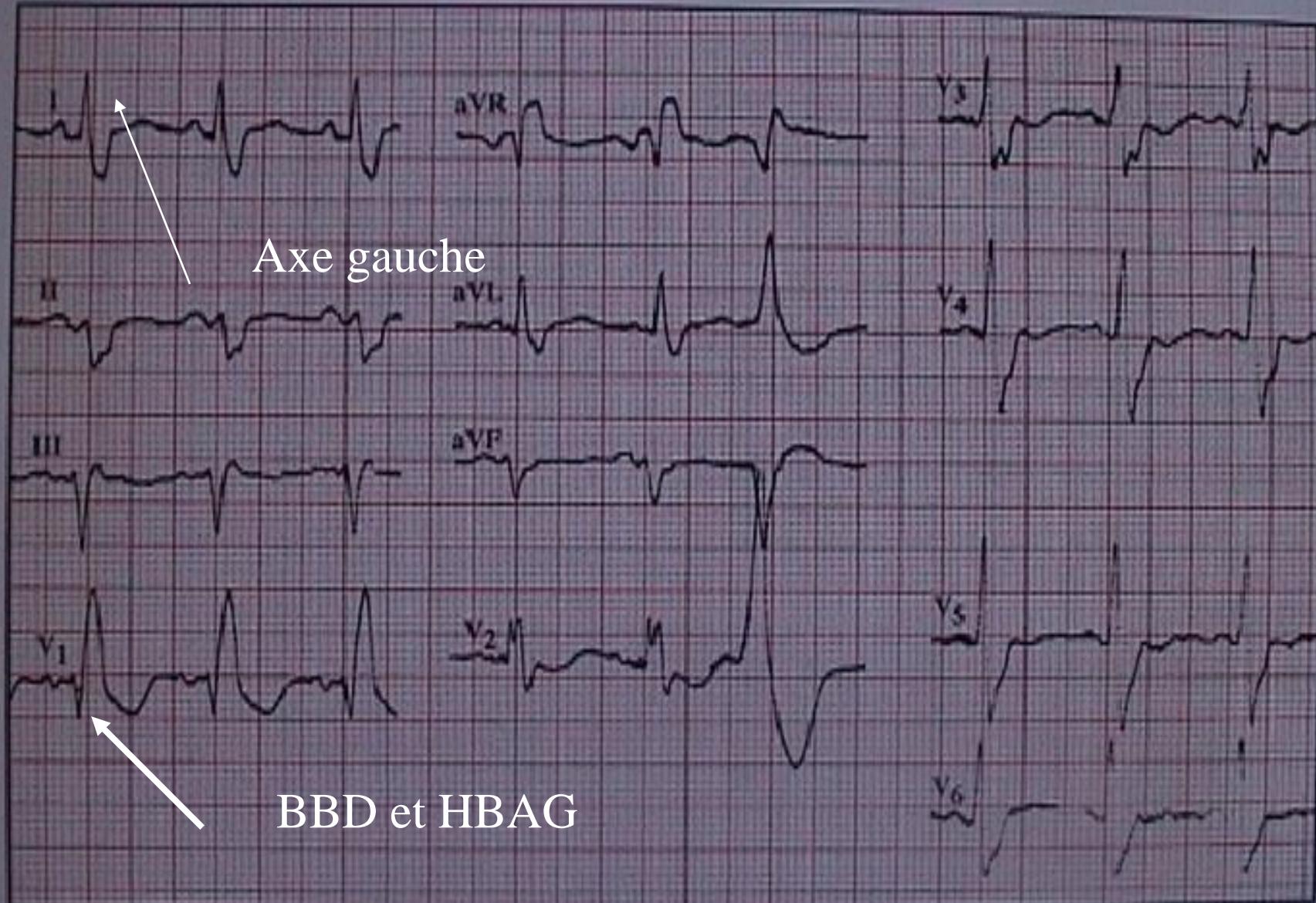
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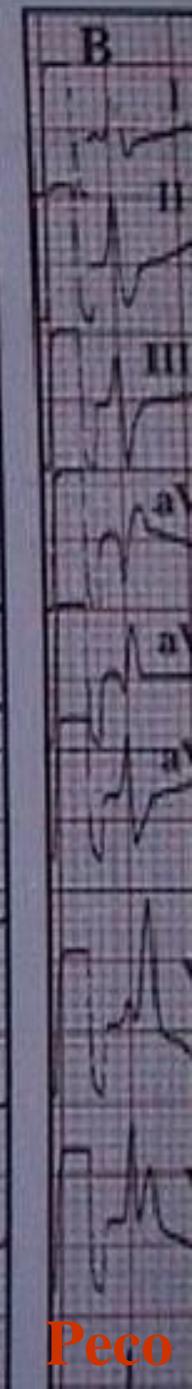
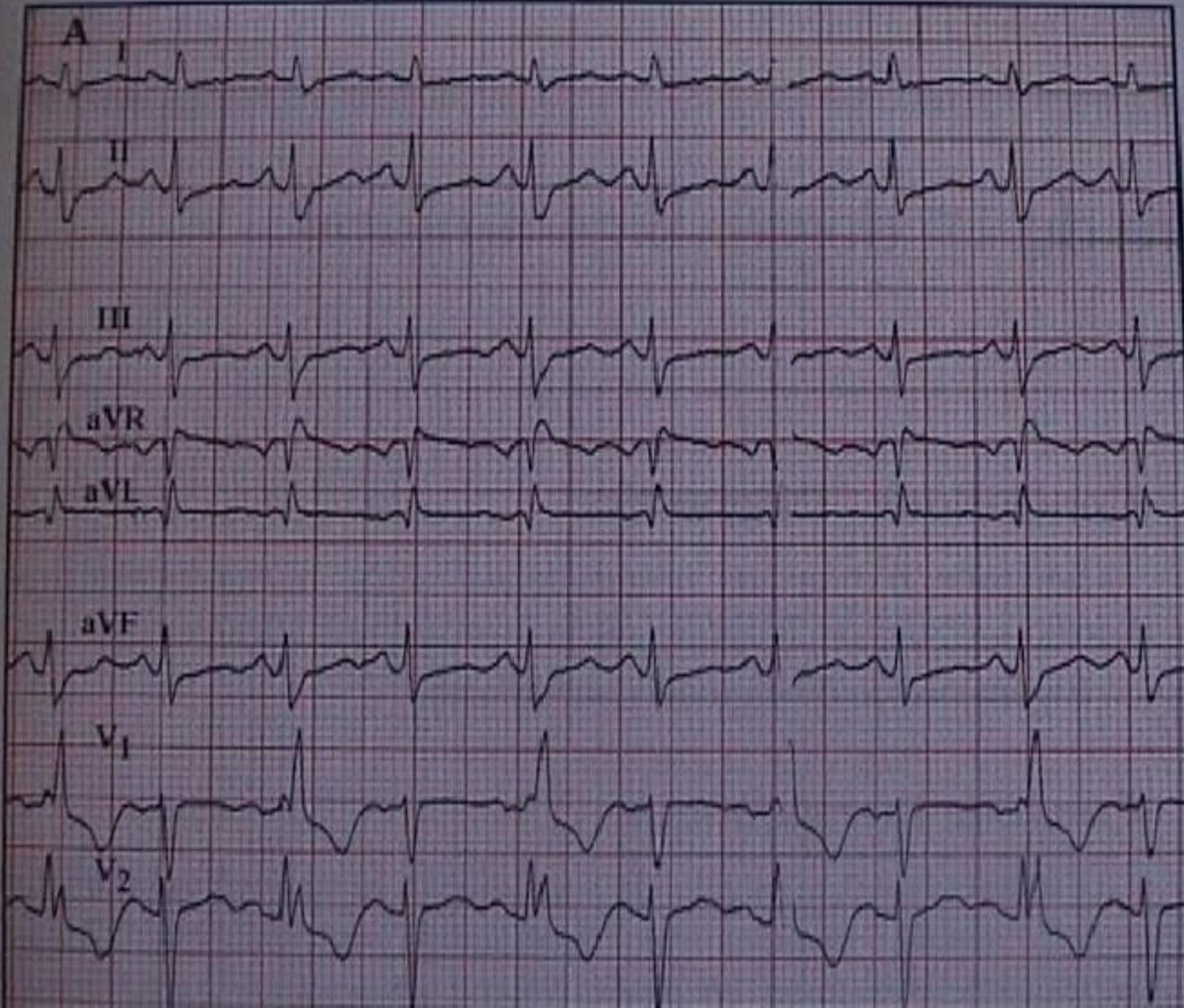




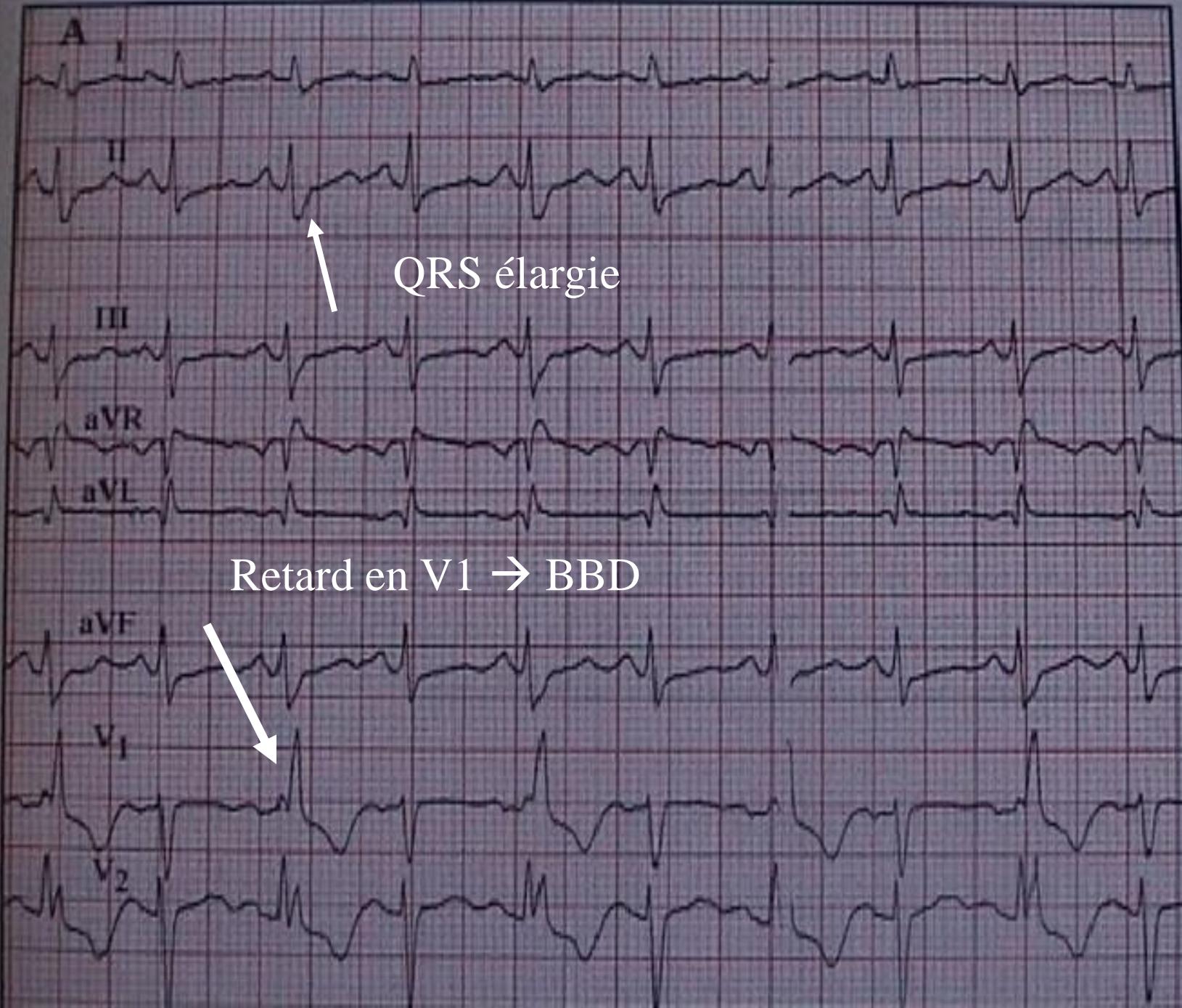
Bloc AV second degré type mobitz 2

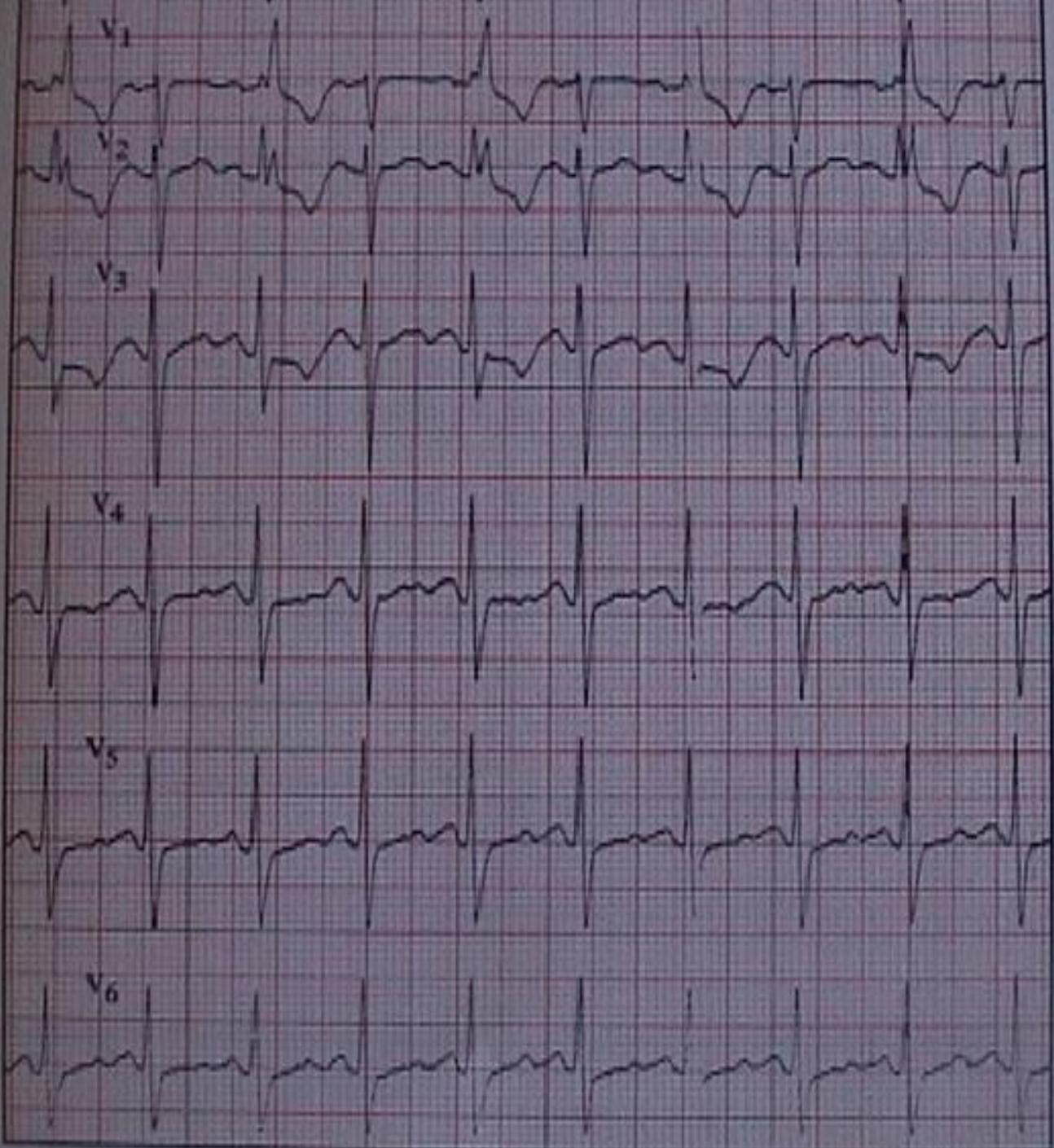




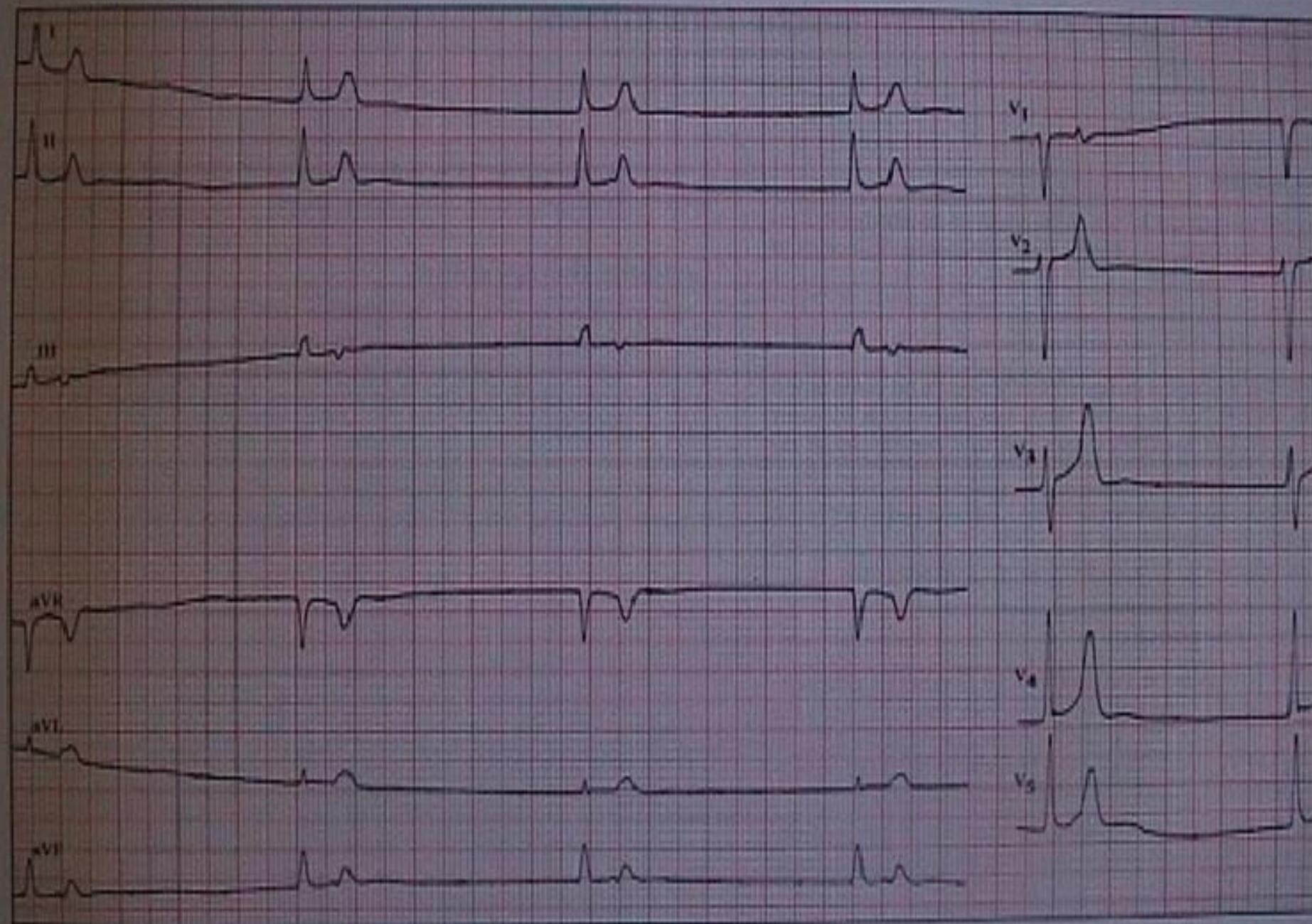


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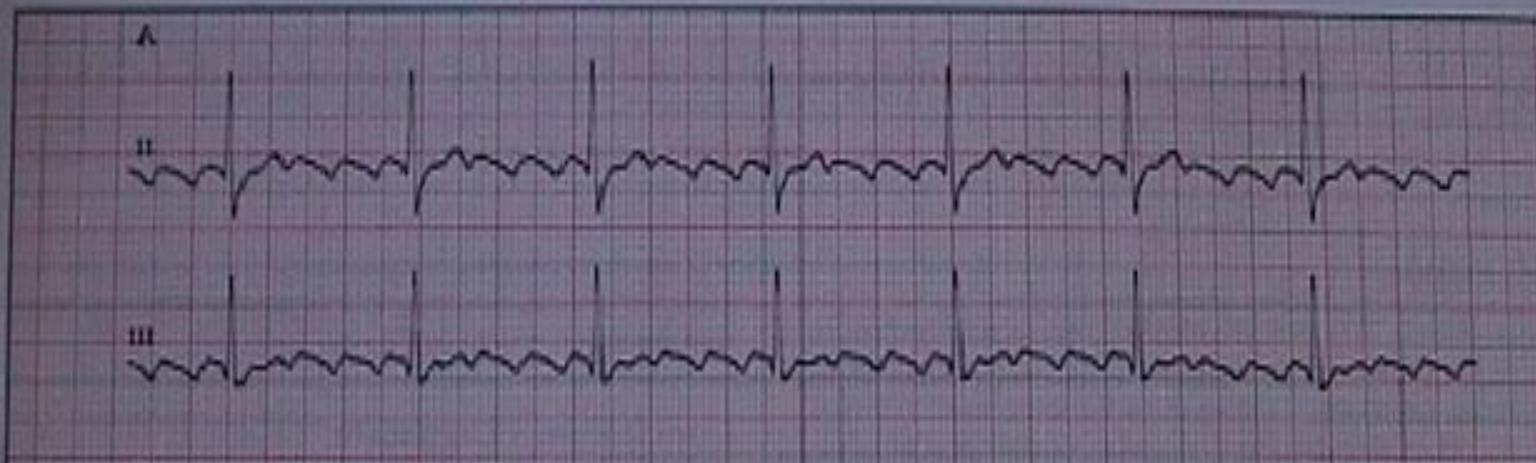




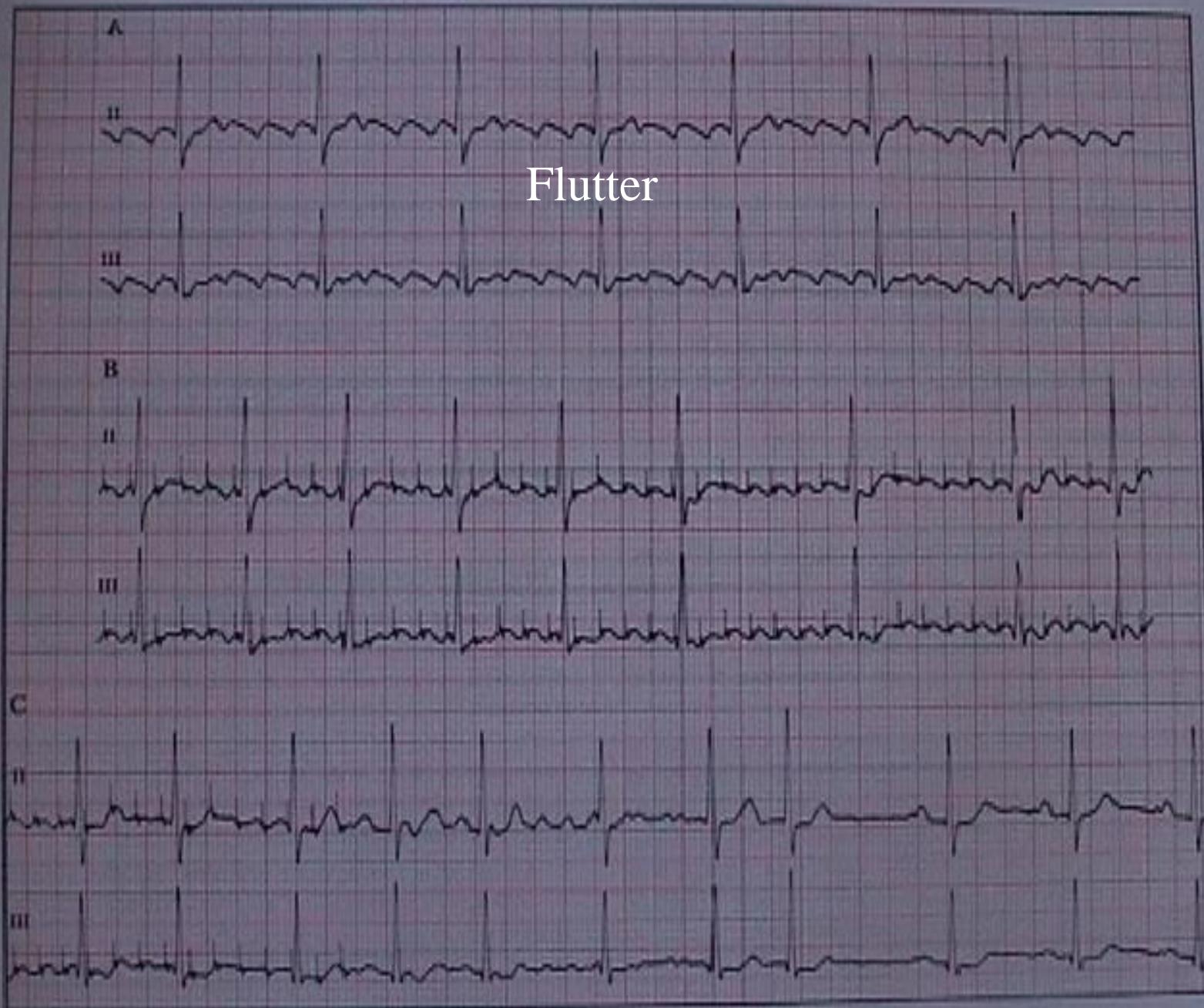
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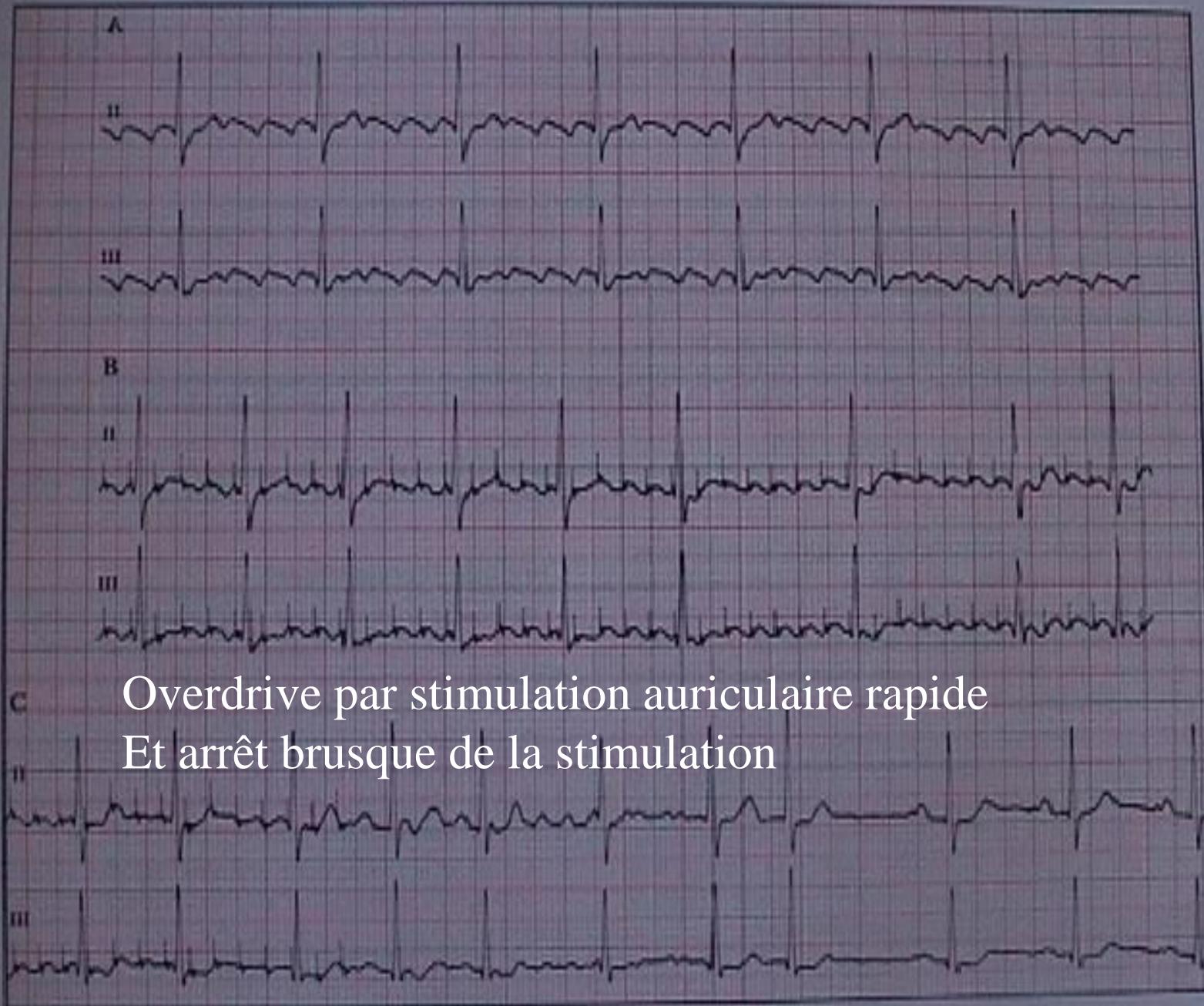


Bradycardie sans P = bloc Sino A

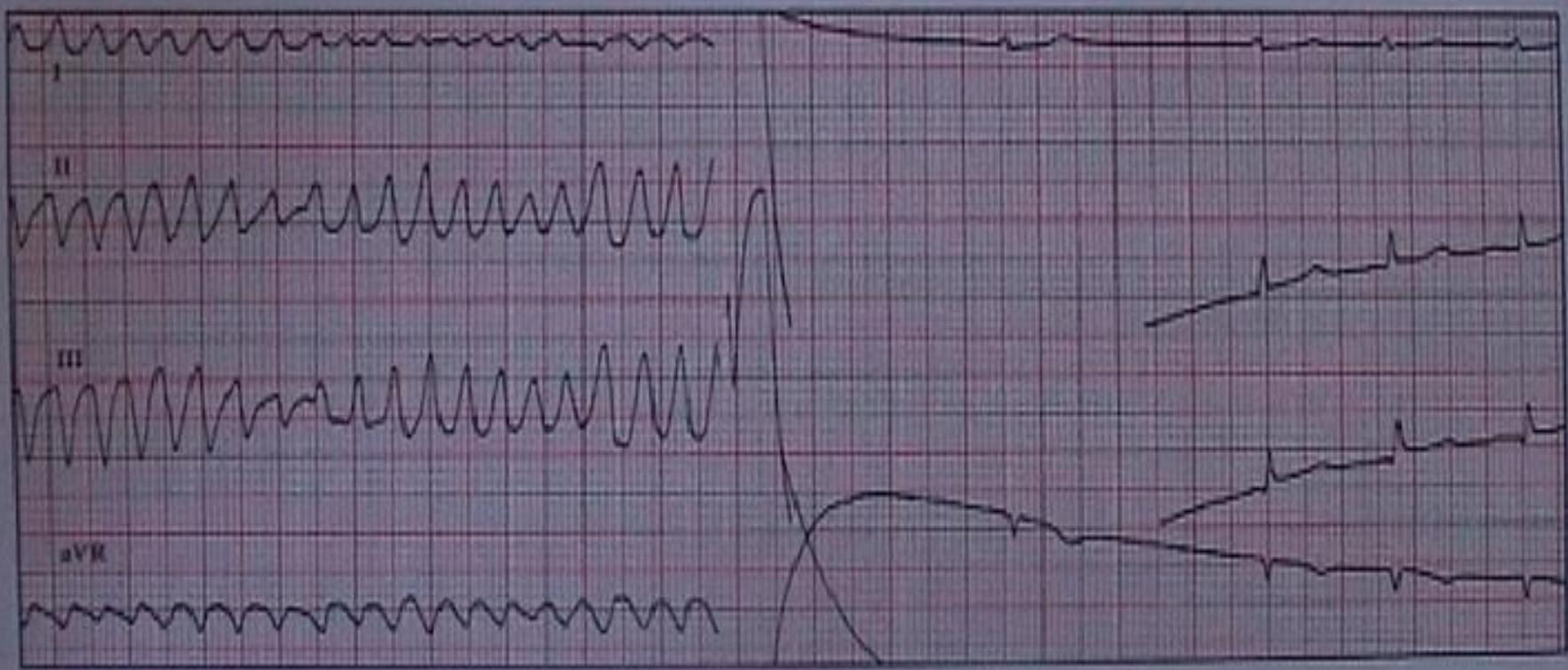


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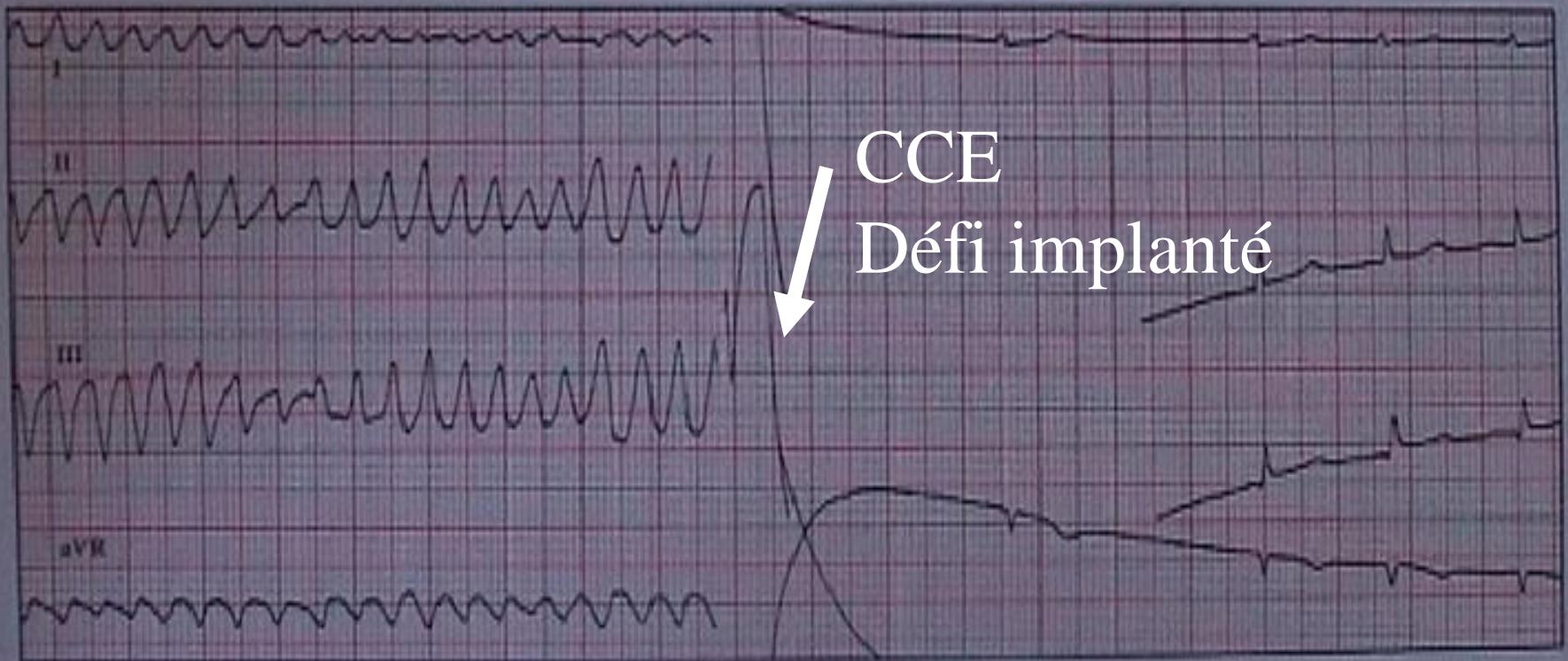


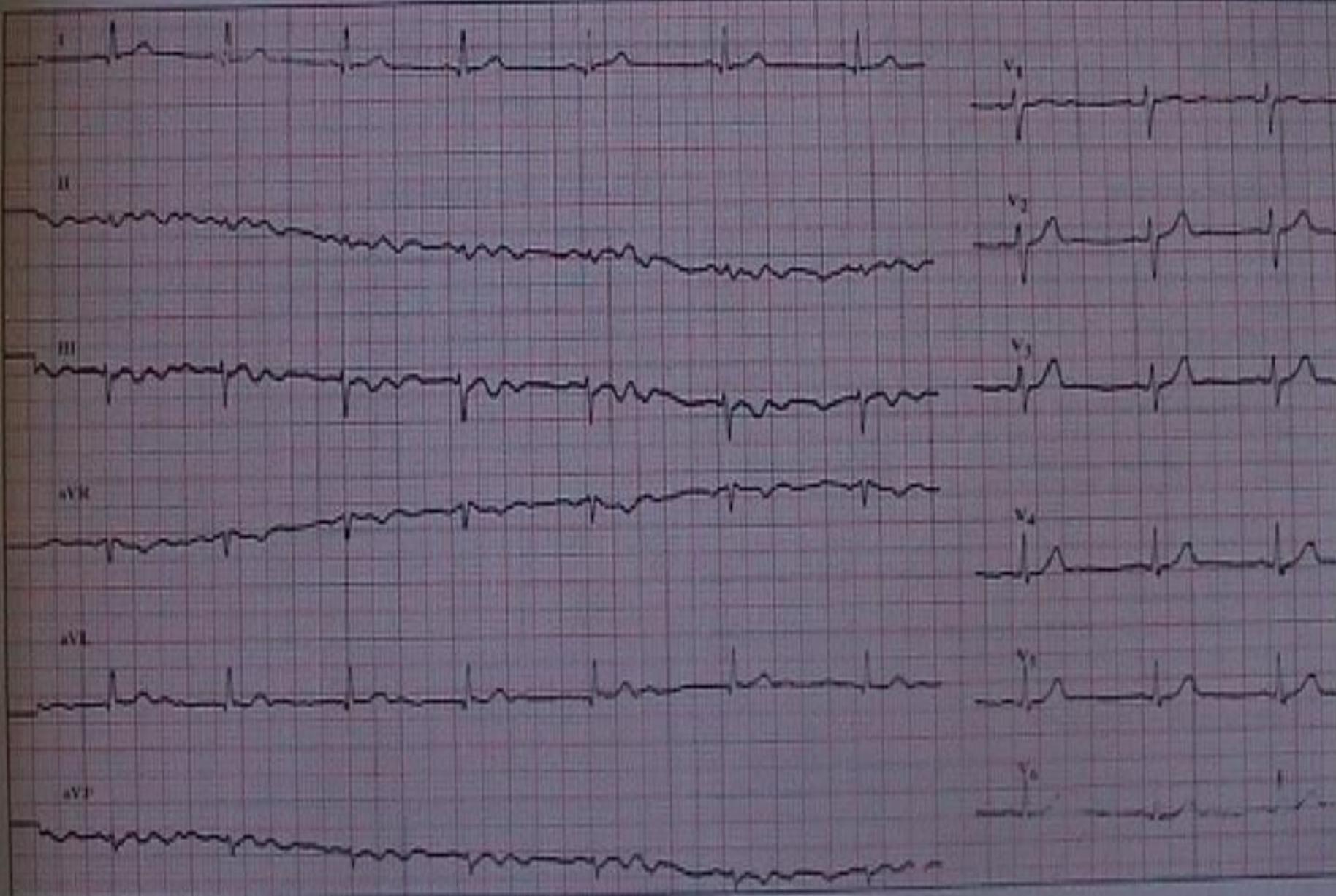


Overdrive par stimulation auriculaire rapide  
Et arrêt brusque de la stimulation

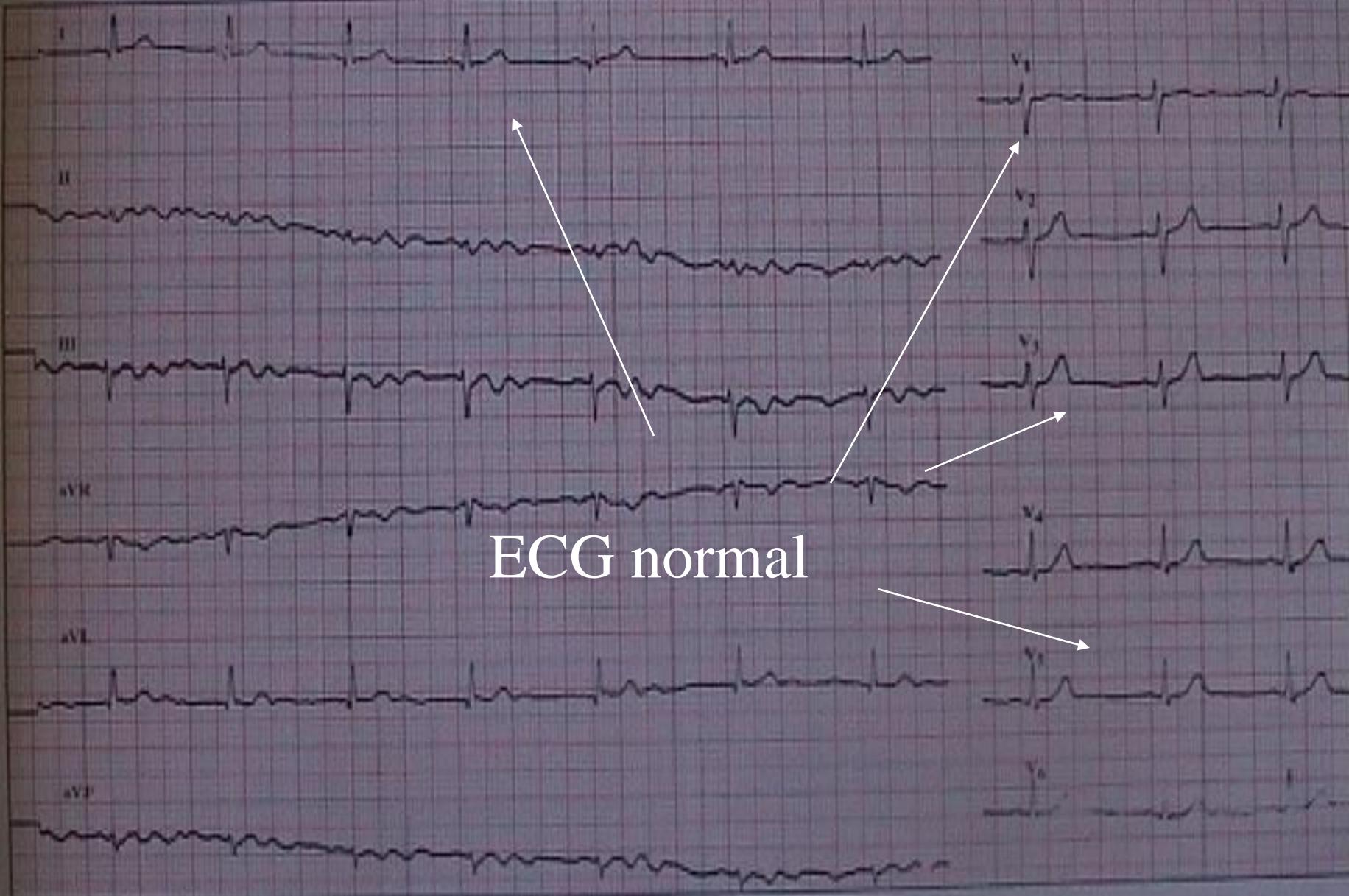


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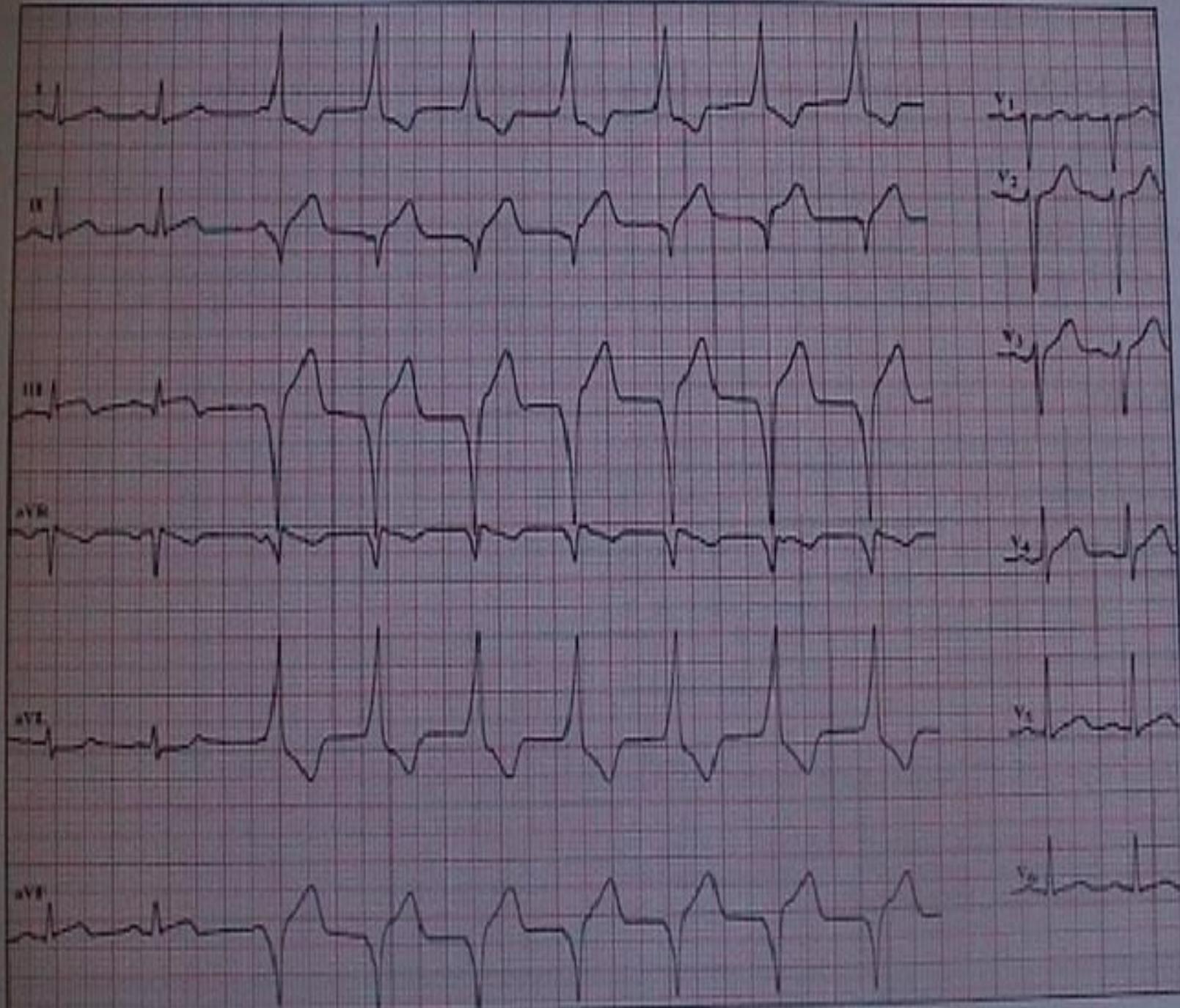




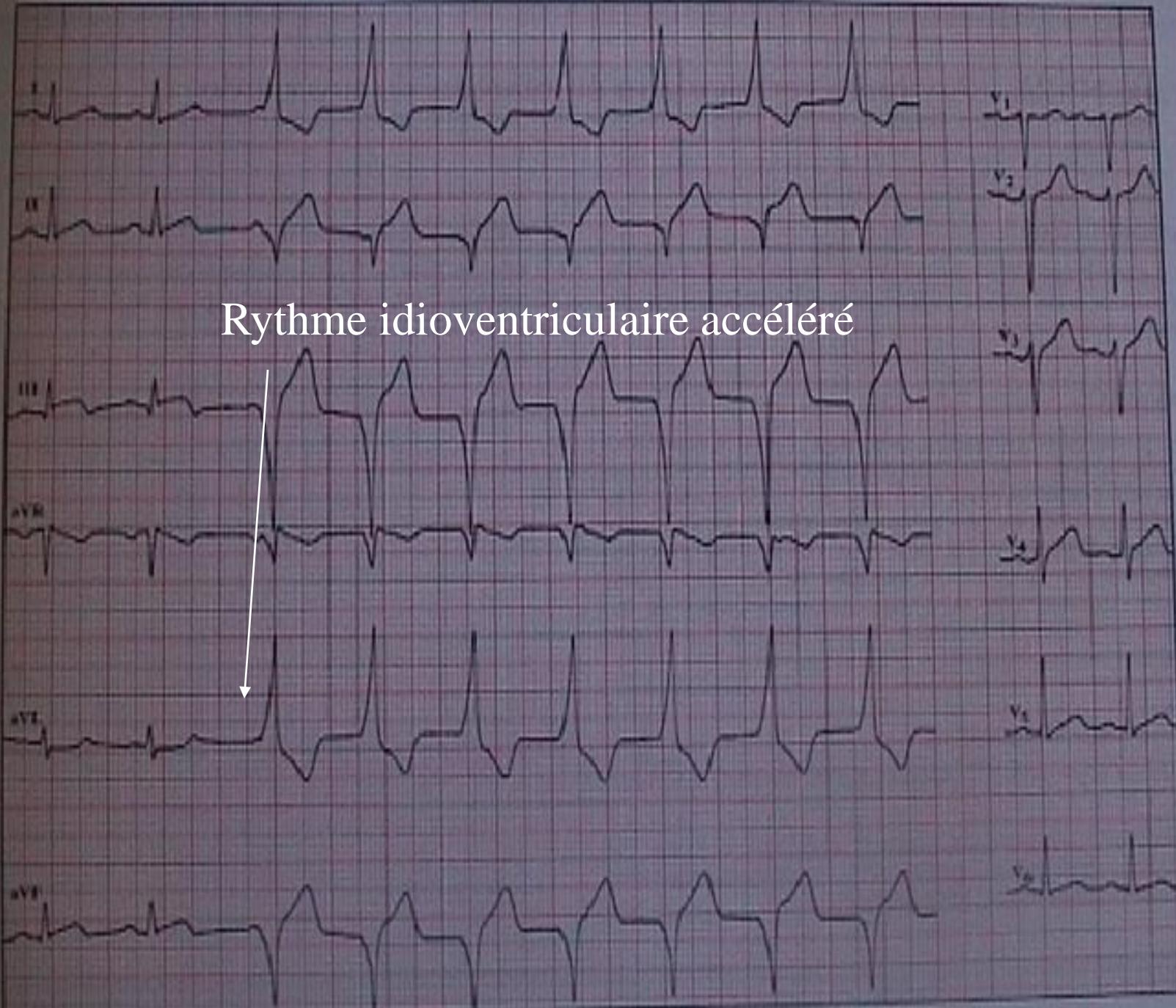
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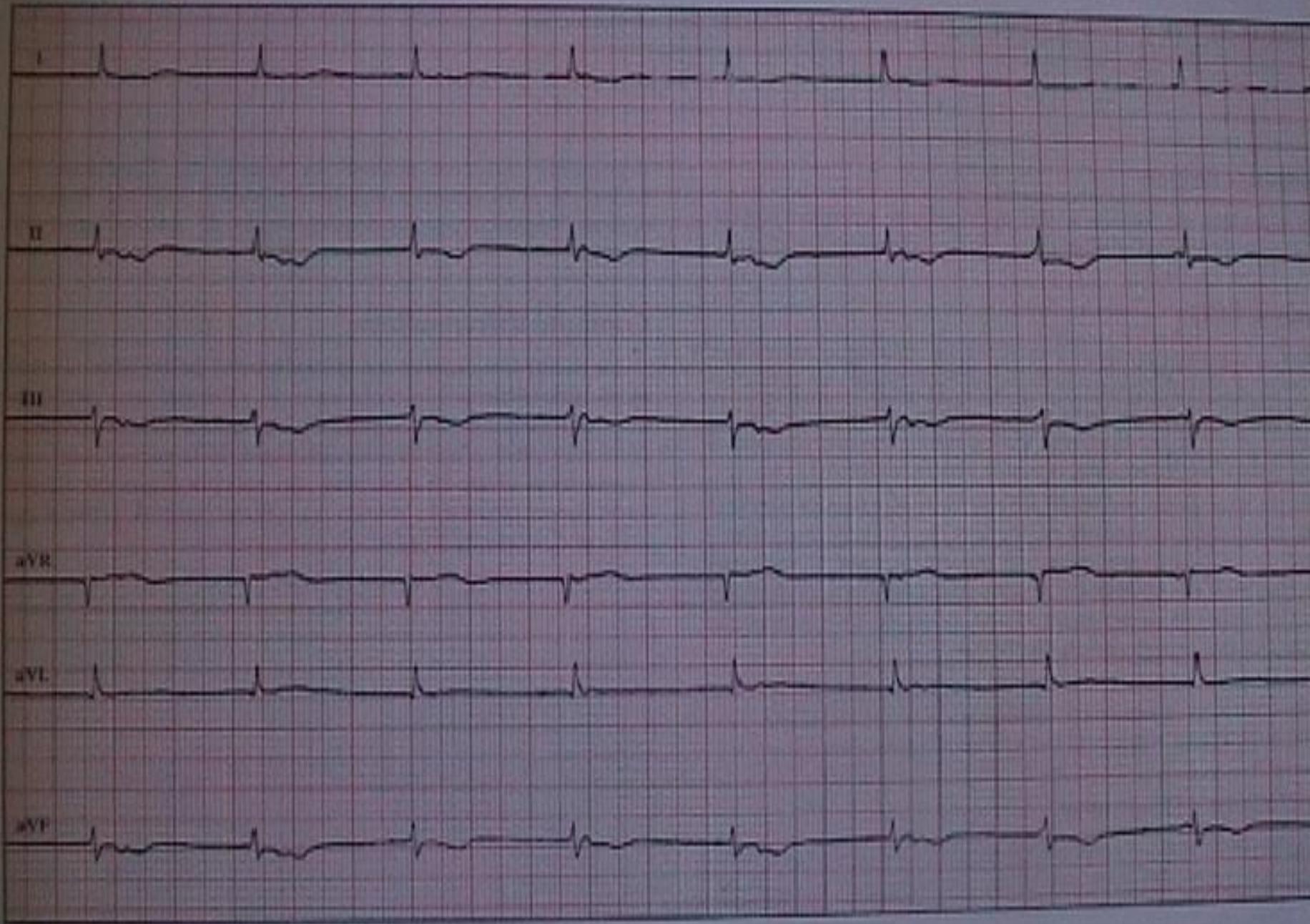
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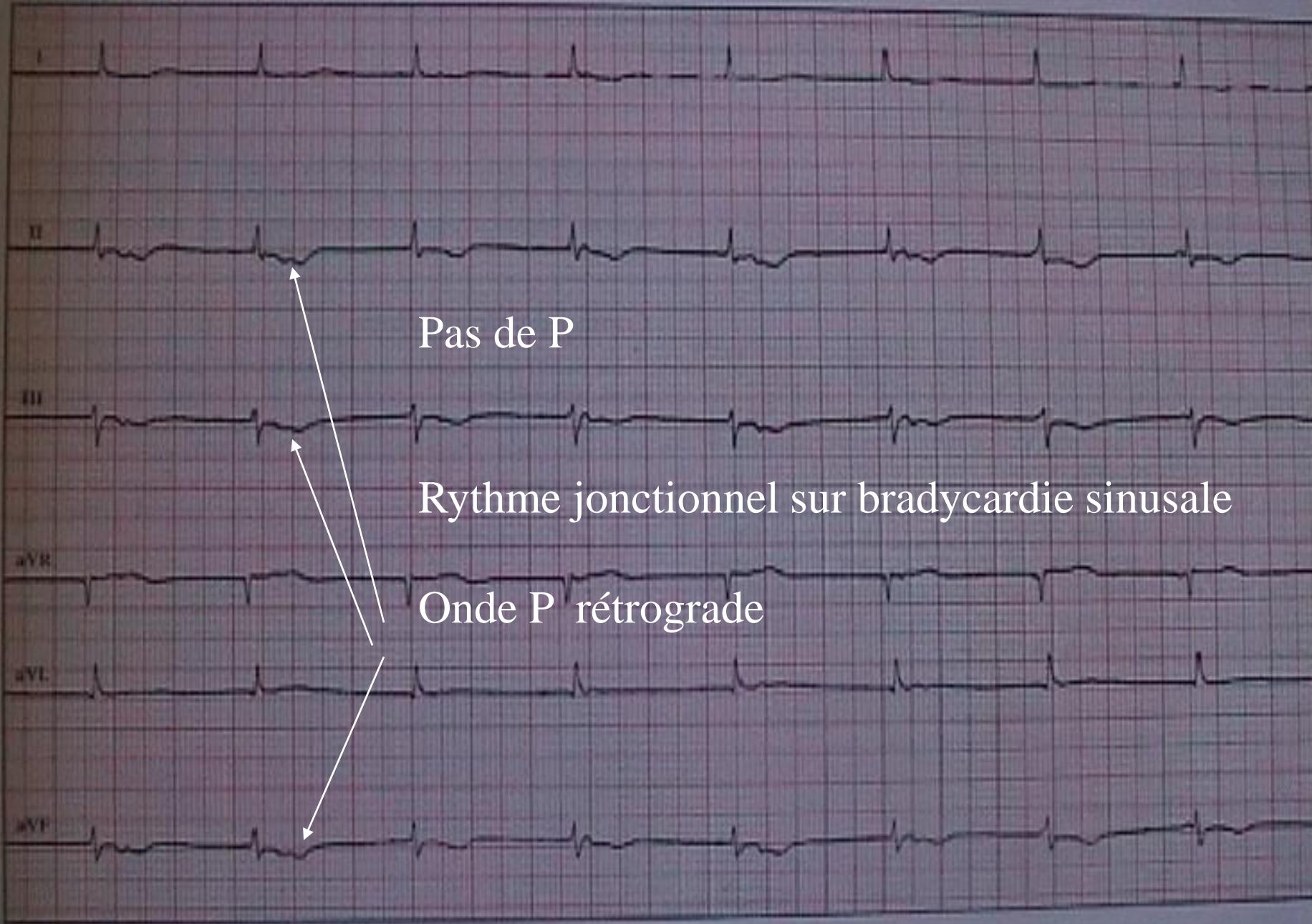
Peco



Rythme idioventriculaire accéléré



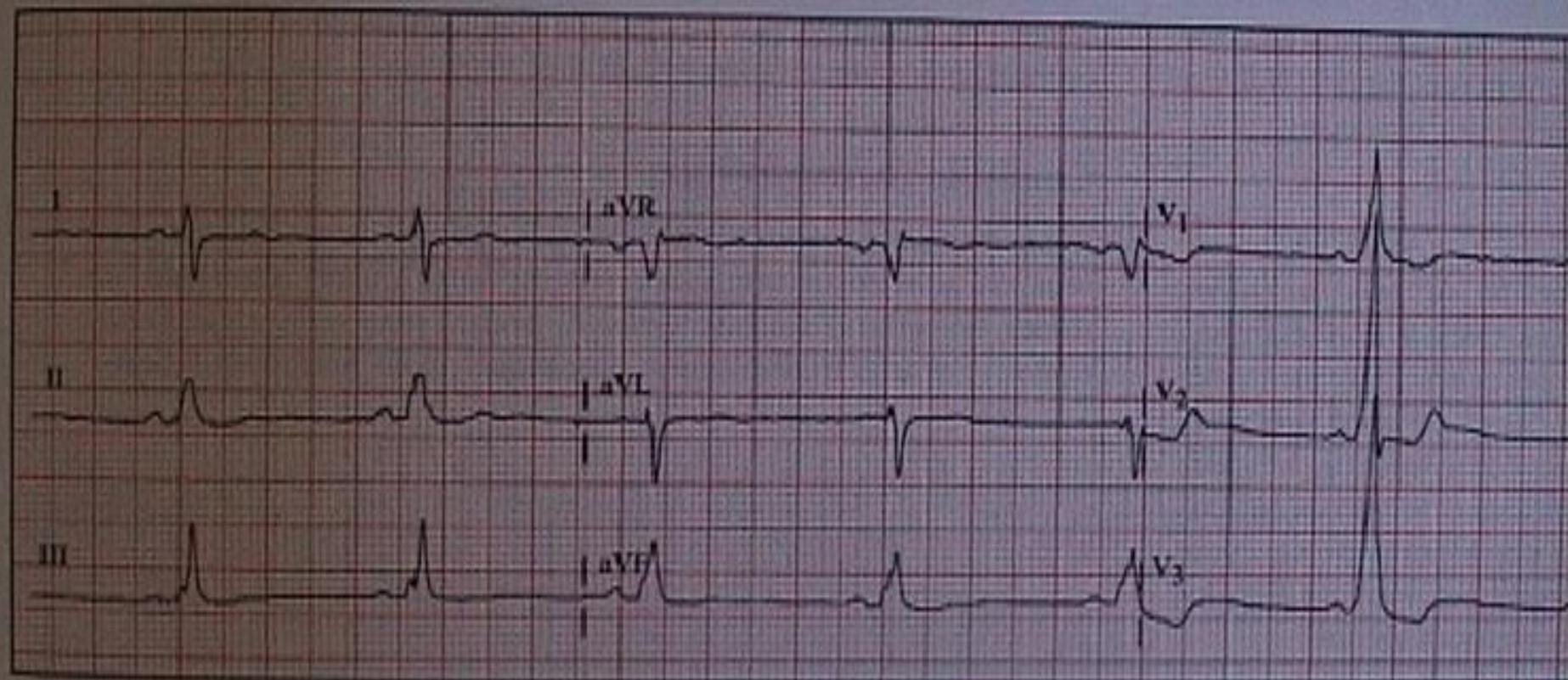
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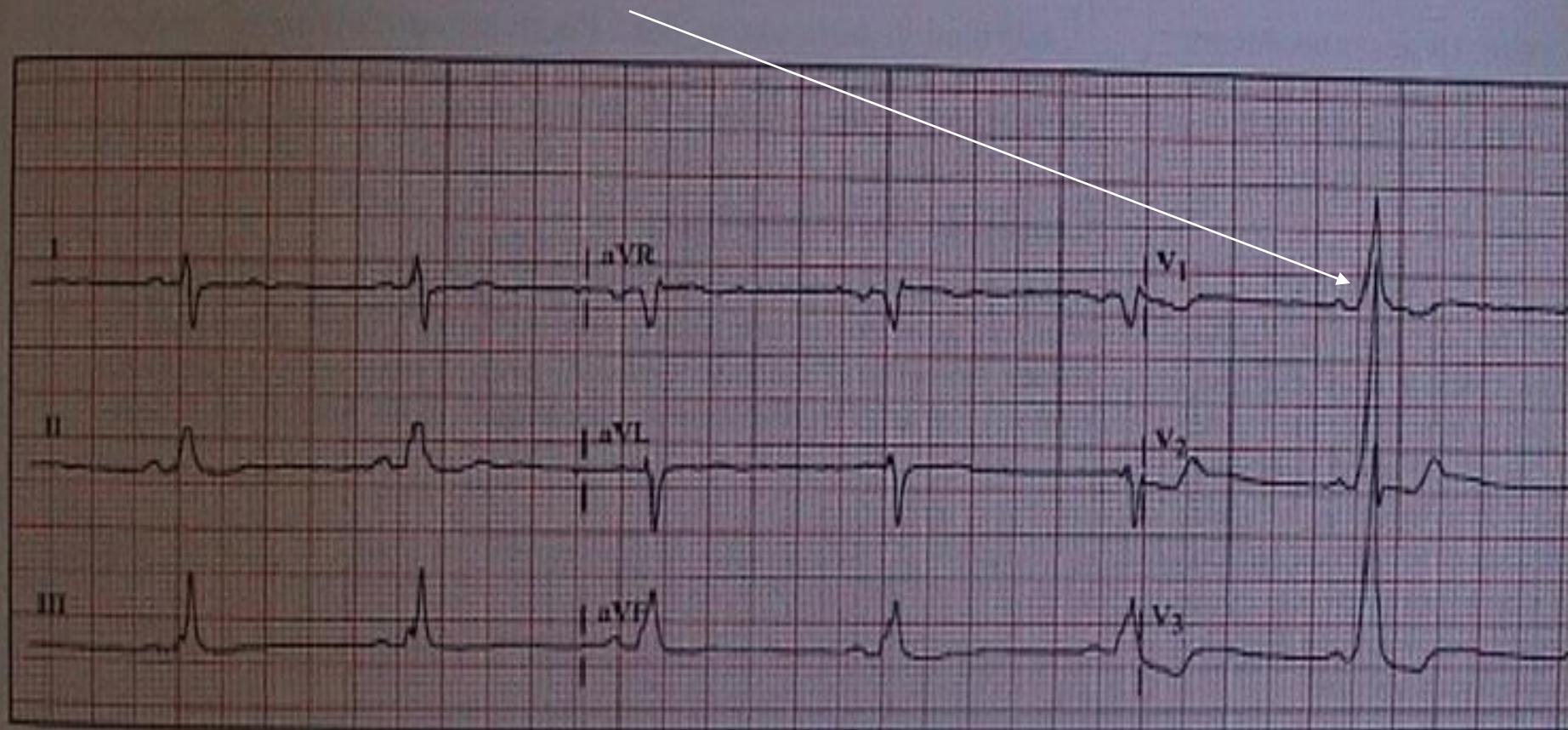
Pas de P

Rythme jonctionnel sur bradycardie sinusale

Onde P rétrograde

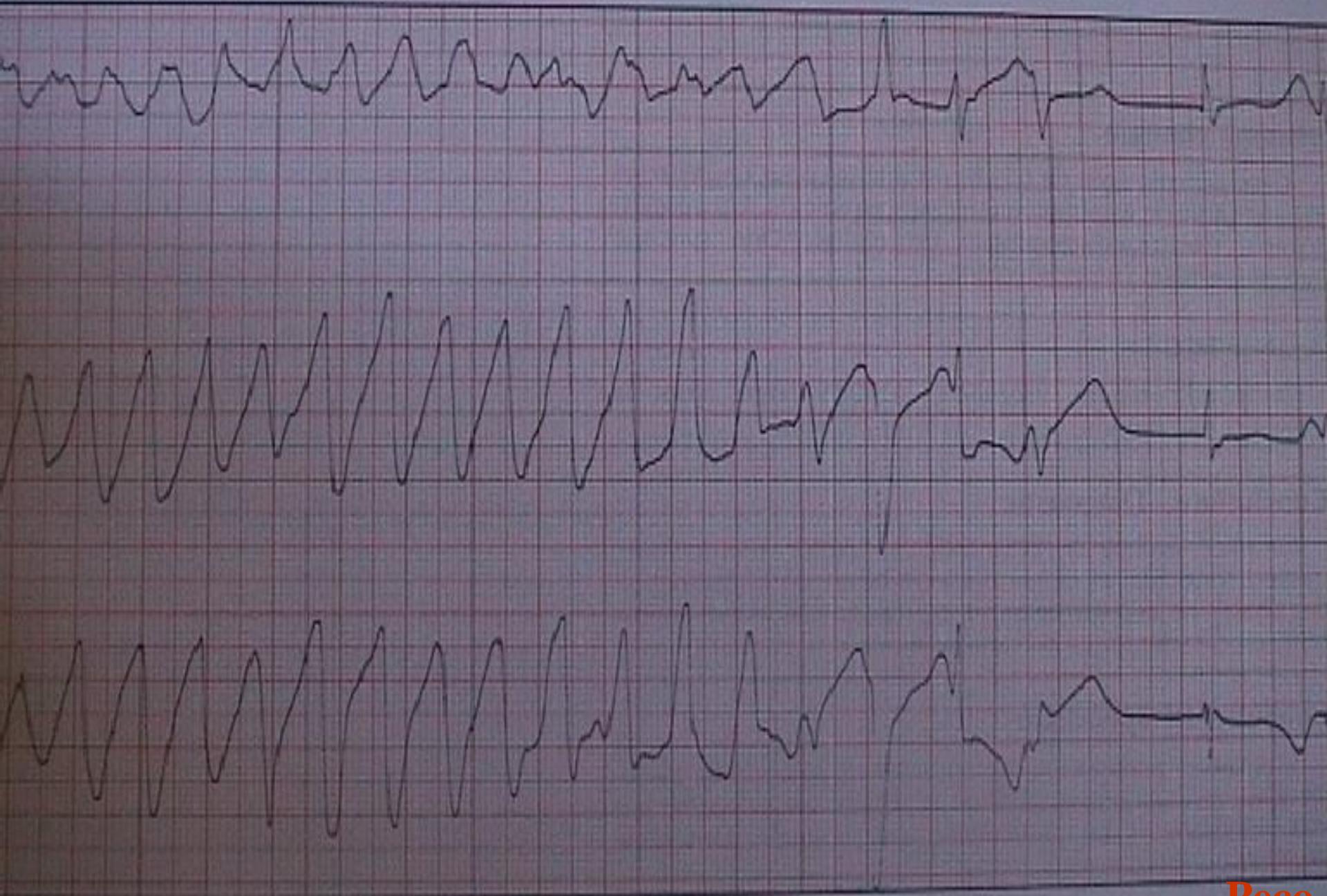


Pr court avec onde delta

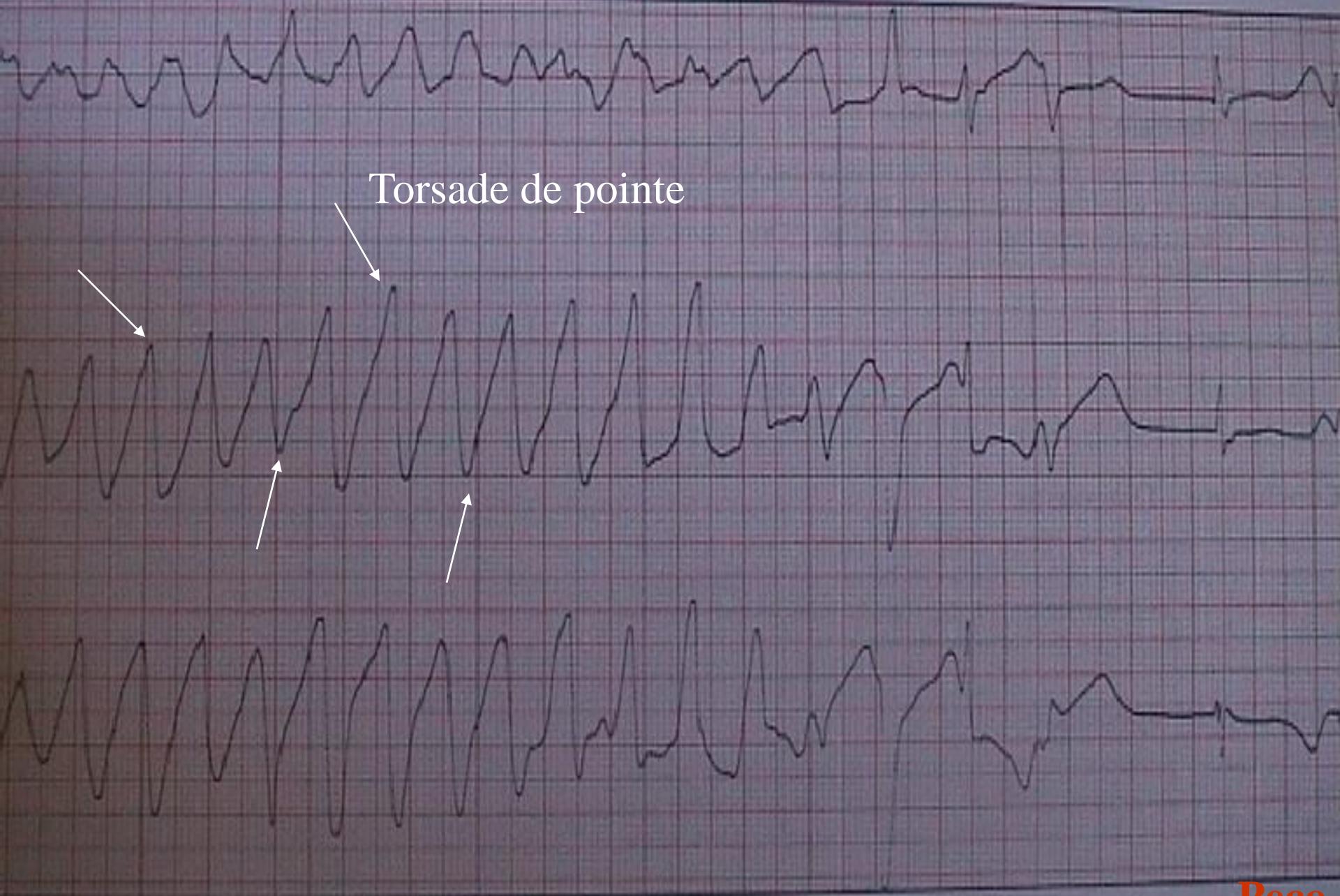


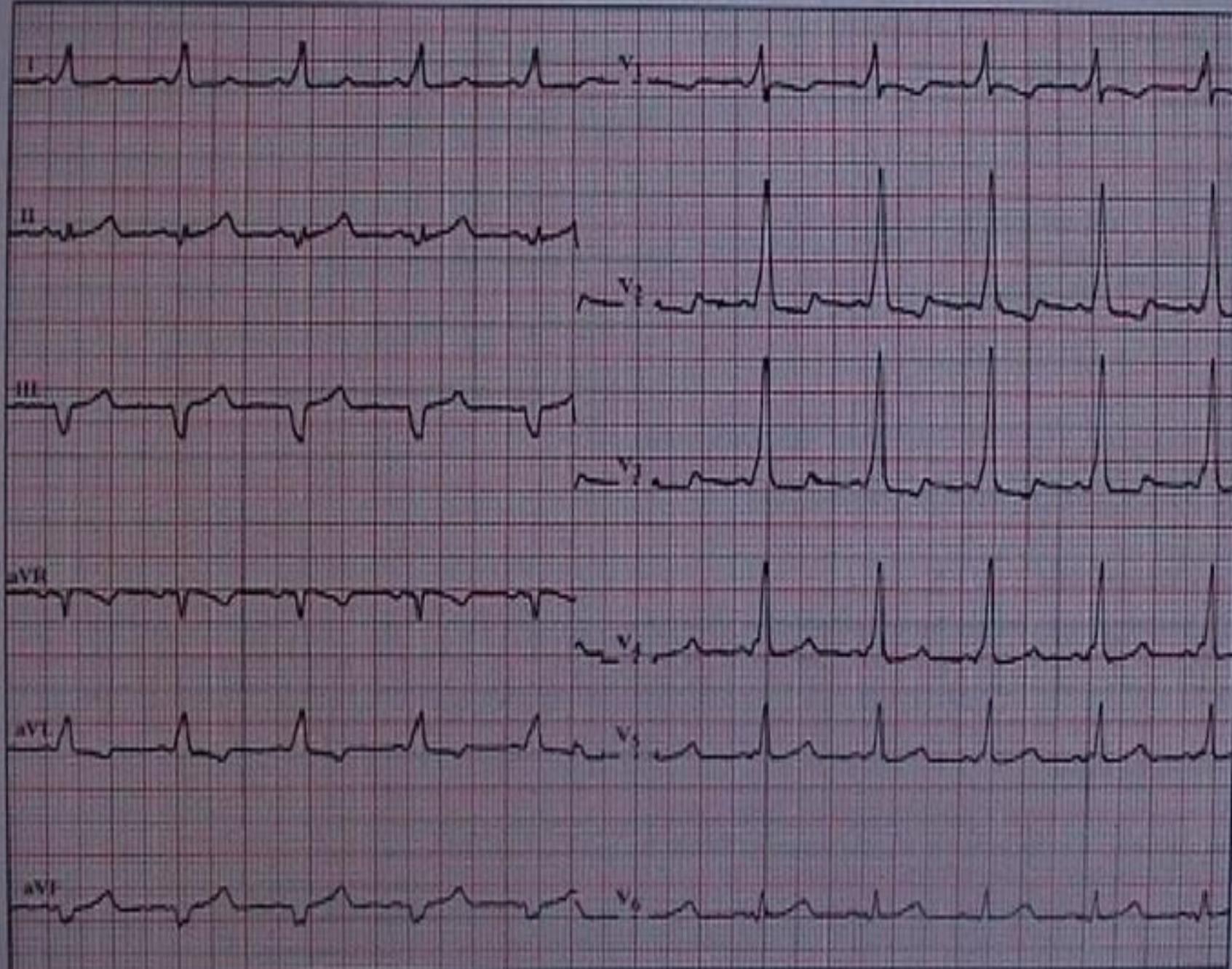
Wolff parkinson White

Peco

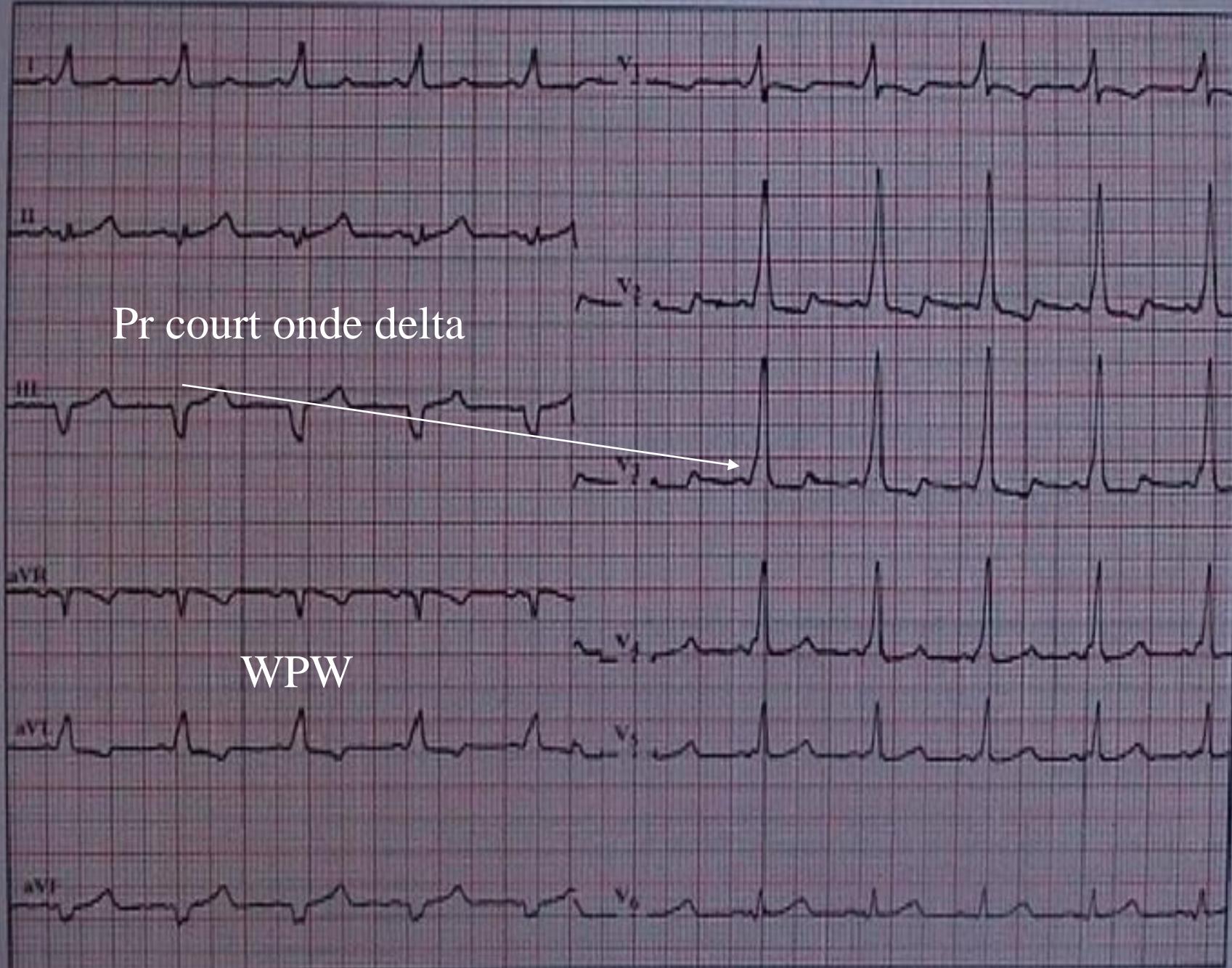


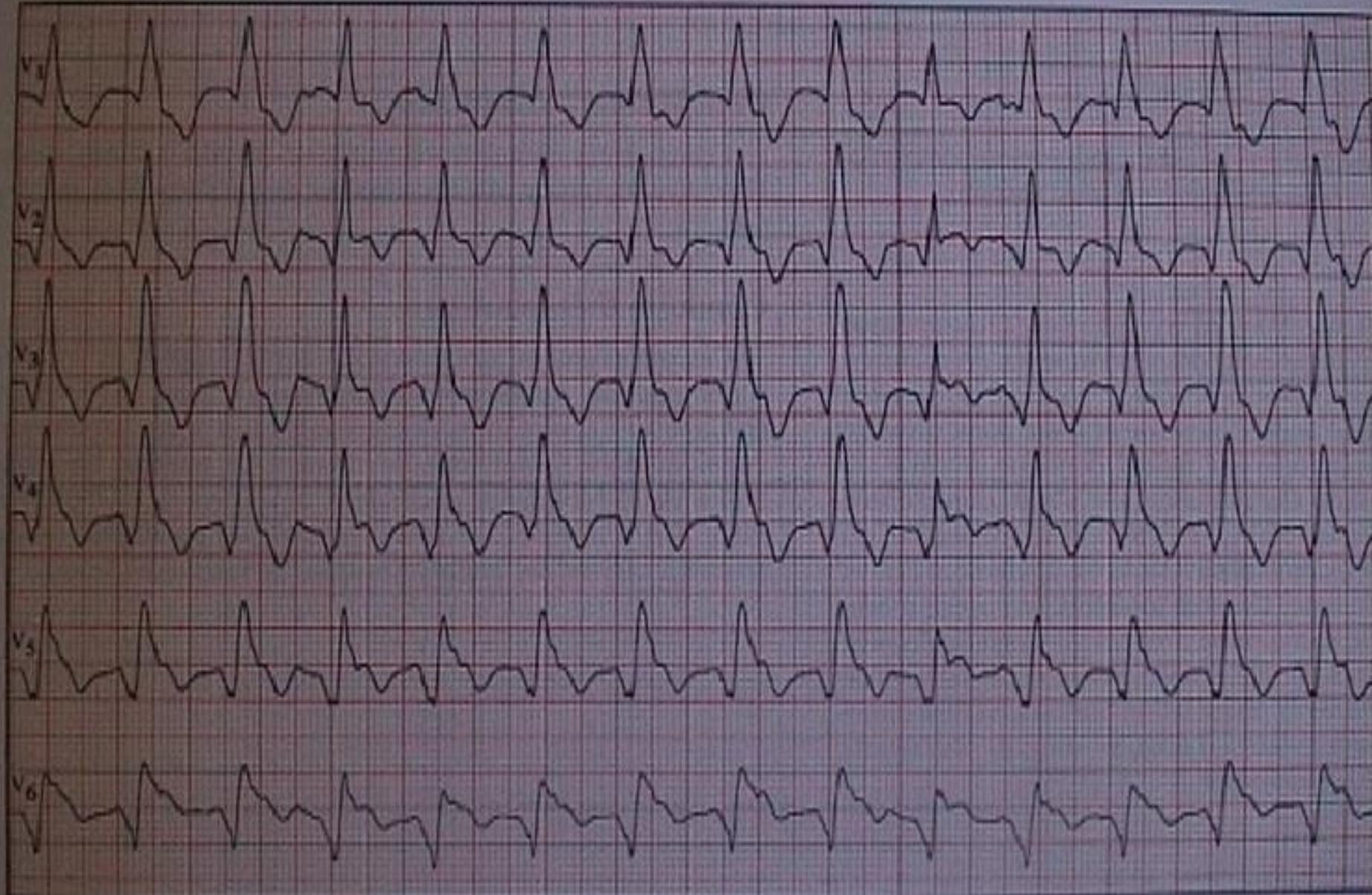
Poco





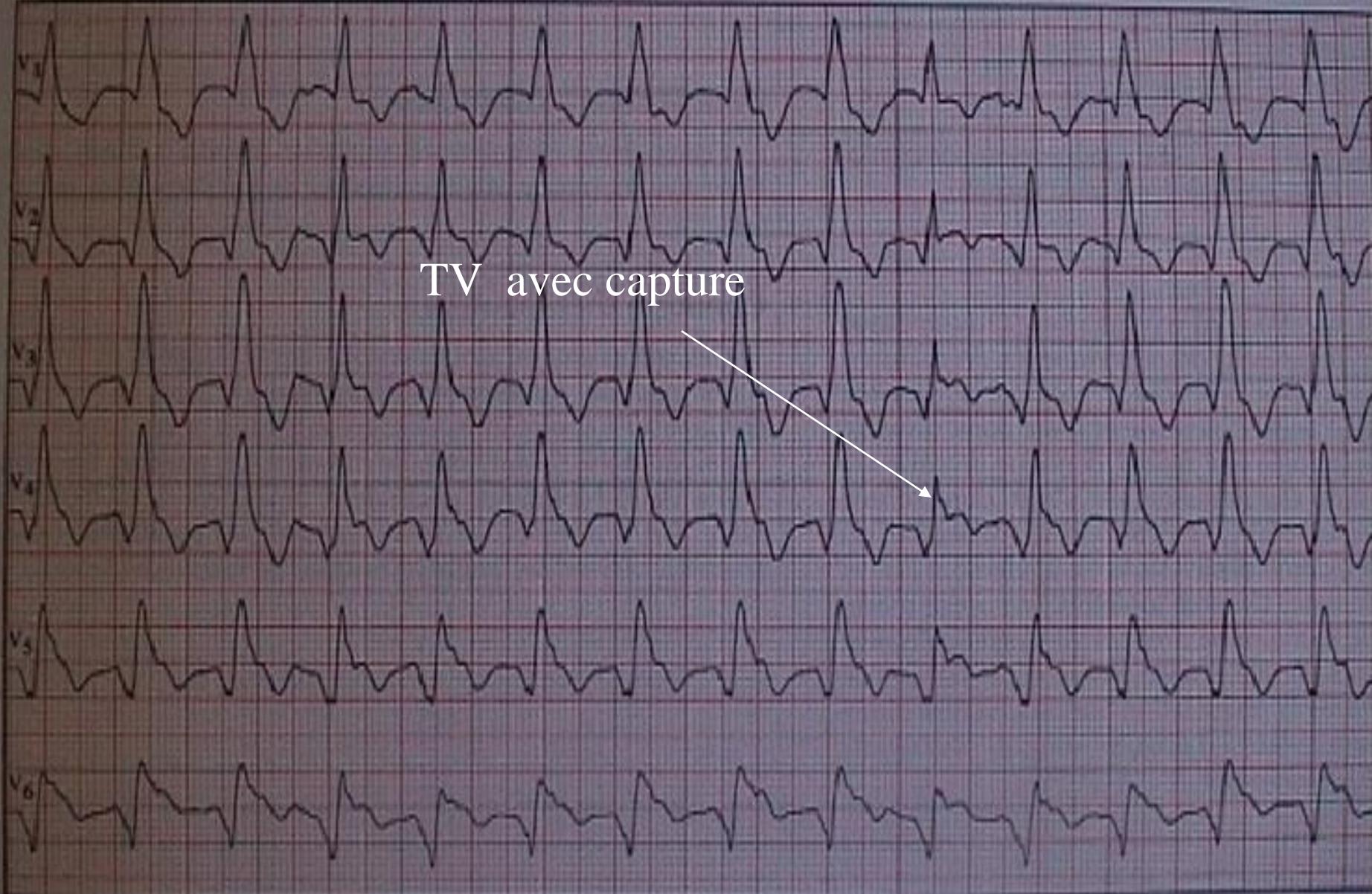
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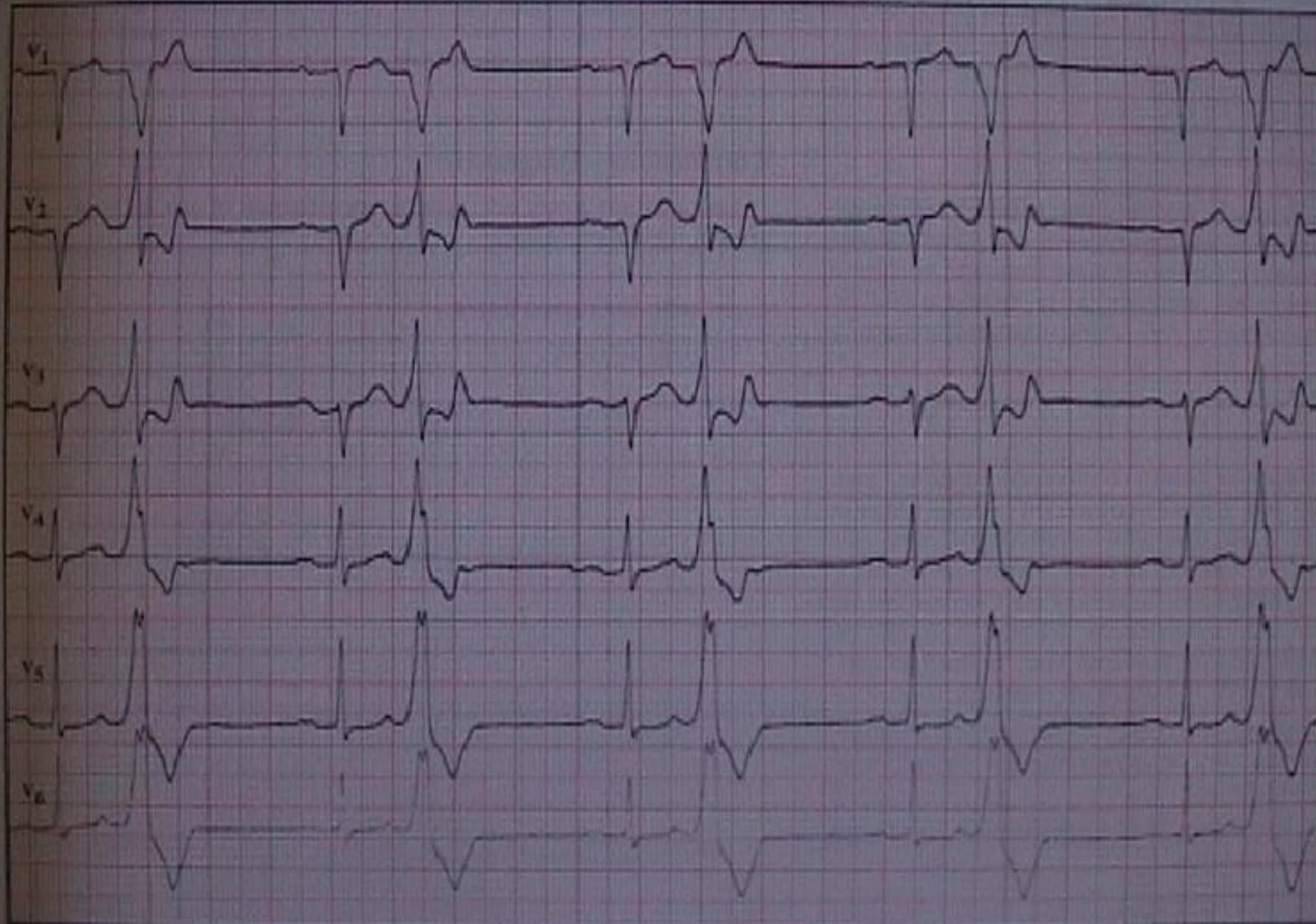




Poco

TV avec capture





Peco

Extra systole

Retard en V6