

Troubles du rythme et de la conduction

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SMUR PITIE

DAR PITIE SALPETRIERE

PARIS

Tachycardie/Bradycardie

- Fréquence cardiaque :

moins de 50 cycles / min

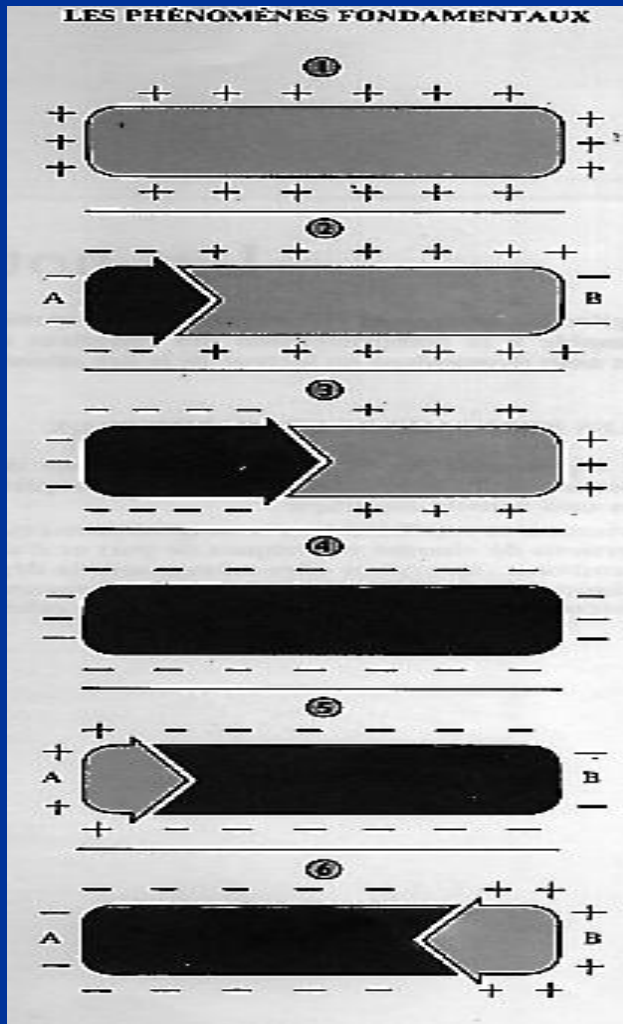
plus de 150 cycles / min

parfois entre 50 et 150 !

Notion électrocardiographique de base

1

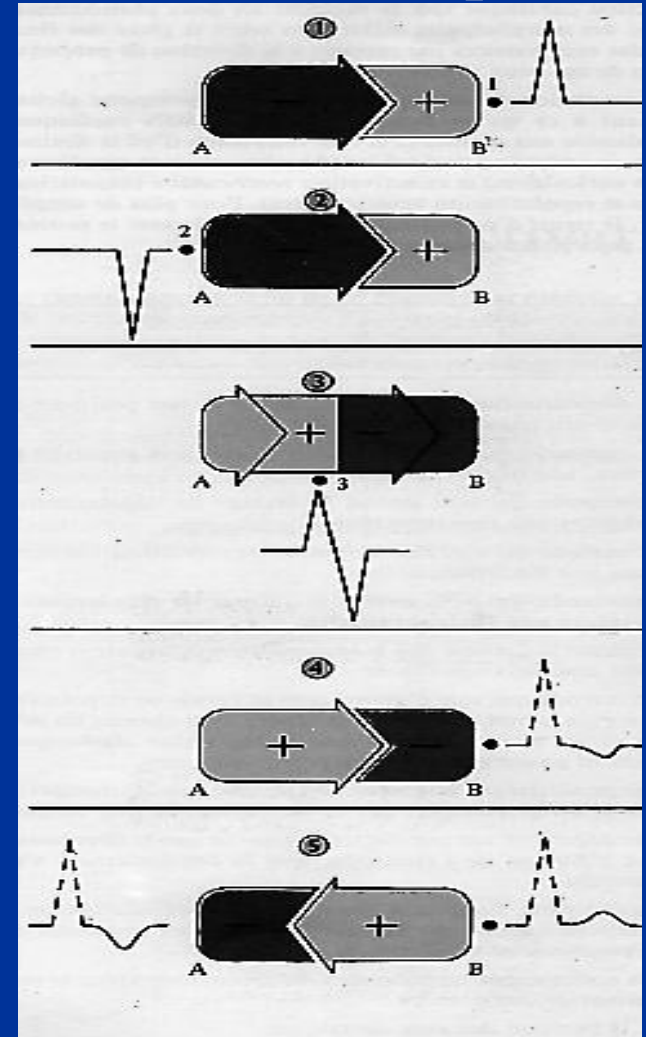
La cellule cardiaque



Dépolarisation

Repolarisation

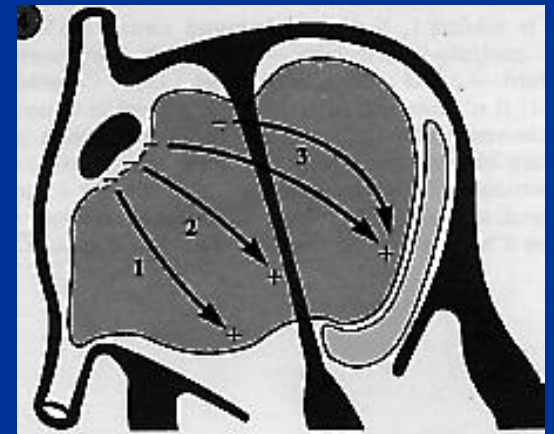
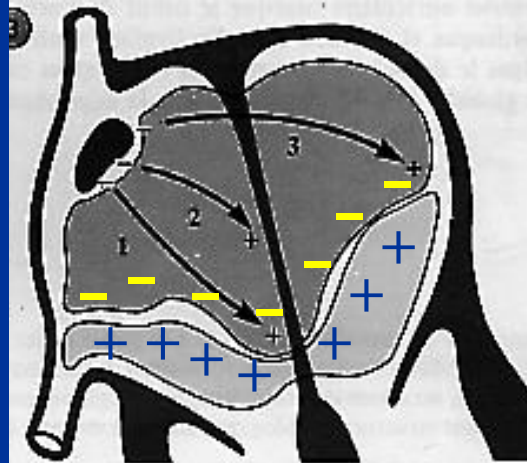
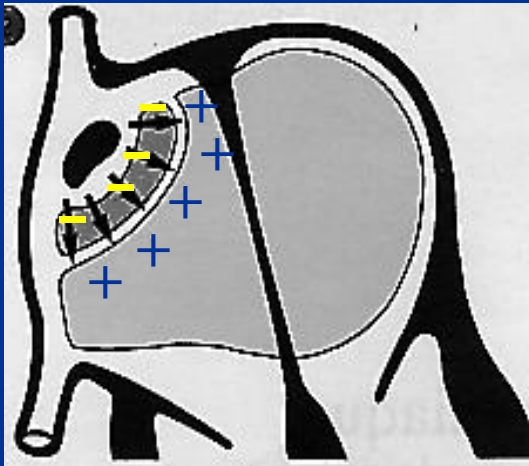
Le vecteur cardiaque



Notion électrocardiographique de base

2

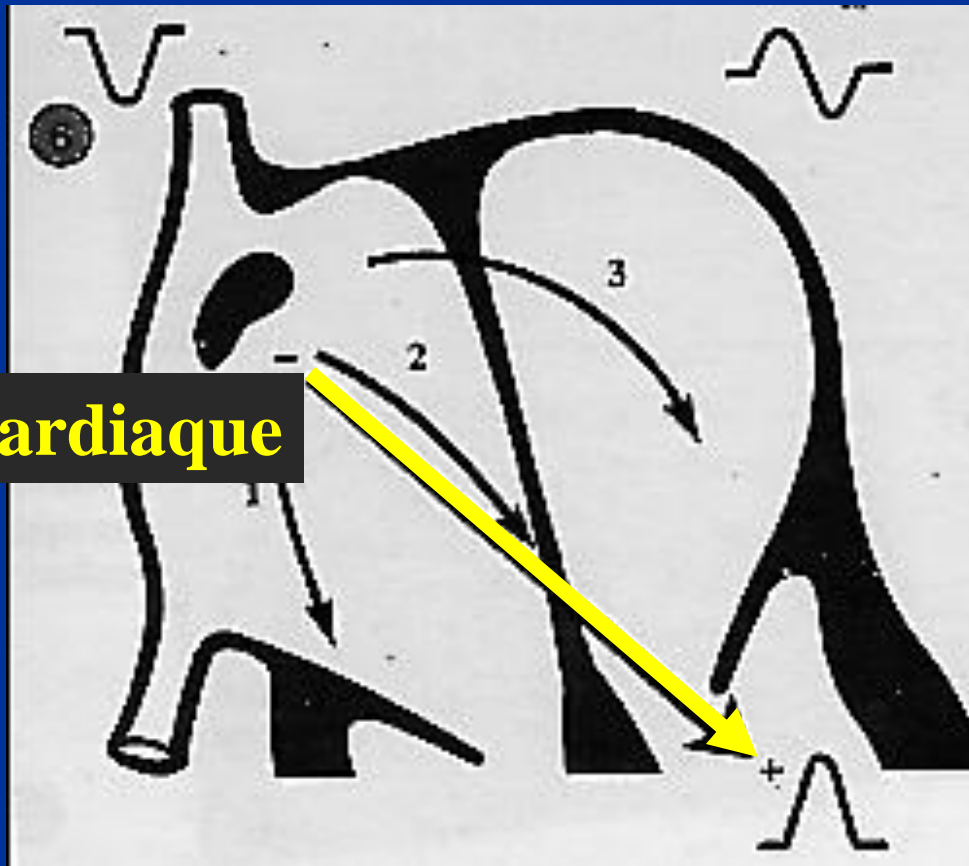
Dépolarisation des oreillettes



Notion électrocardiographique de base

3

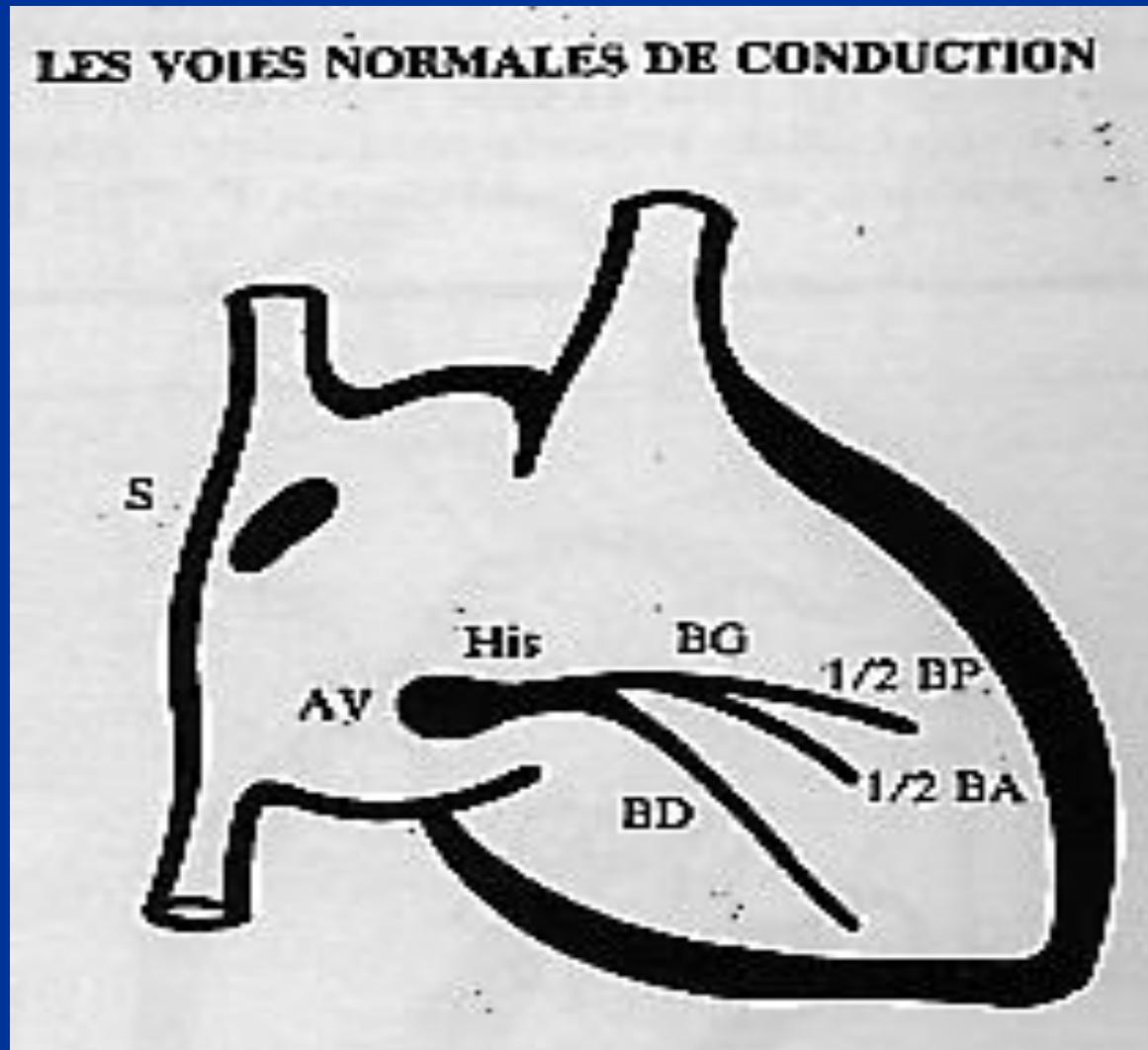
Aspect électrocardiographique



Le vecteur cardiaque

Notion électrocardiographique de base

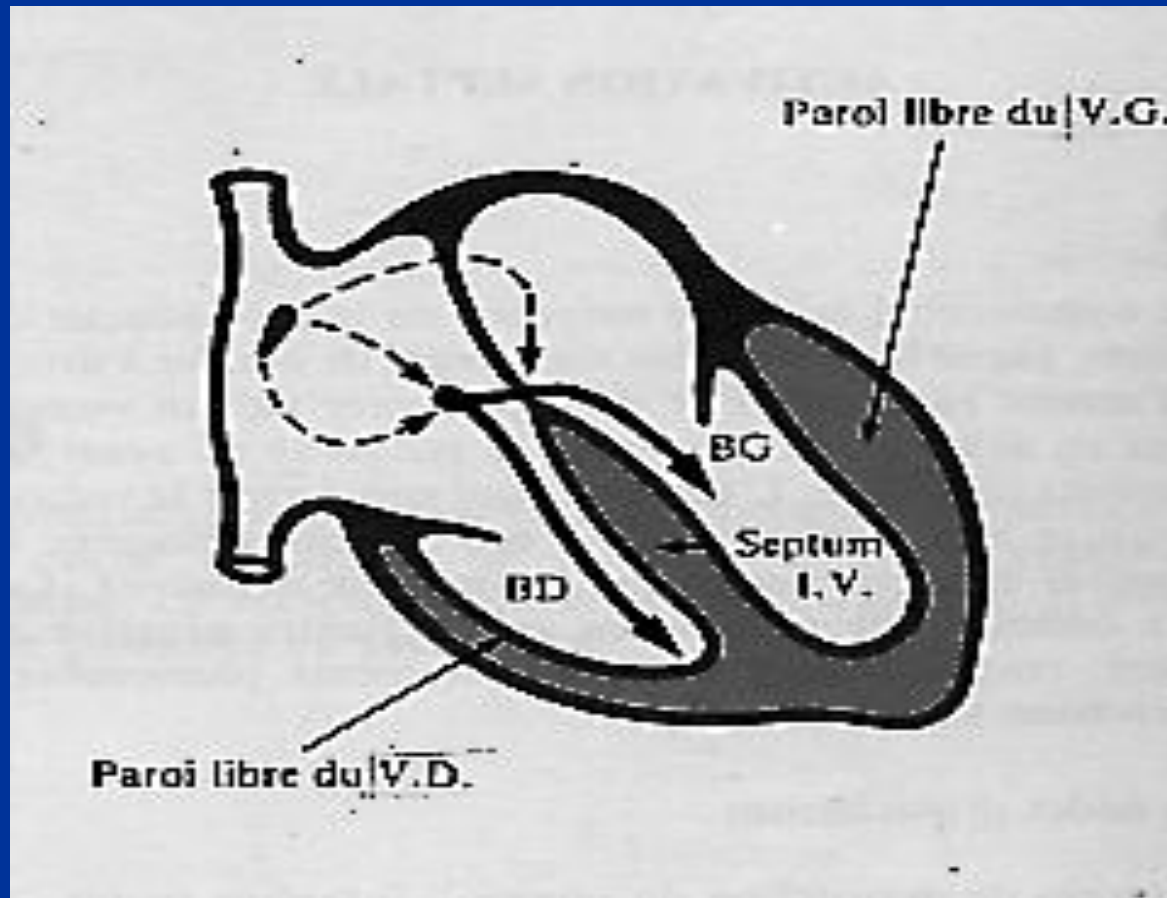
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Notion électrocardiographique de base

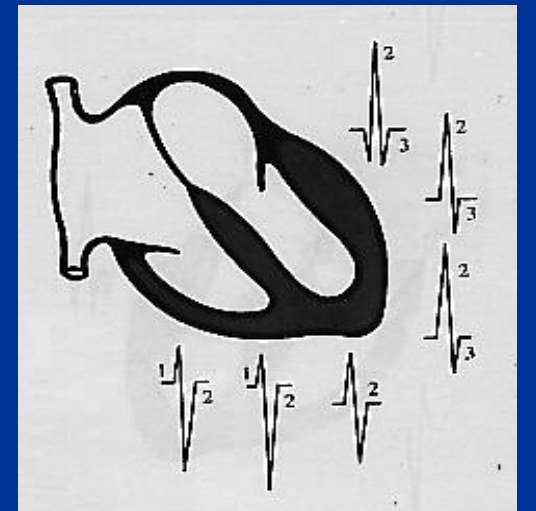
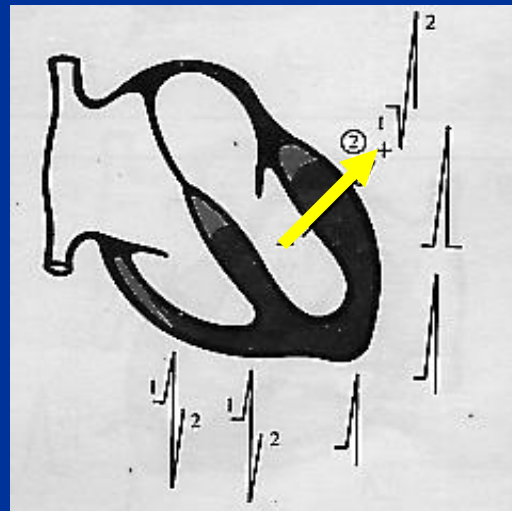
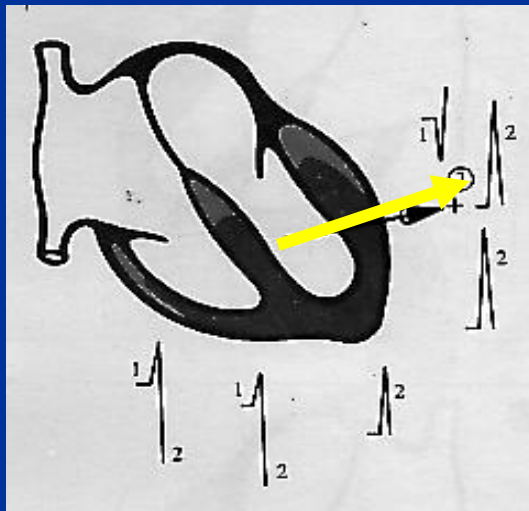
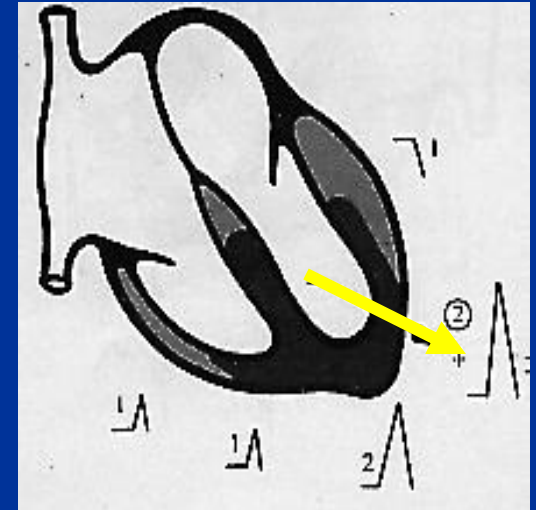
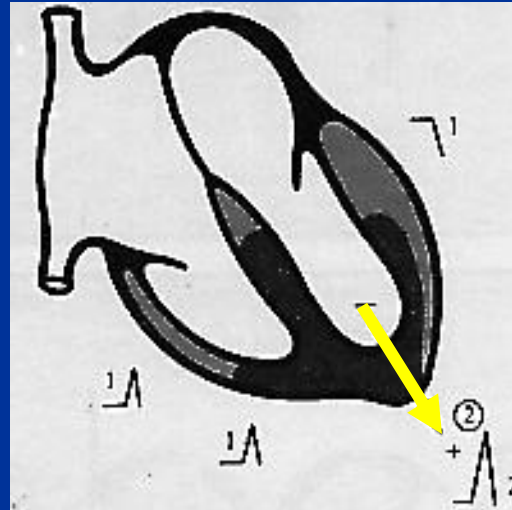
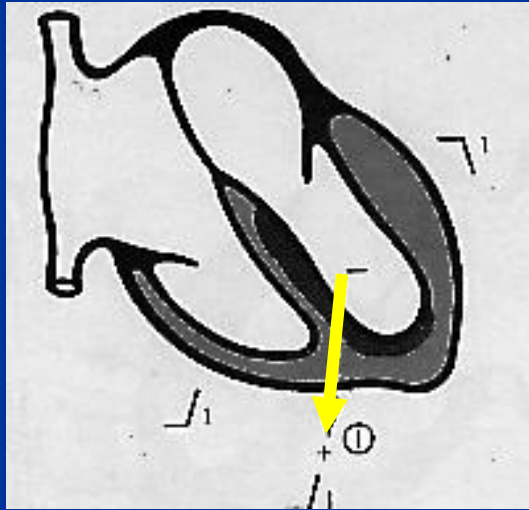
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Dépolarisation ventriculaire



Notion électrocardiographique de base

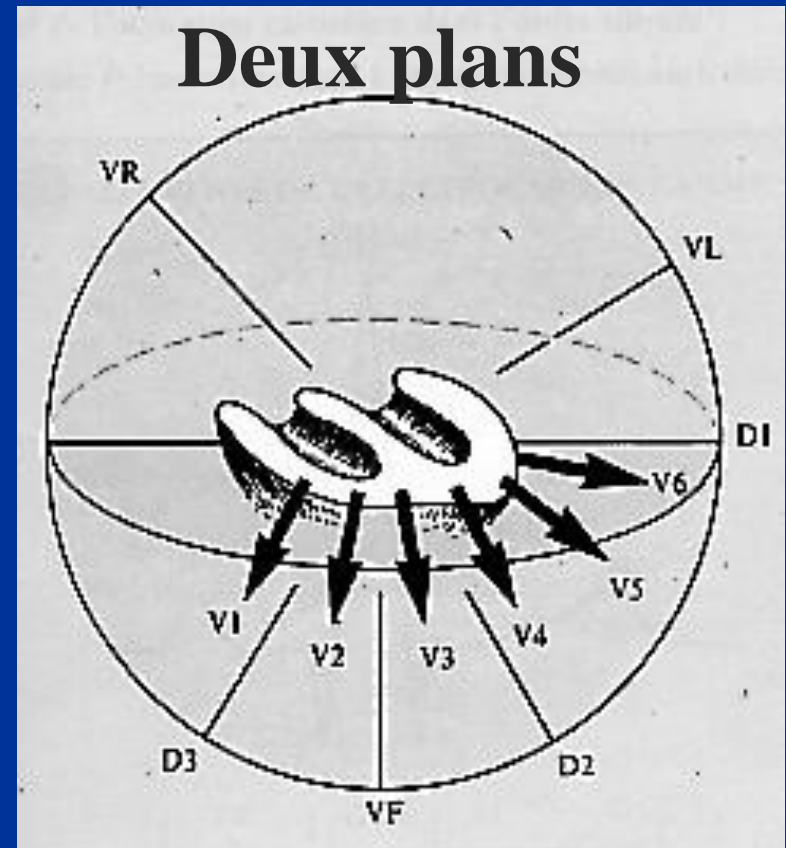
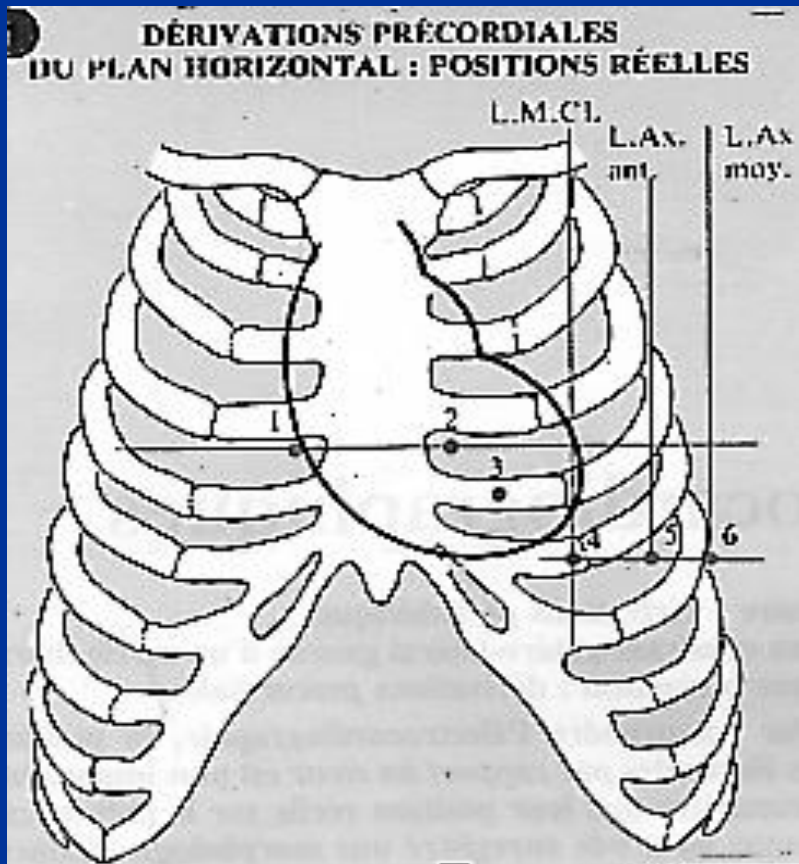
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Notion électrocardiographique de base

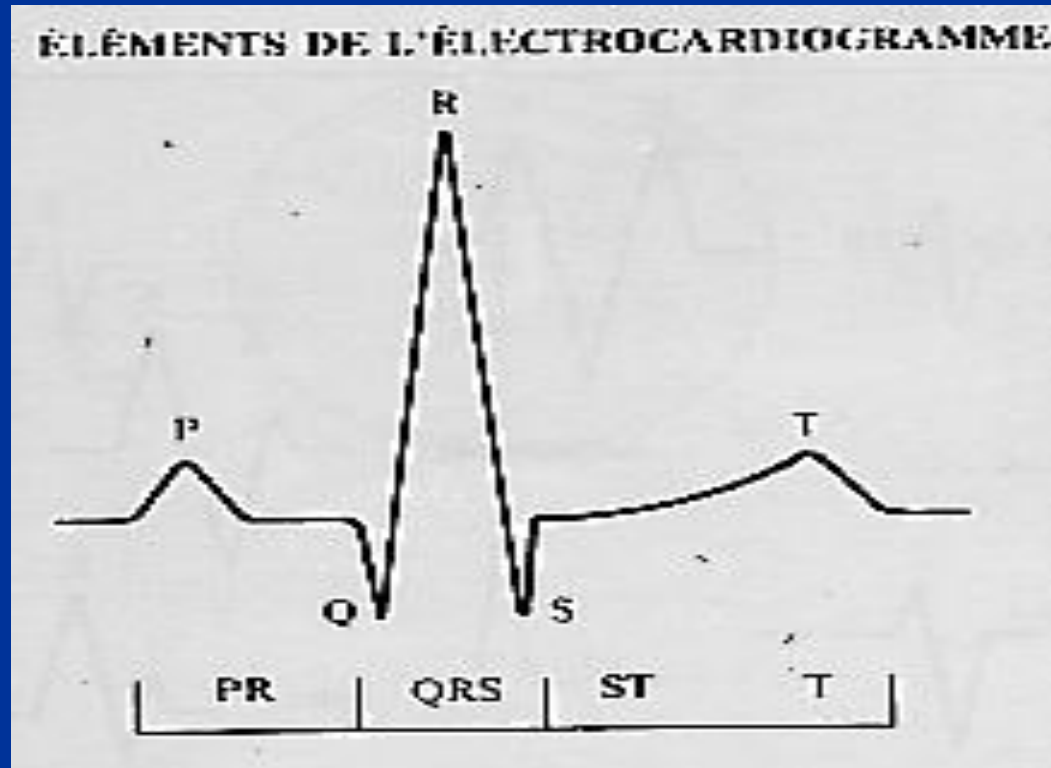
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Les dérivations

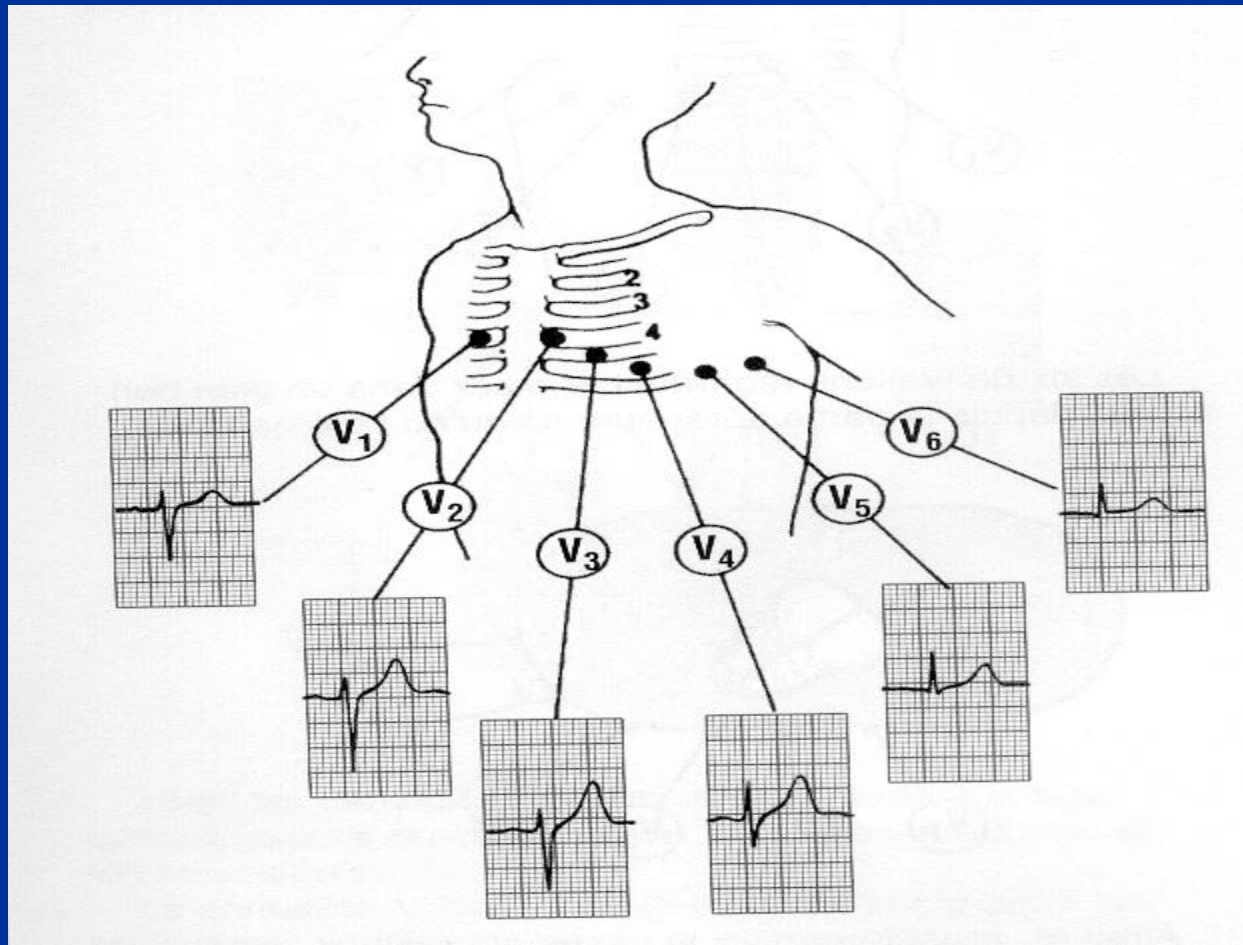


Aspect ECG des variations du vecteur cardiaque

(dérivation à la pointe du cœur)



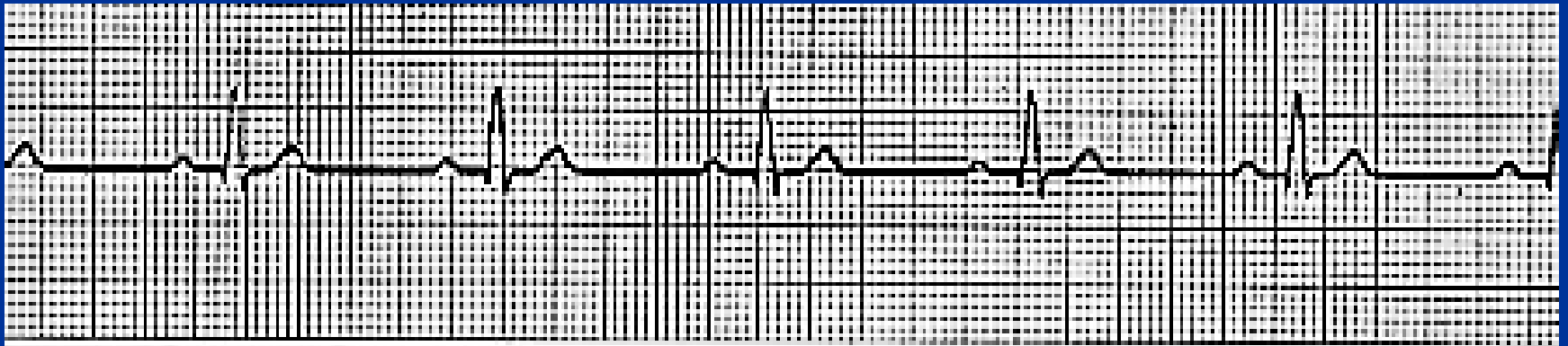
Aspect ECG dans les dérivations précordiales



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

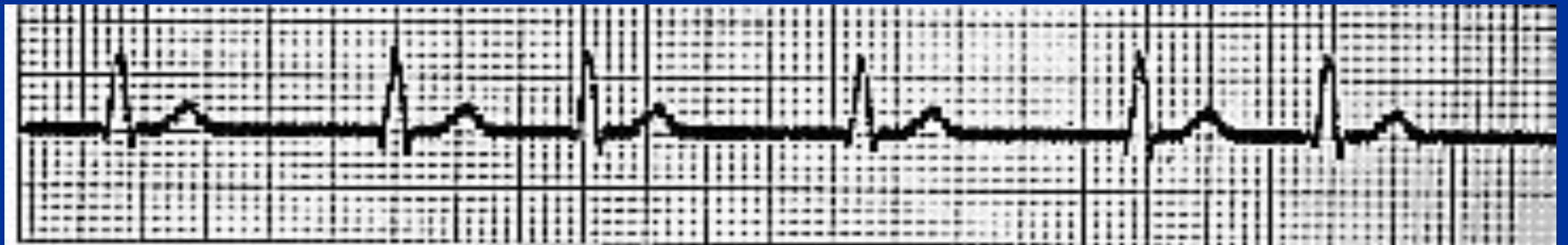
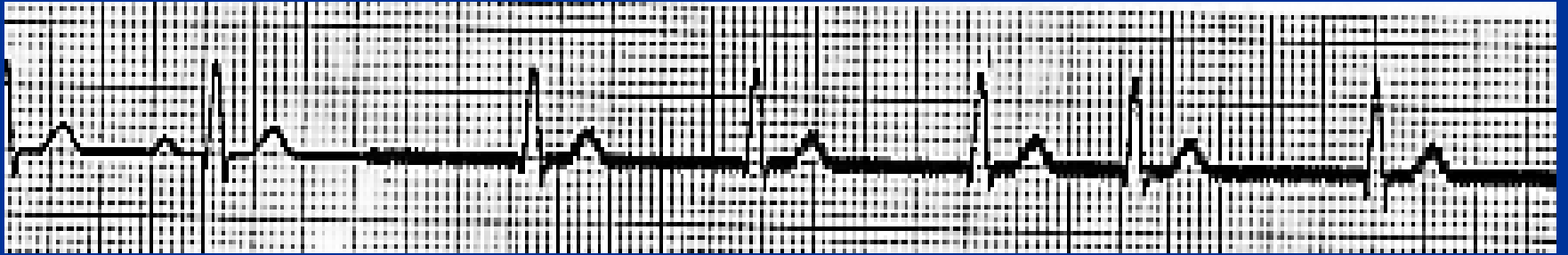


ESV (QRS large sans onde P)

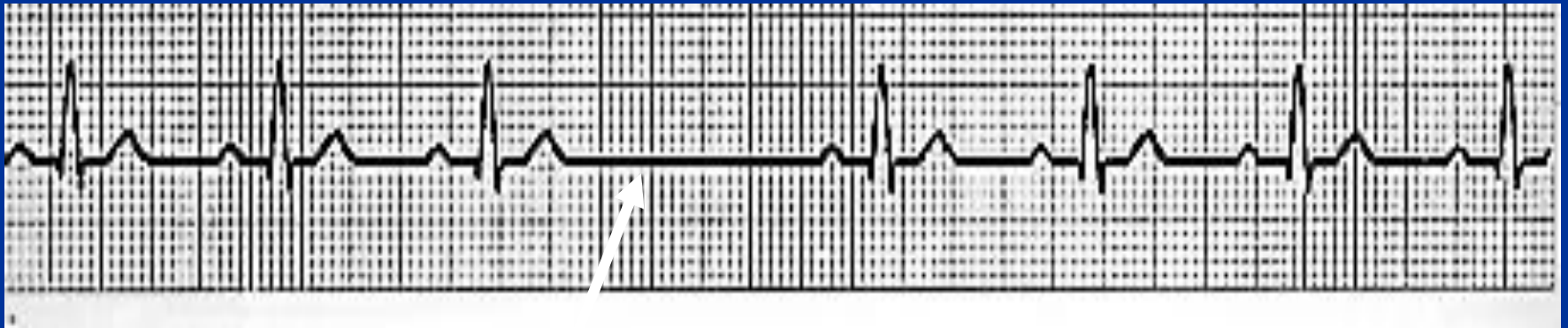
Bradycardie sinusale



Arythmie complète par fibrillation auriculaire (AC/FA)



Bloc sino-auriculaire



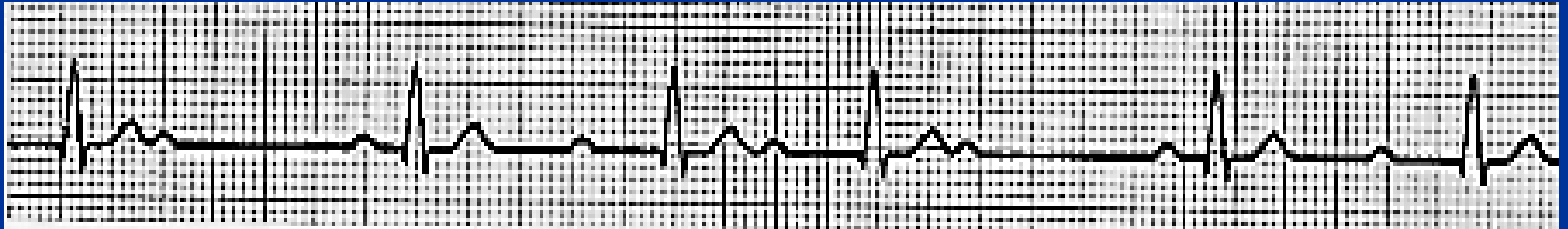
P ?

Bloc auriculo-ventriculaire

BAV I



BAV II type 1 (période Lucciani-Wenckebach)

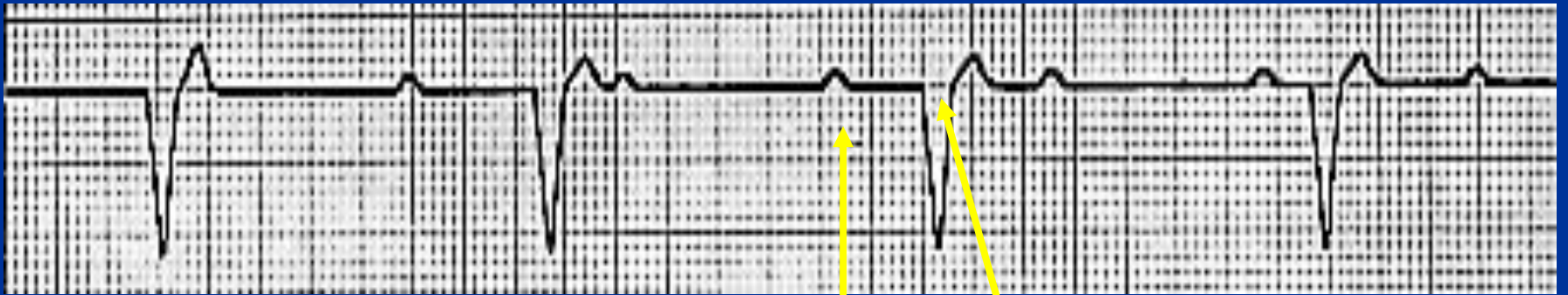


BAV II type 2

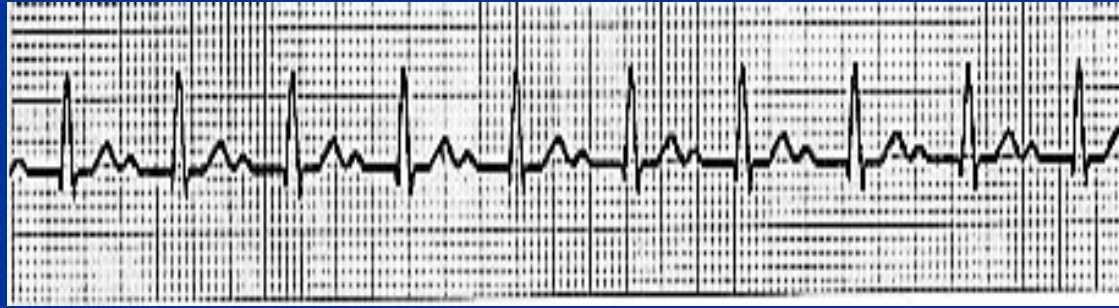


Bloc auriculo-ventriculaire

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

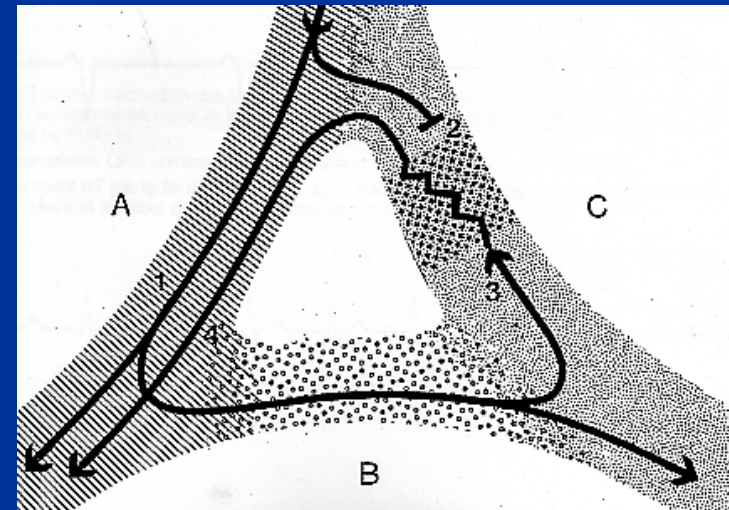
Flutter



Tachycardies jonctionnelles 1

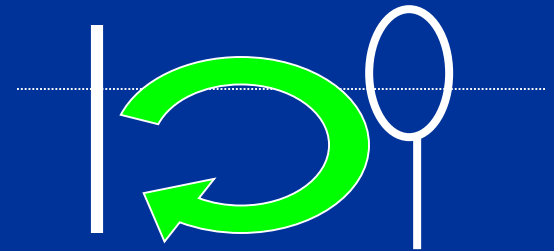


À l'intérieur du nœud A-V
2 fibres de conduction
A et C forme par saut
de dépolarisation (B) une
boucle auto-entretenue



Tachycardies jonctionnelles 2

Boucle possible avec voies normales et faisceau accessoire (WPW)



ECG hors tachycardie

PR court et onde delta

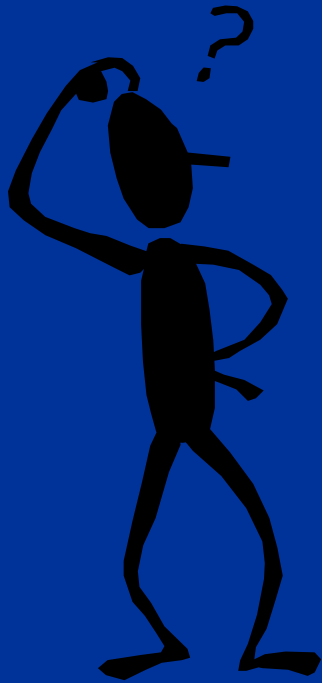


Conduite diagnostic

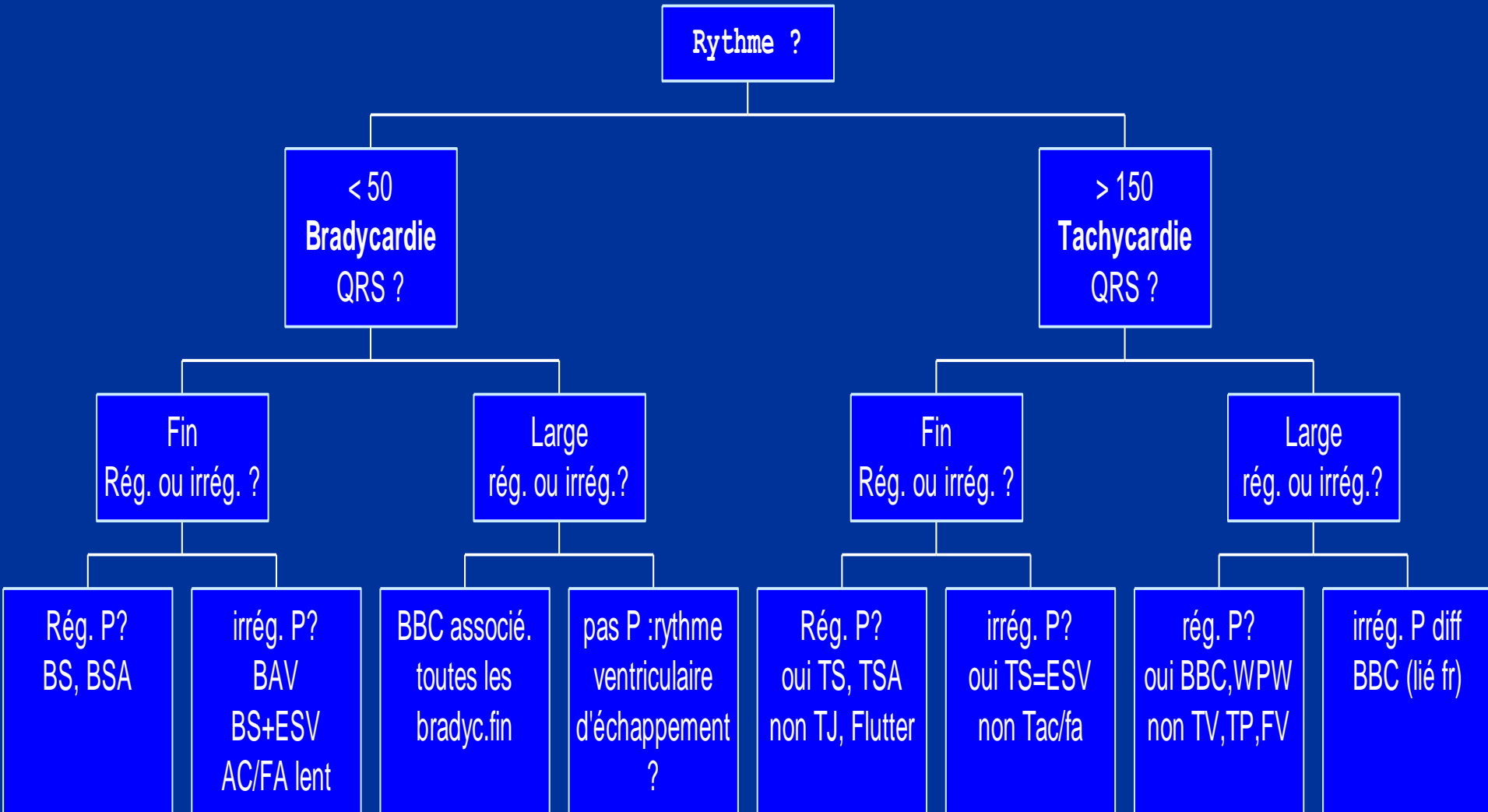
- Pour une interprétation pratique

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



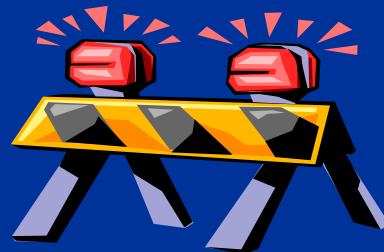
Conduite Pratique

- Le problème est de savoir si :

DANGER immédiat ou non ?

Si QRS fin peu de risque

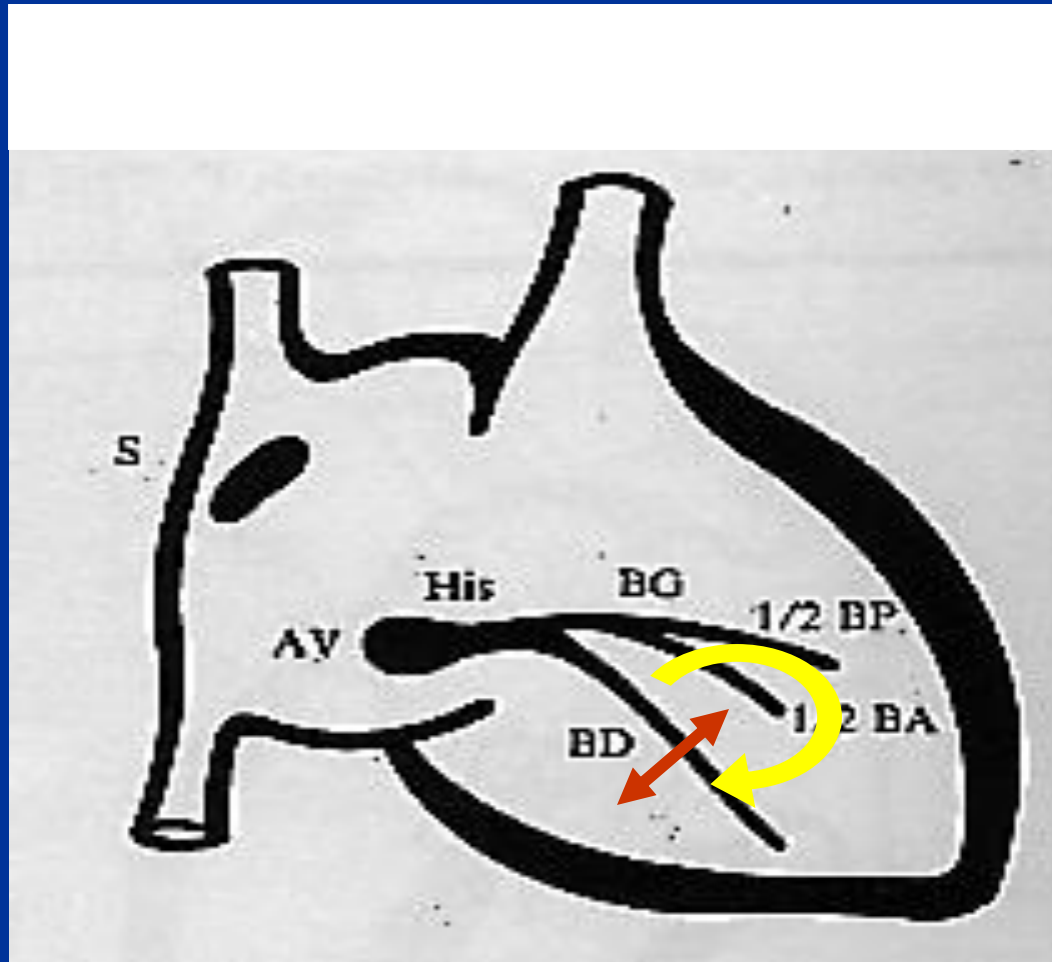
si QRS large et Tachycardie **ATTENTION**
à la *TACHYCARDIE VENTRICULAIRE*



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

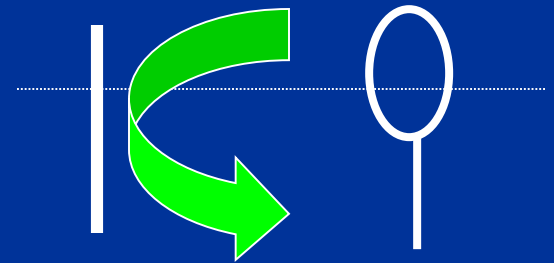
QRS $> 0,12$ s

retard V1 \rightarrow BBD

retard V6 \rightarrow 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

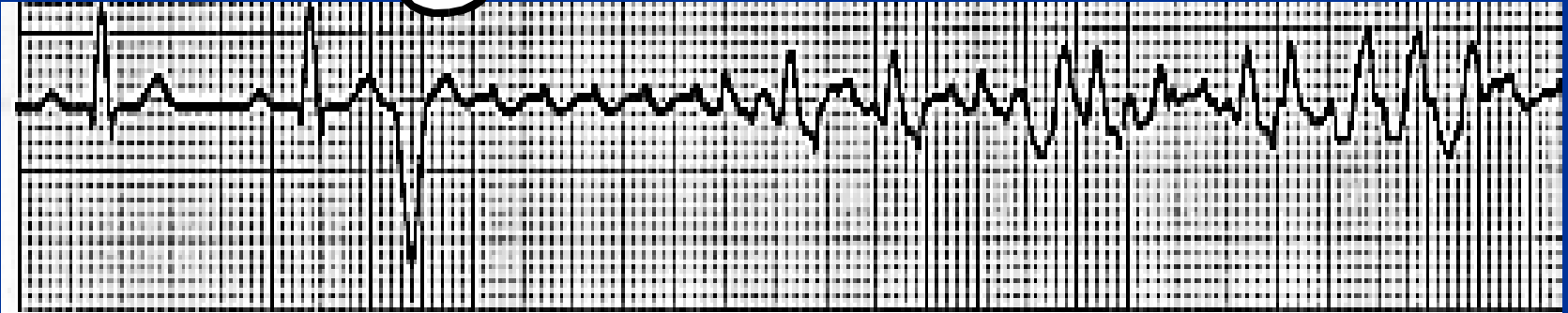
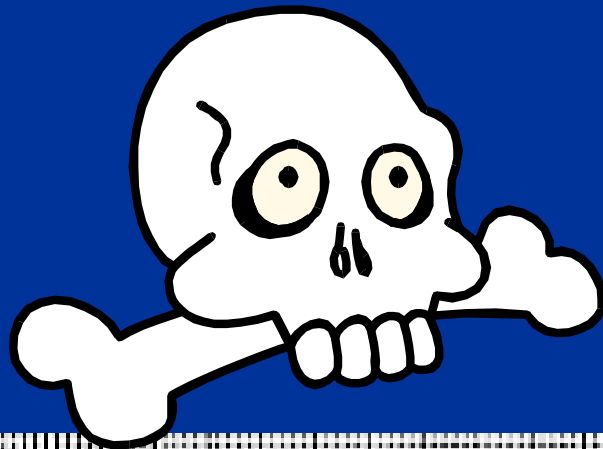
Diagnostic Tachycardie Ventriculaire

- 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 bêta B inh. potassique inh. Calcique autres

<i>classe I</i>	<i>classe II</i>	<i>classe III</i>	<i>classe IV</i>	<i>autres</i>
A. Disopyramide Quinidine Procainamide Ajmaline (Cibenzoline)	β-bloquants	Sotalol Amiodarone Bretylium	Verapamil Diltiazem	Digitale Adénosine triphosphate
B. Lidocaïne Mexiletine				
C. Propafenone Flecainide Cibenzoline				

Classification clinique de TOUBOUL

- Sur la conduction auriculo-ventriculaire:
 - Bêtabloquants, 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:flécaine cipralan, rythmol)
- La cordarone donne des dysthyroidies

Quelques ECG

3 minutes de réflexion

Une feuille et un crayon si besoin

RYTHME?

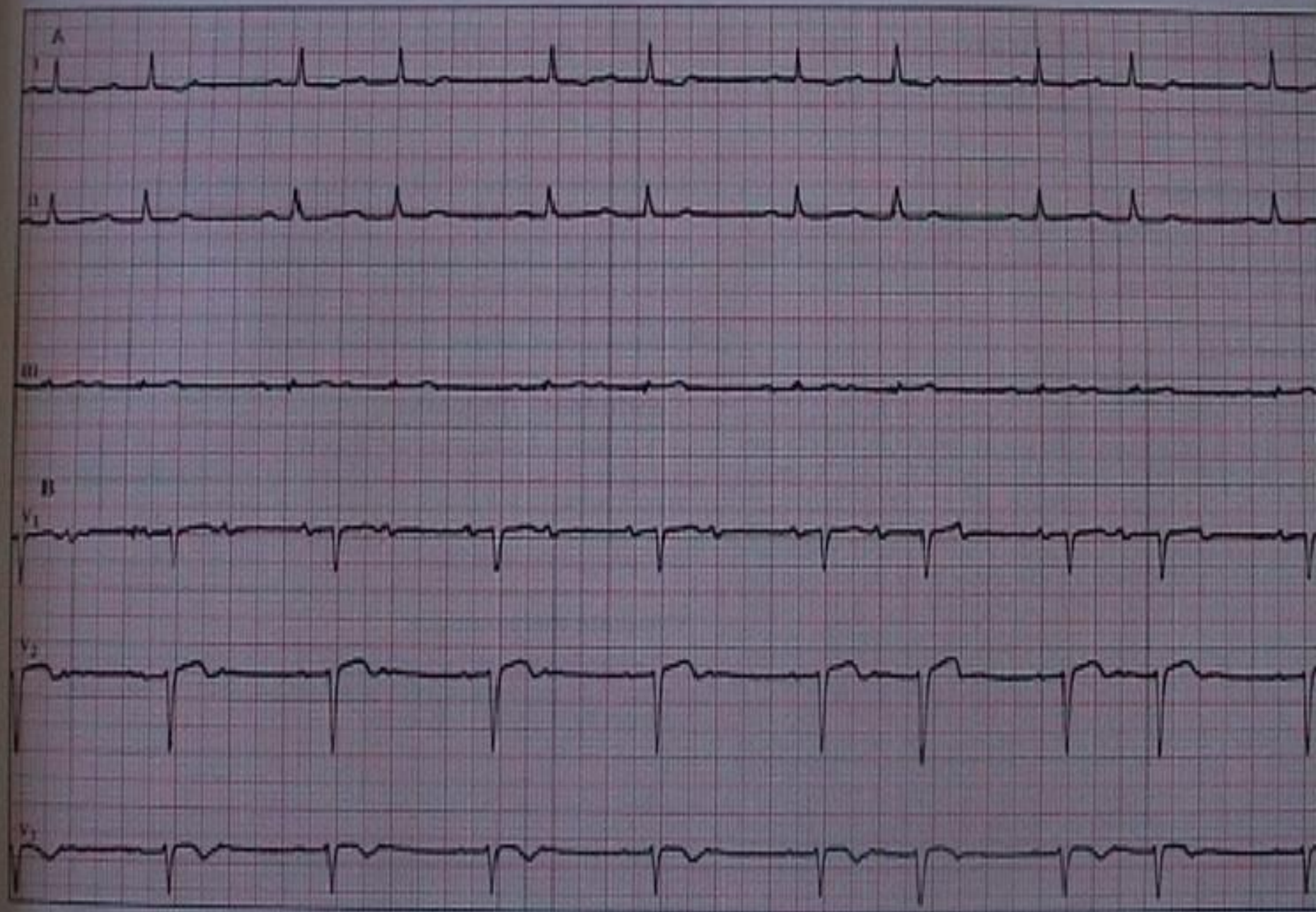
QRS?

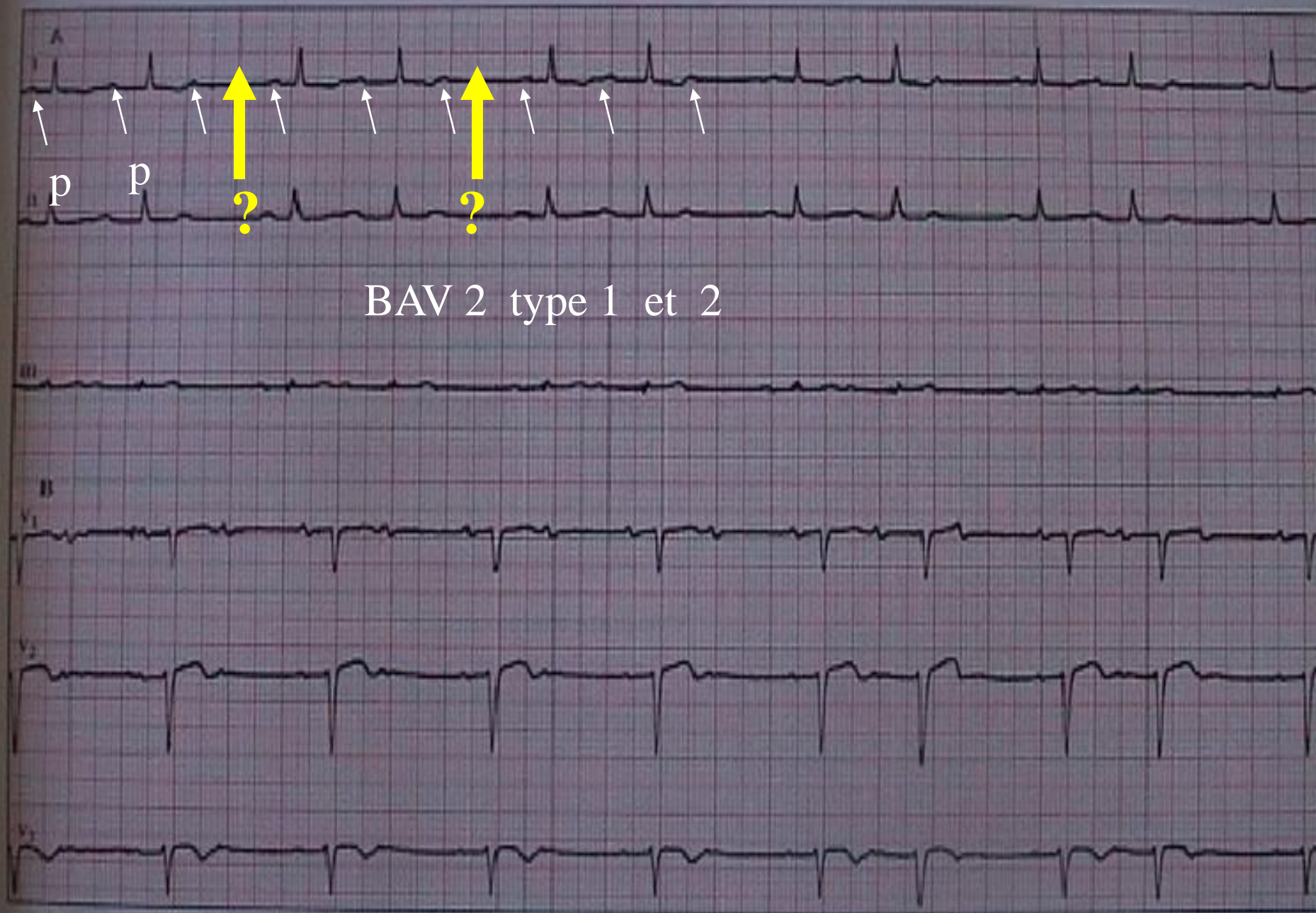
Régulier?

P?

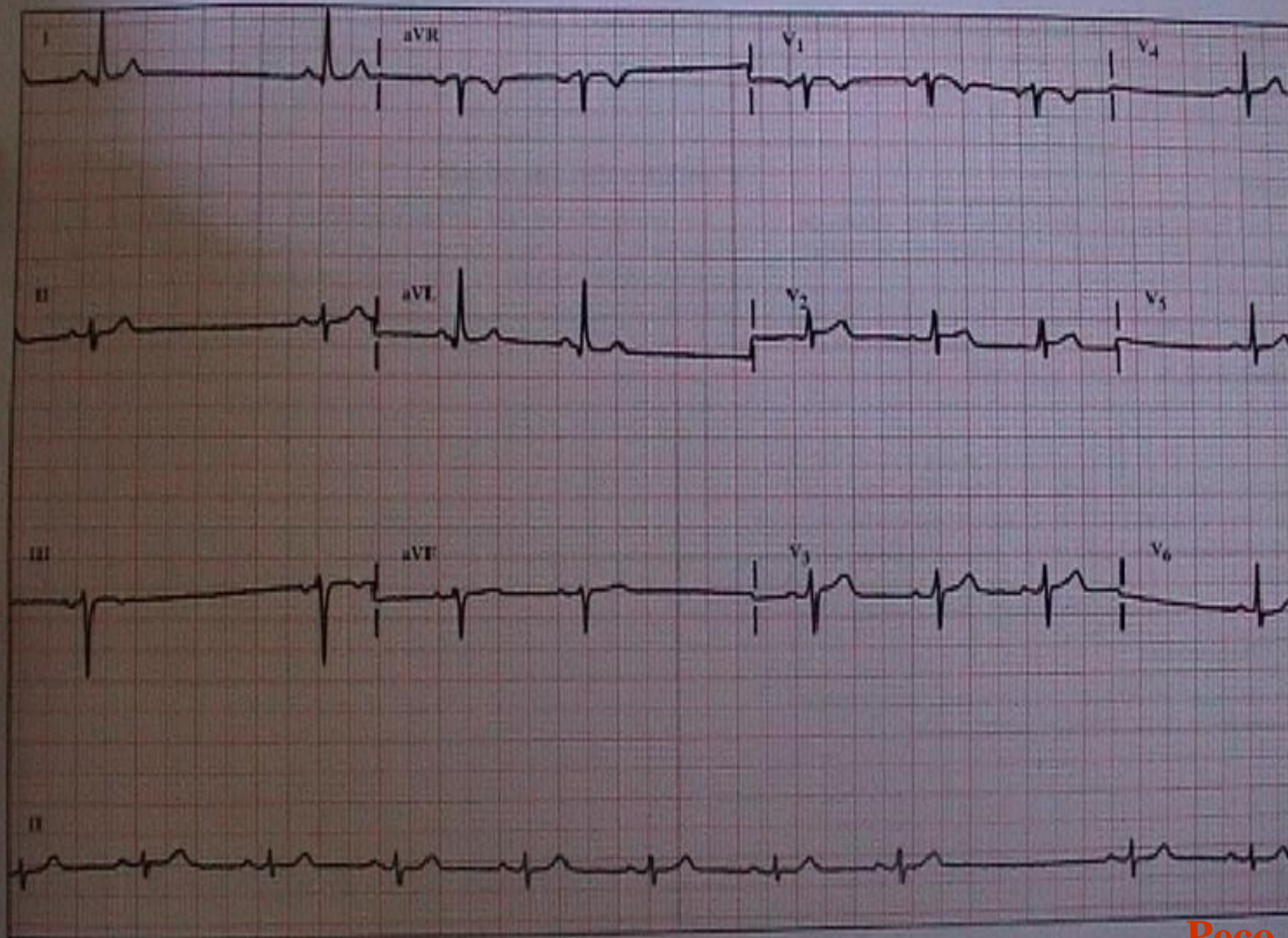
A VOUS !!!

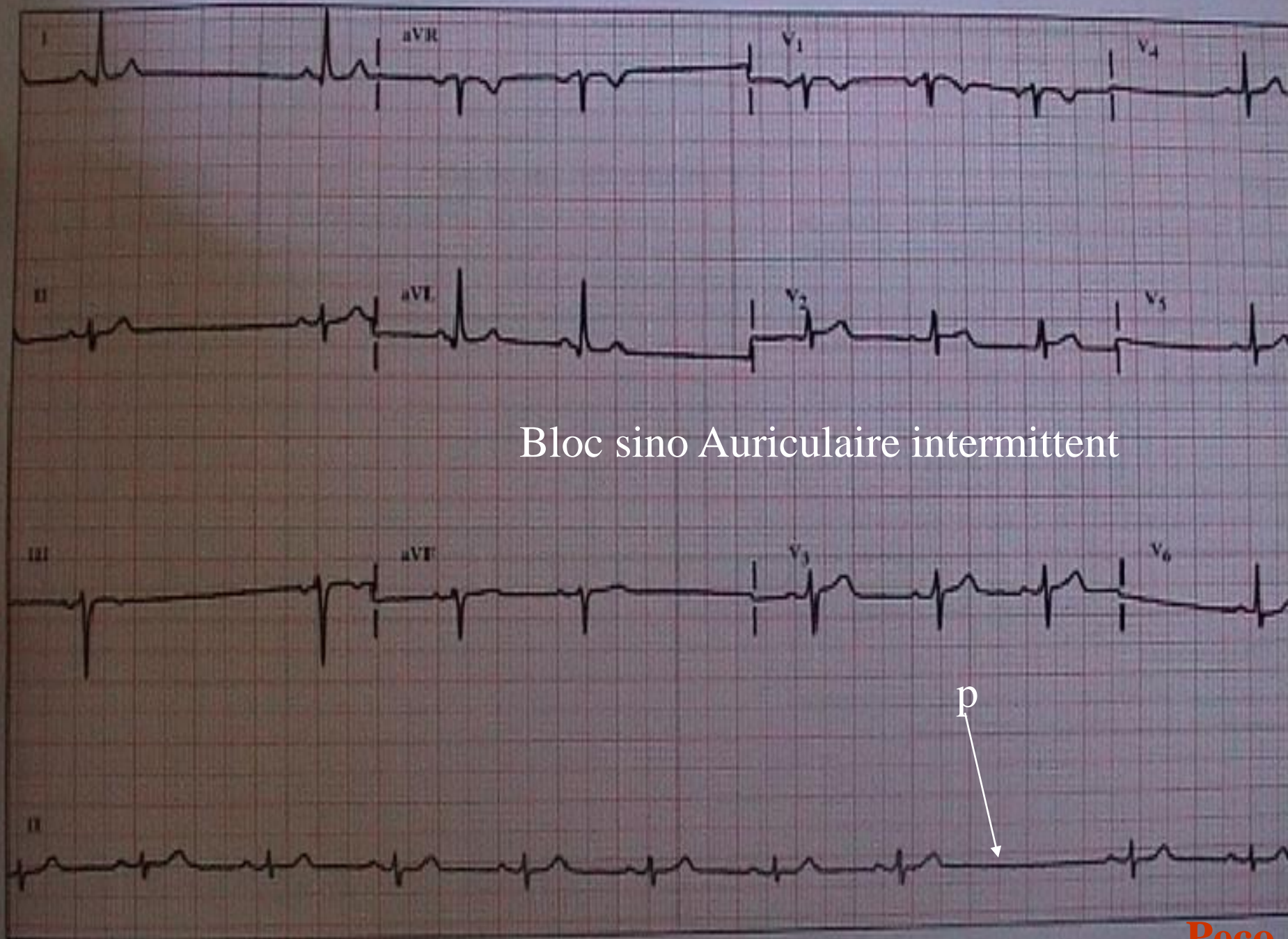




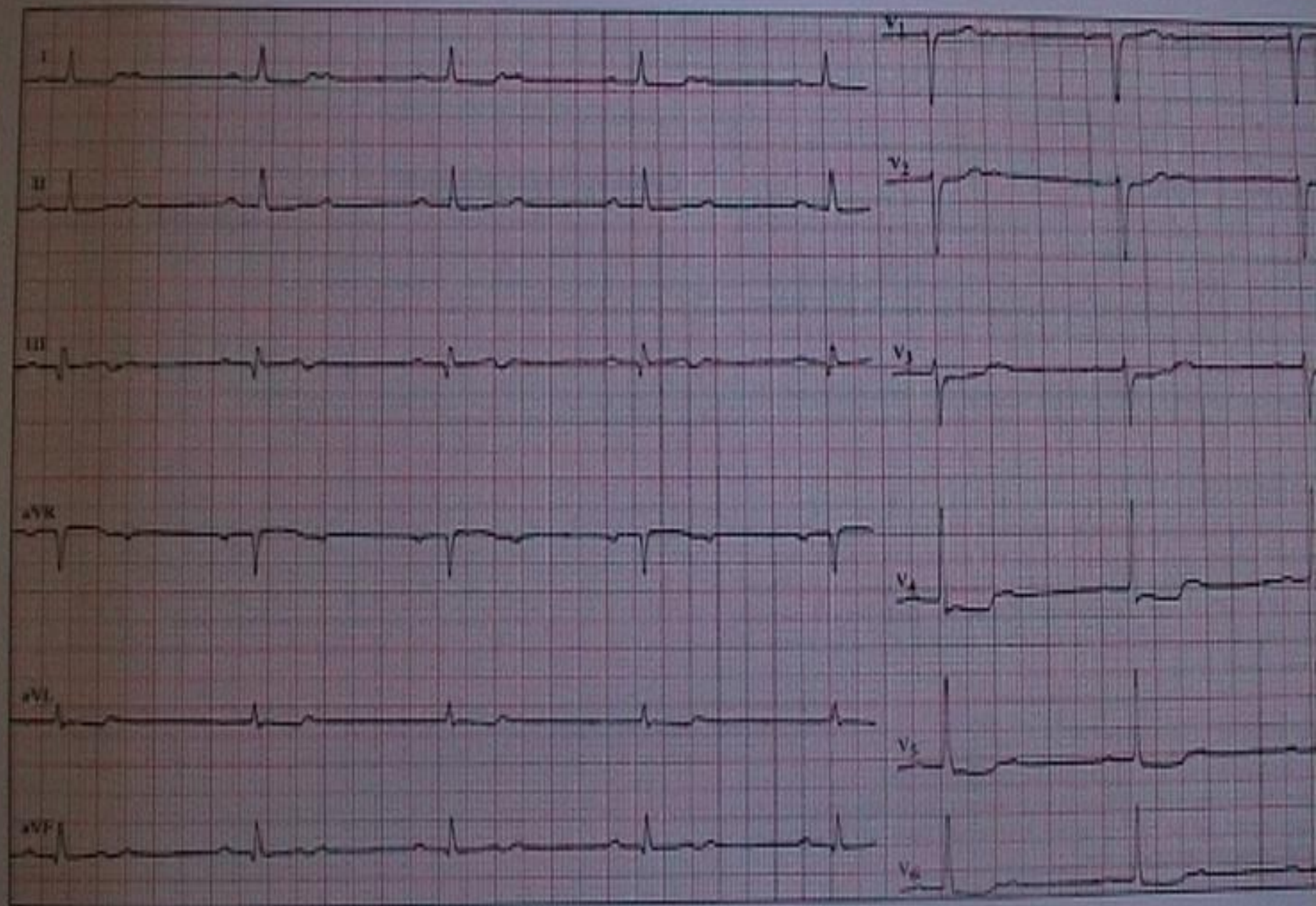


BAV 2 type 1 et 2

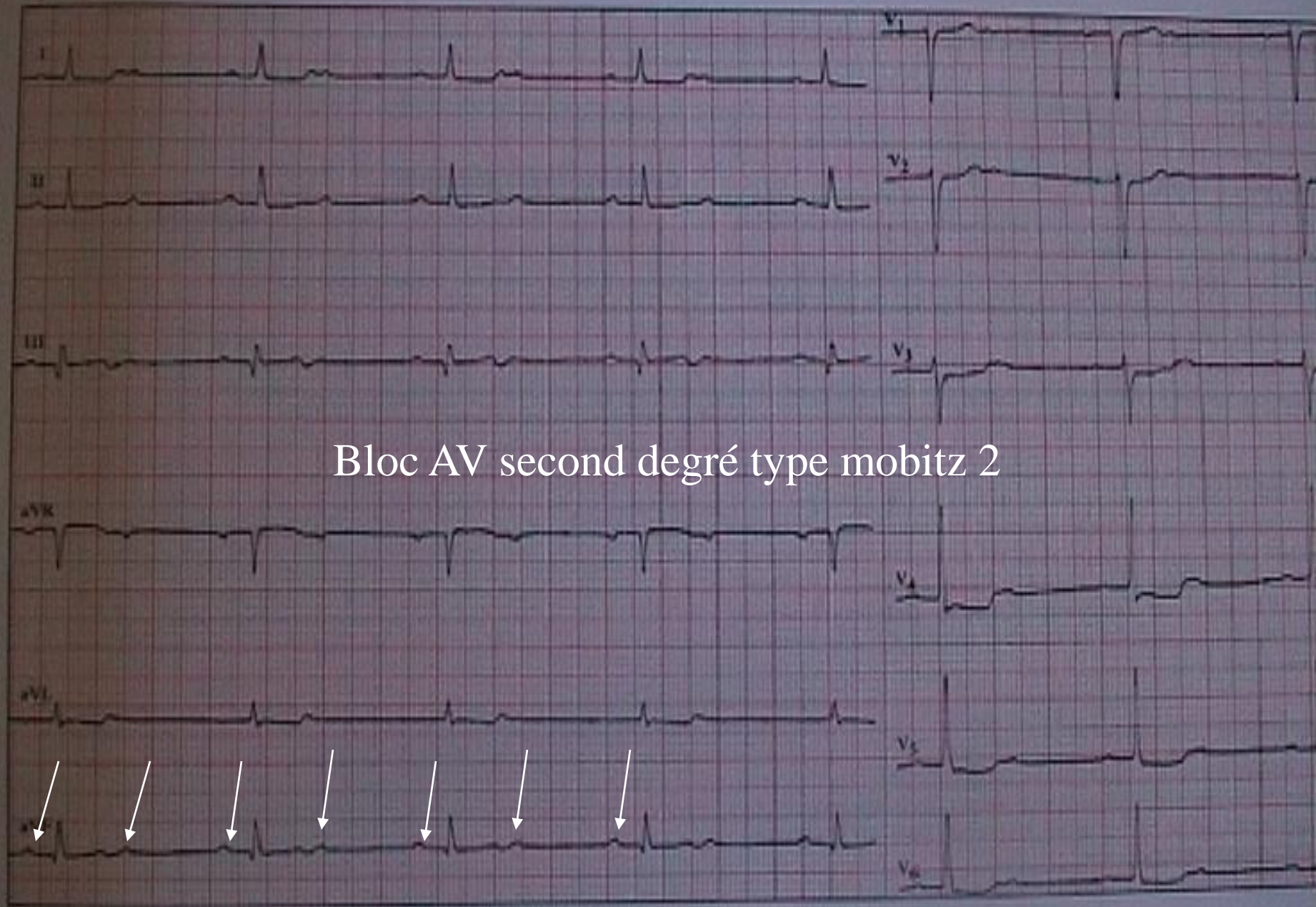


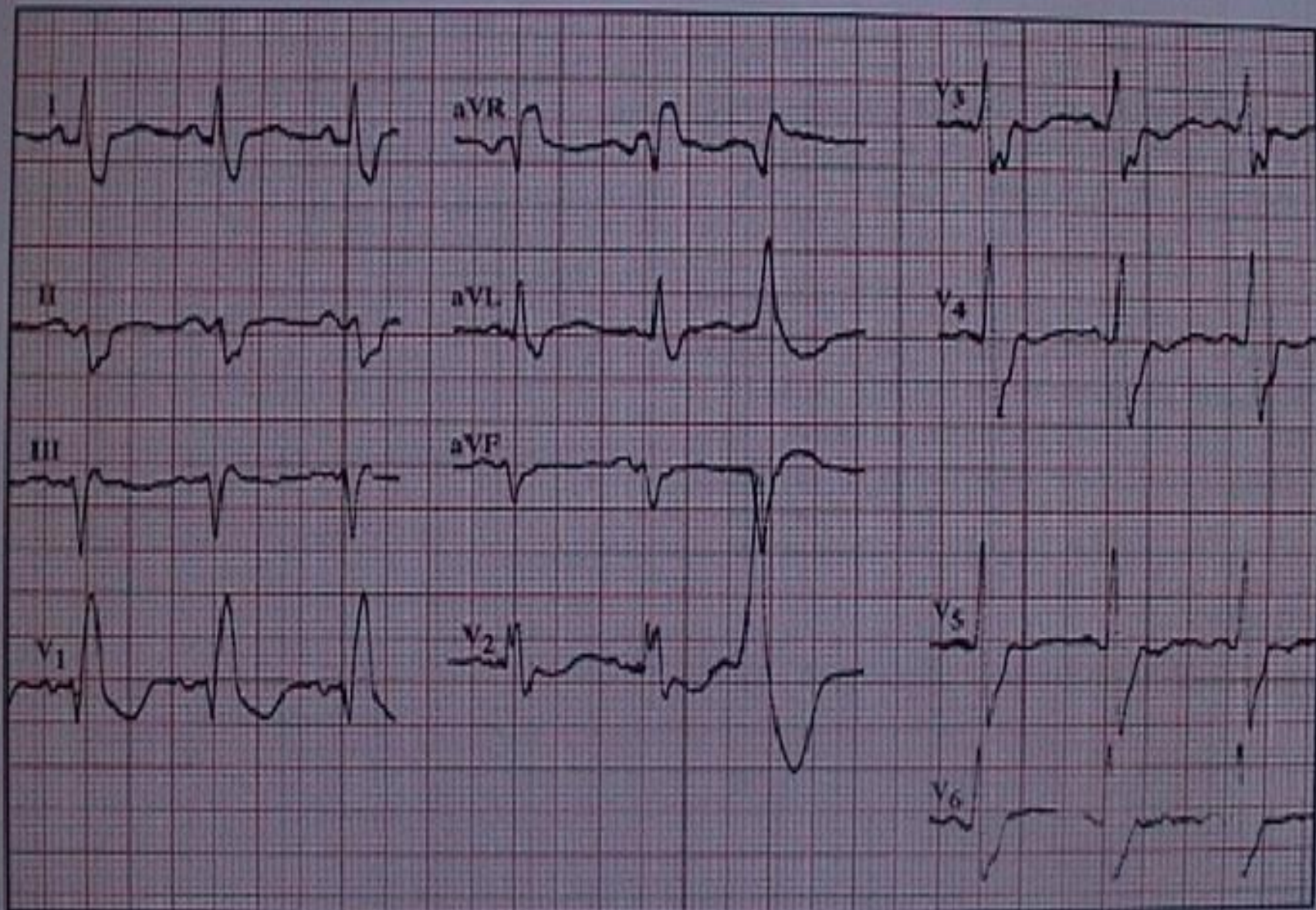


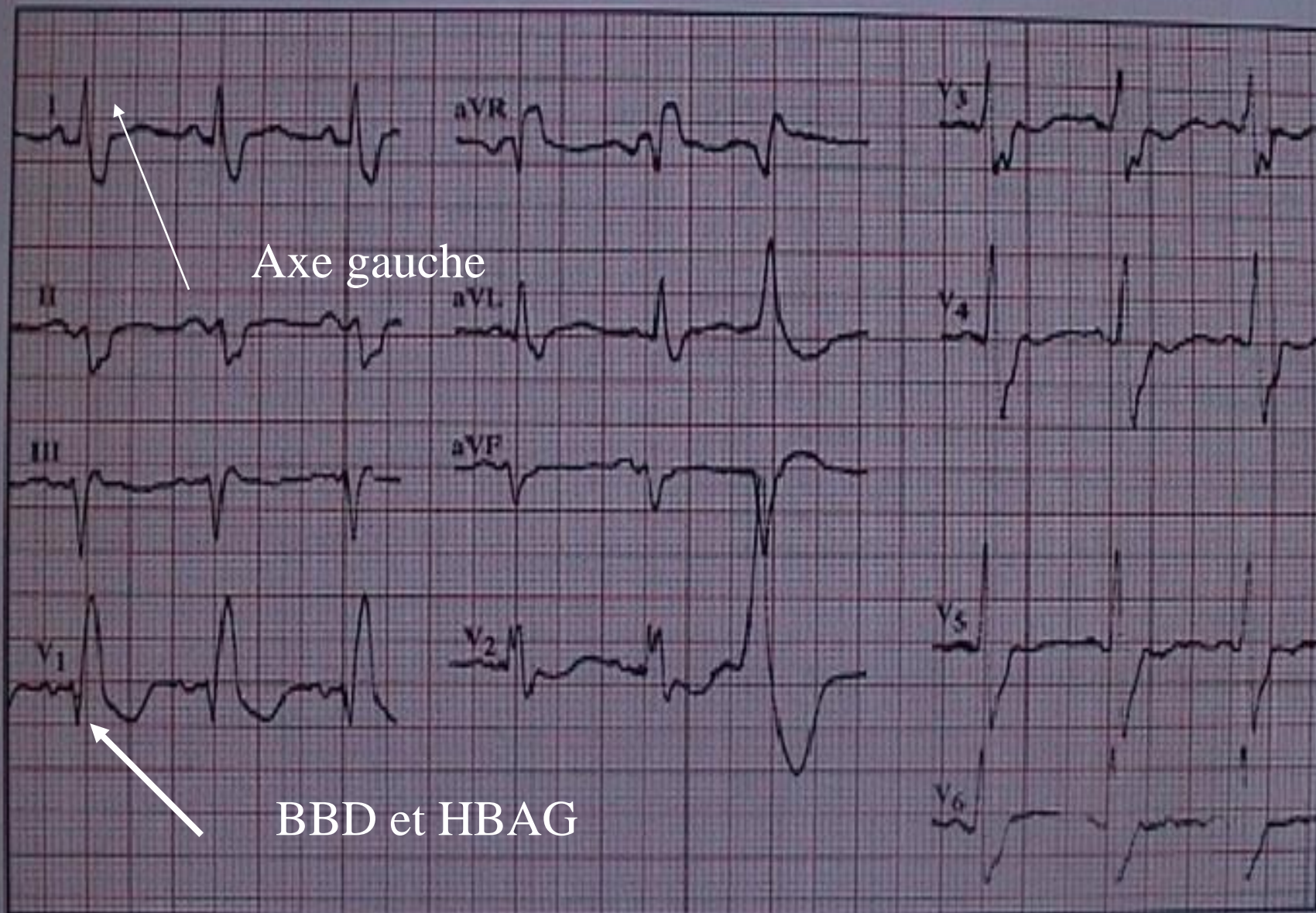
Bloc sino Auriculaire intermittent

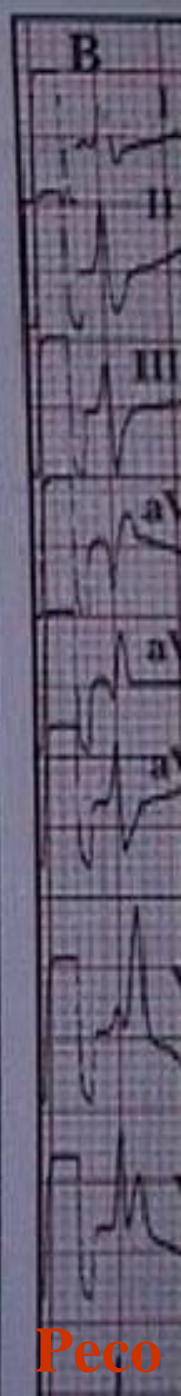
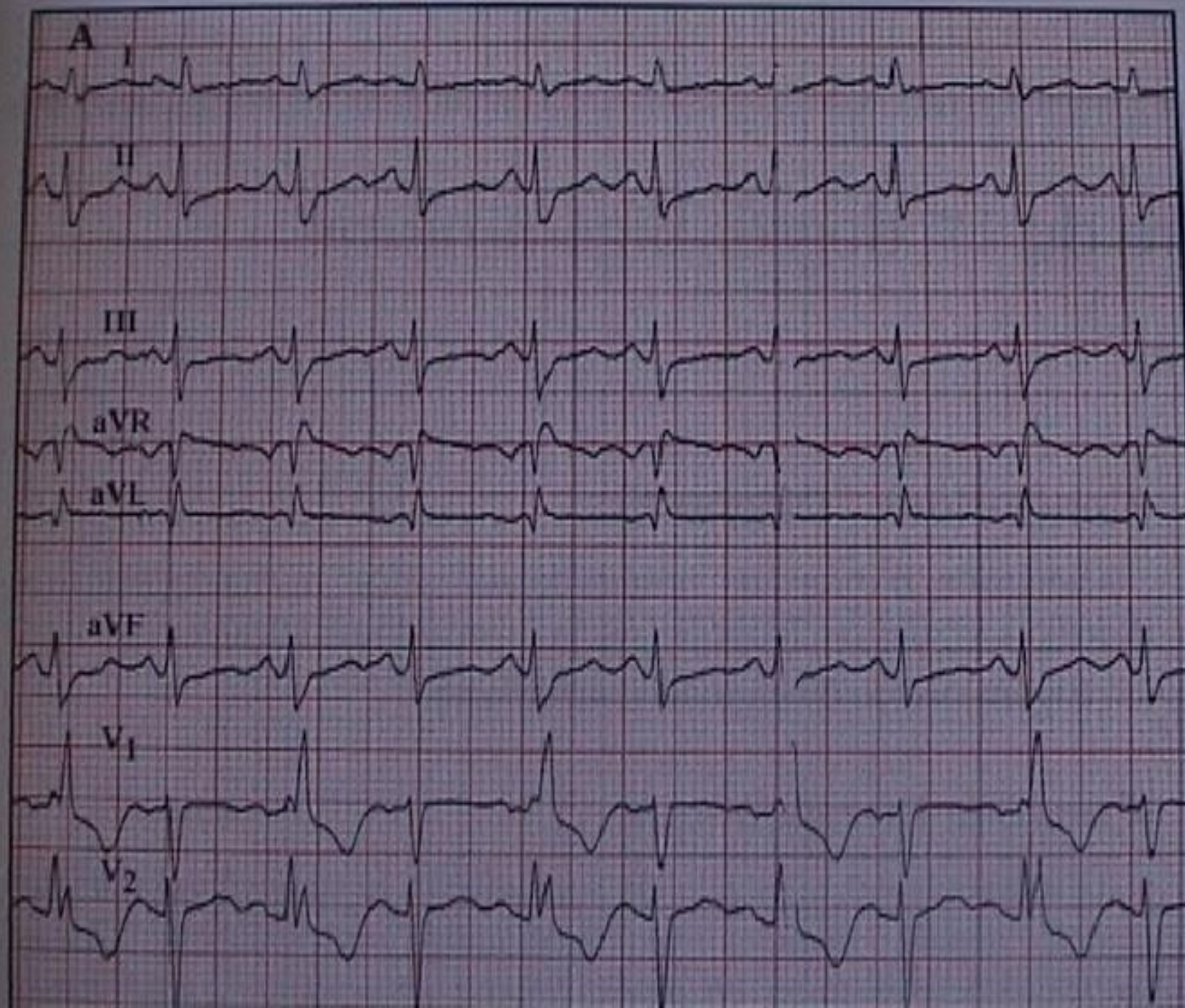


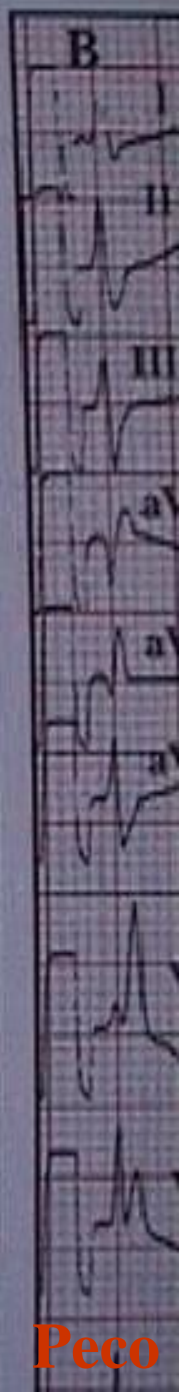
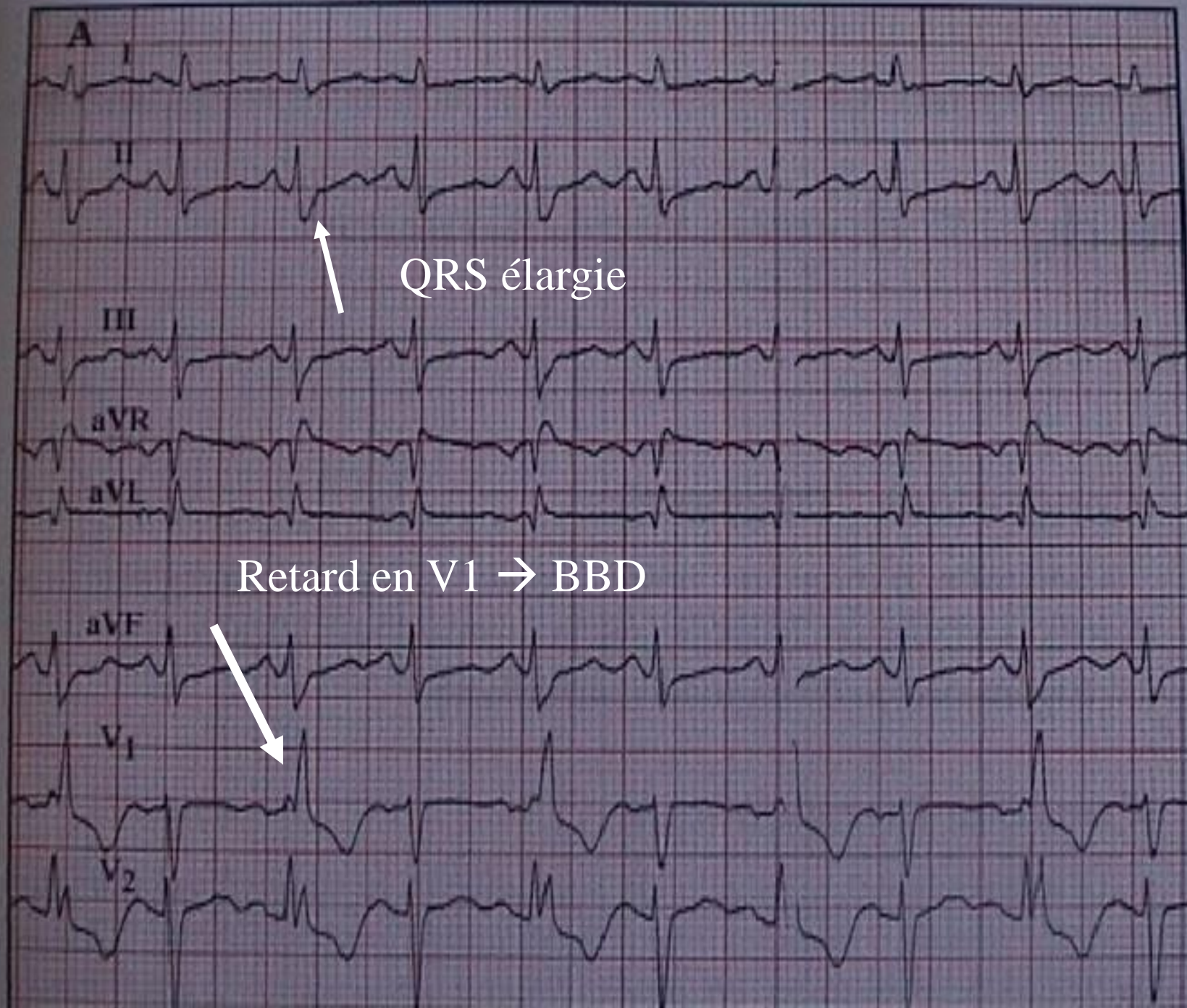
Bloc AV second degré type mobitz 2

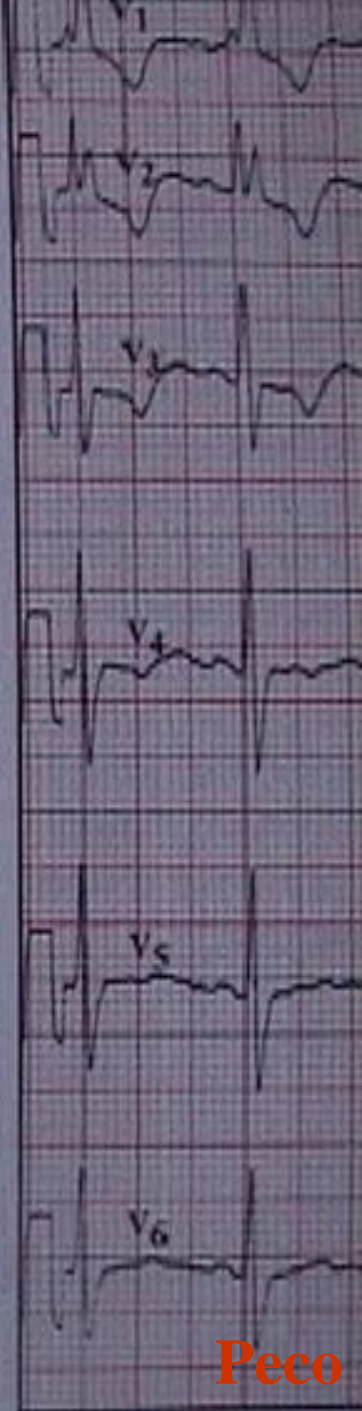
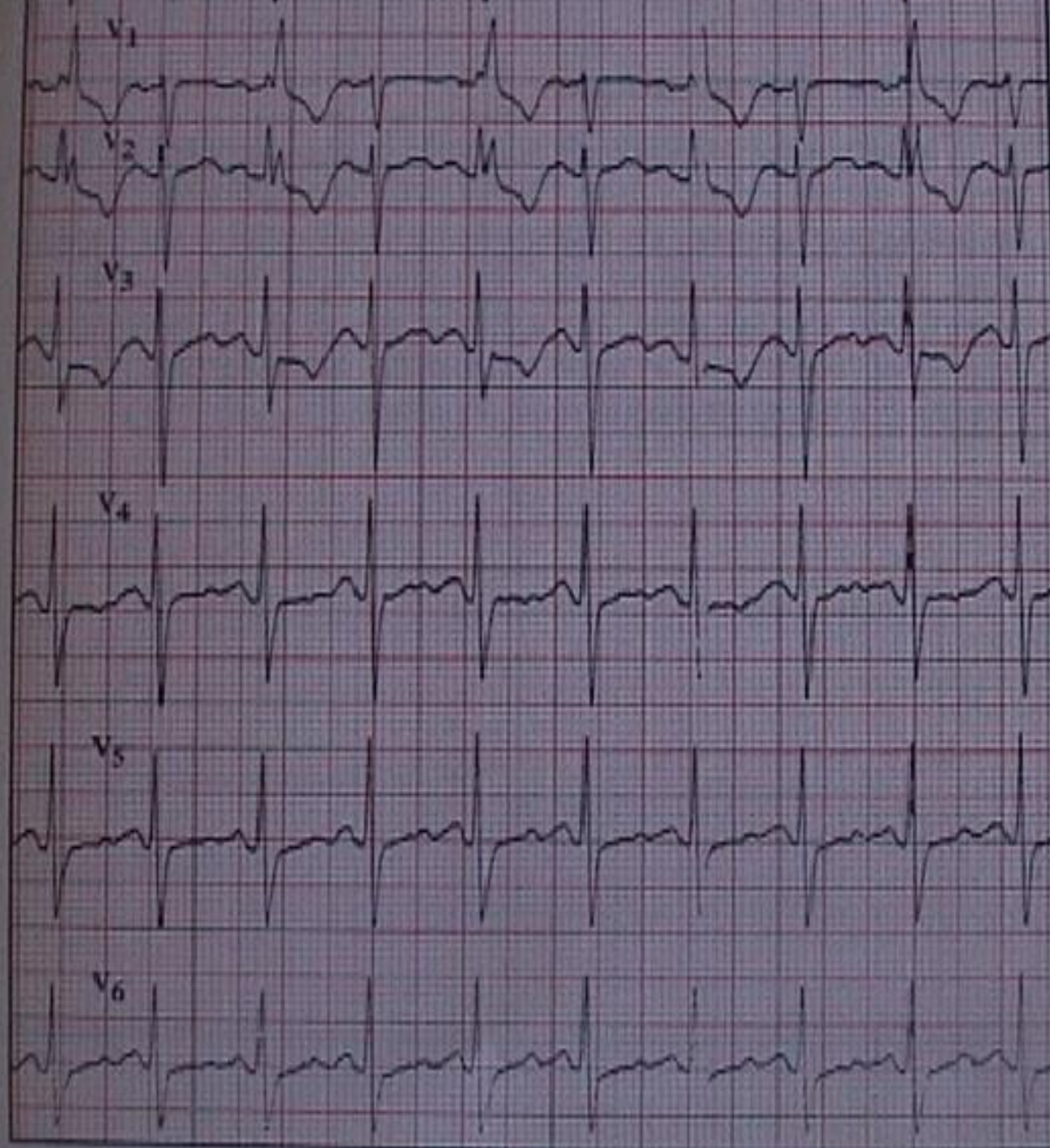


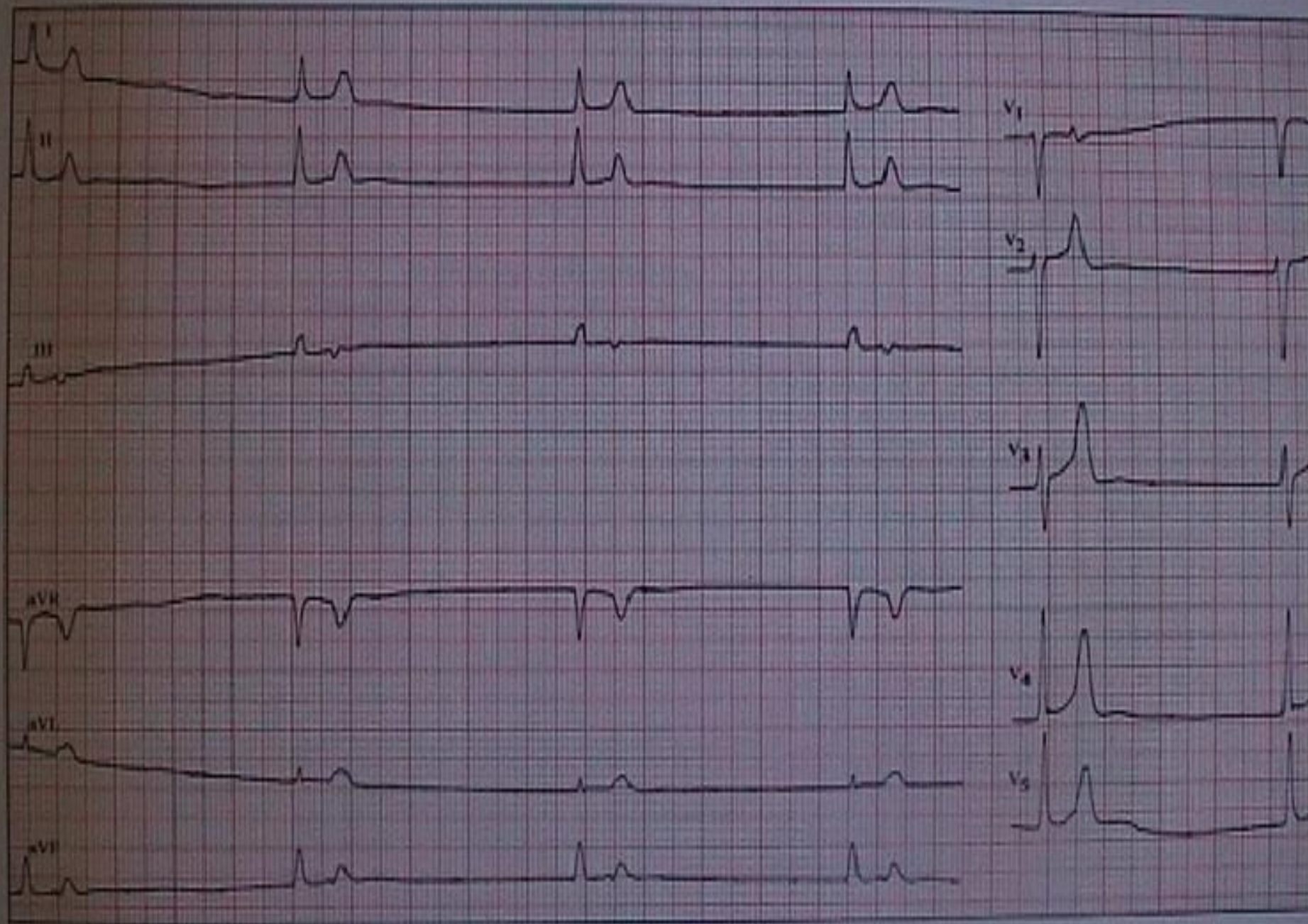


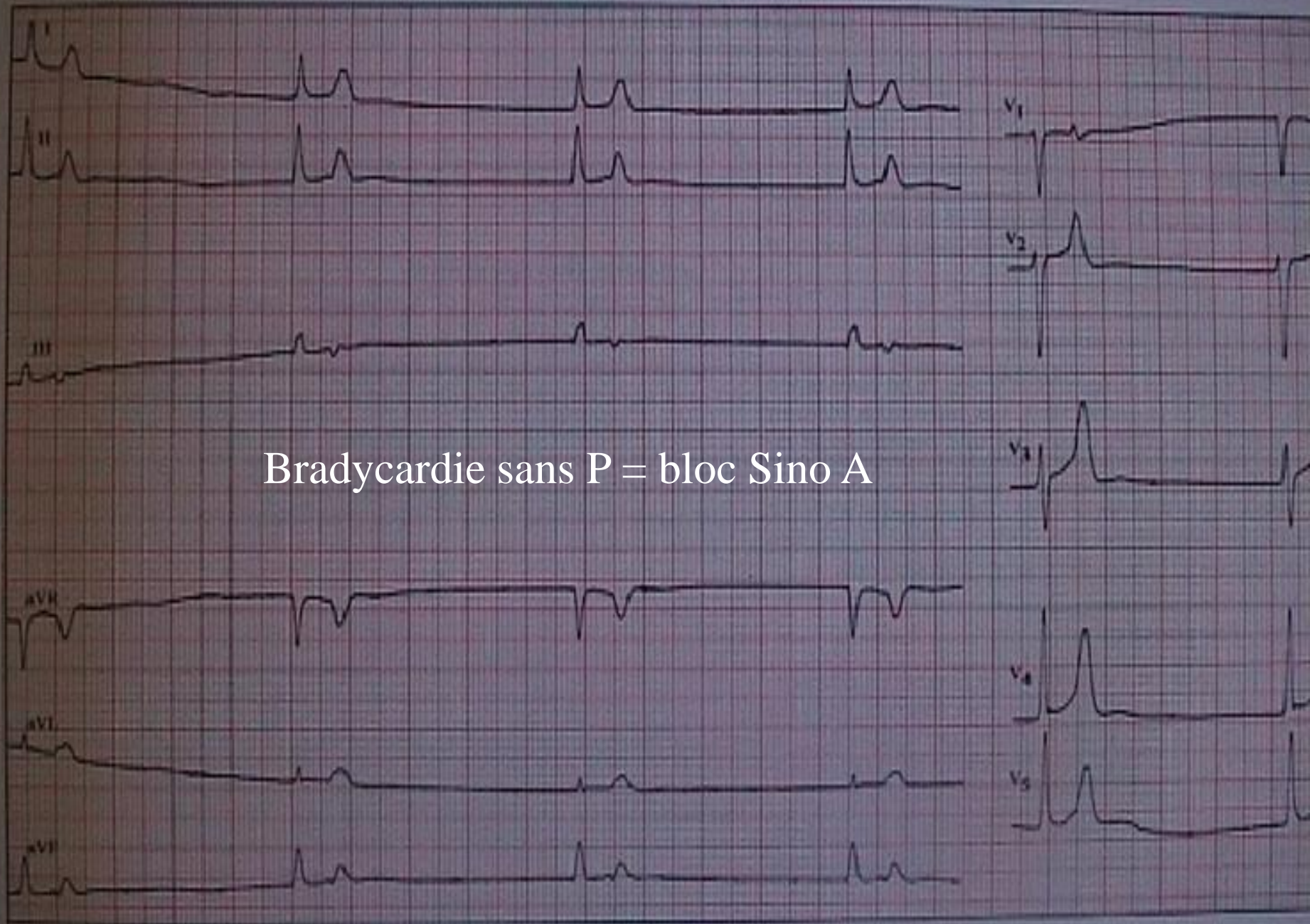




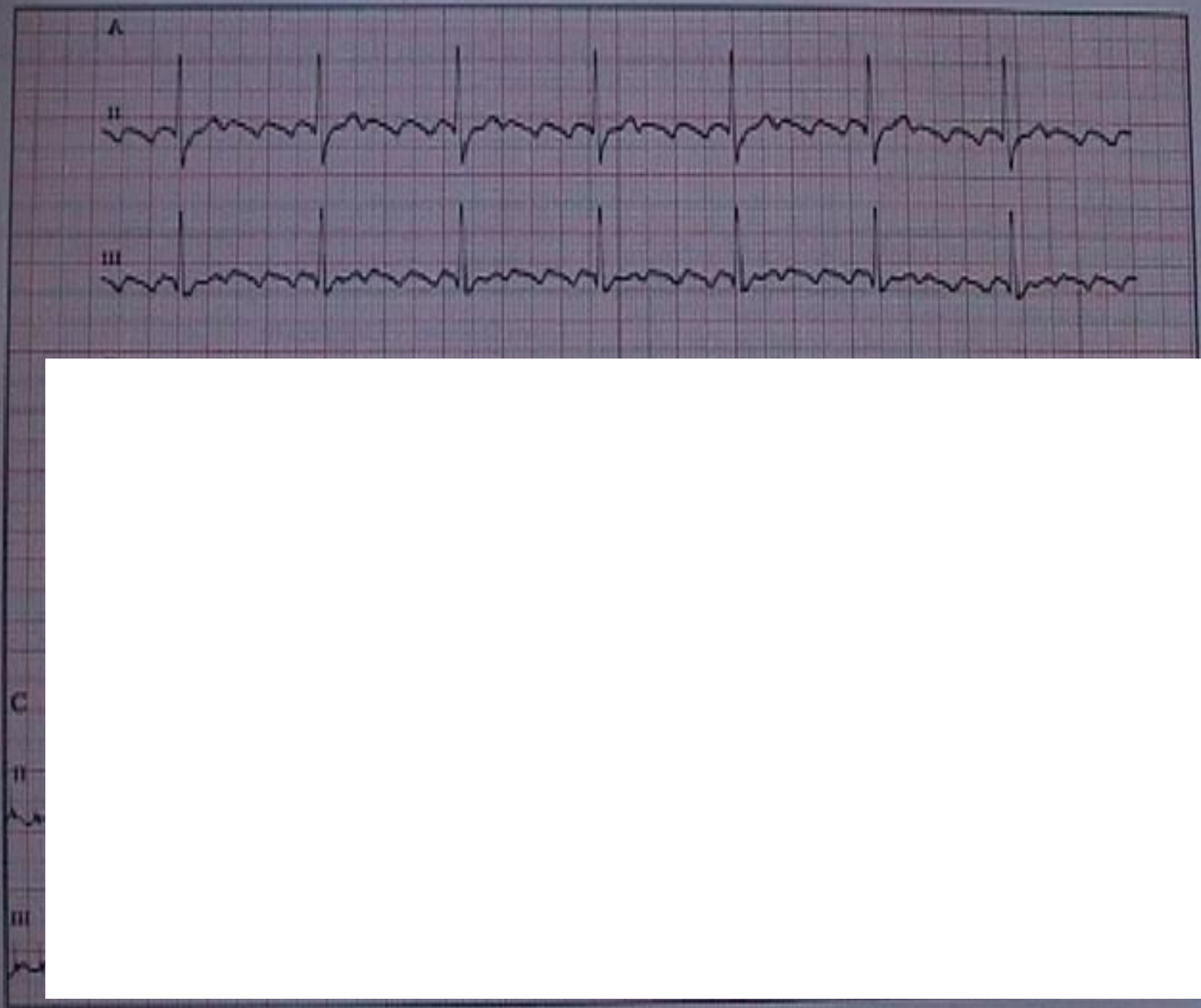








Bradycardie sans P = bloc Sino A



A

II

III

Flutter

B

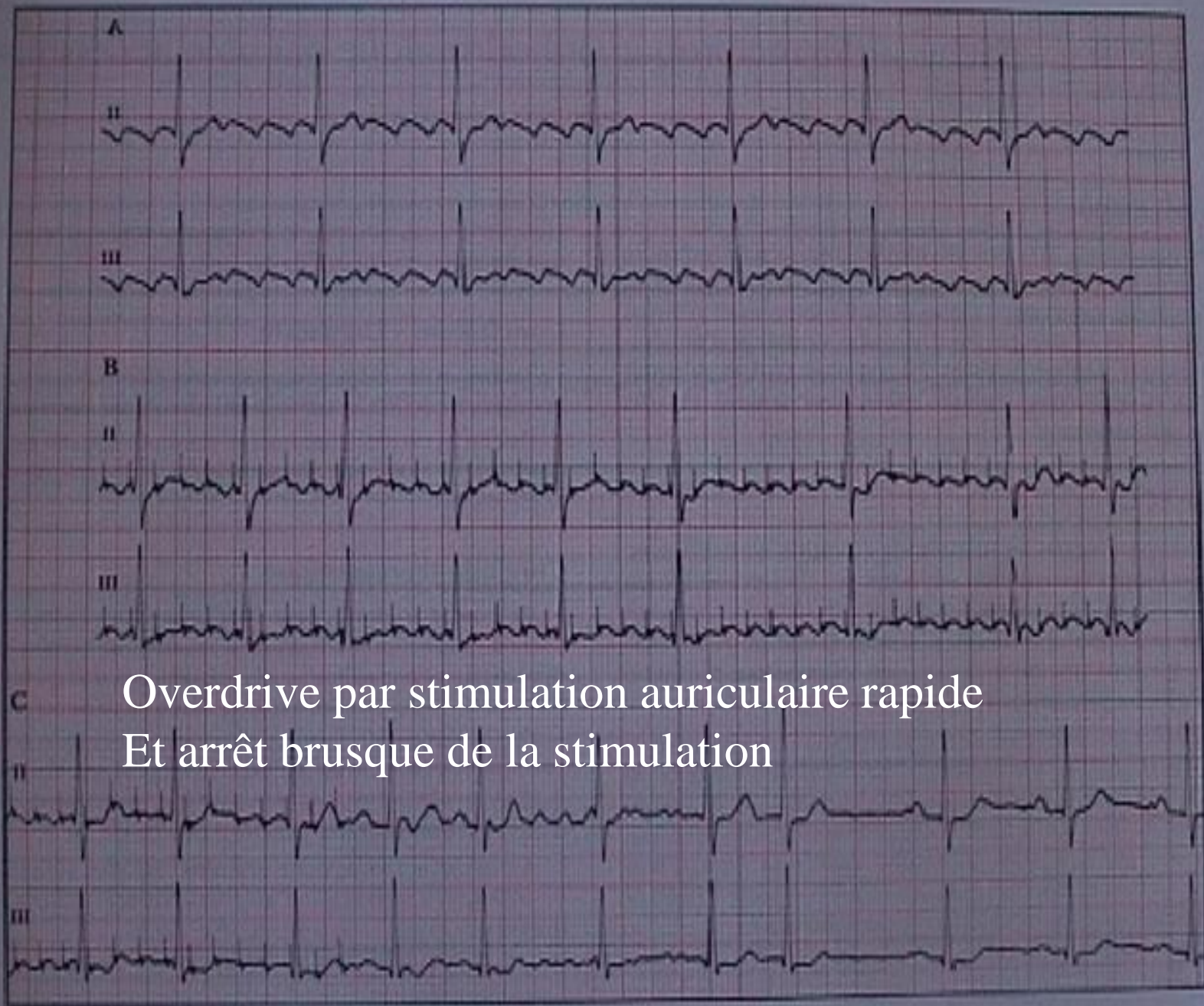
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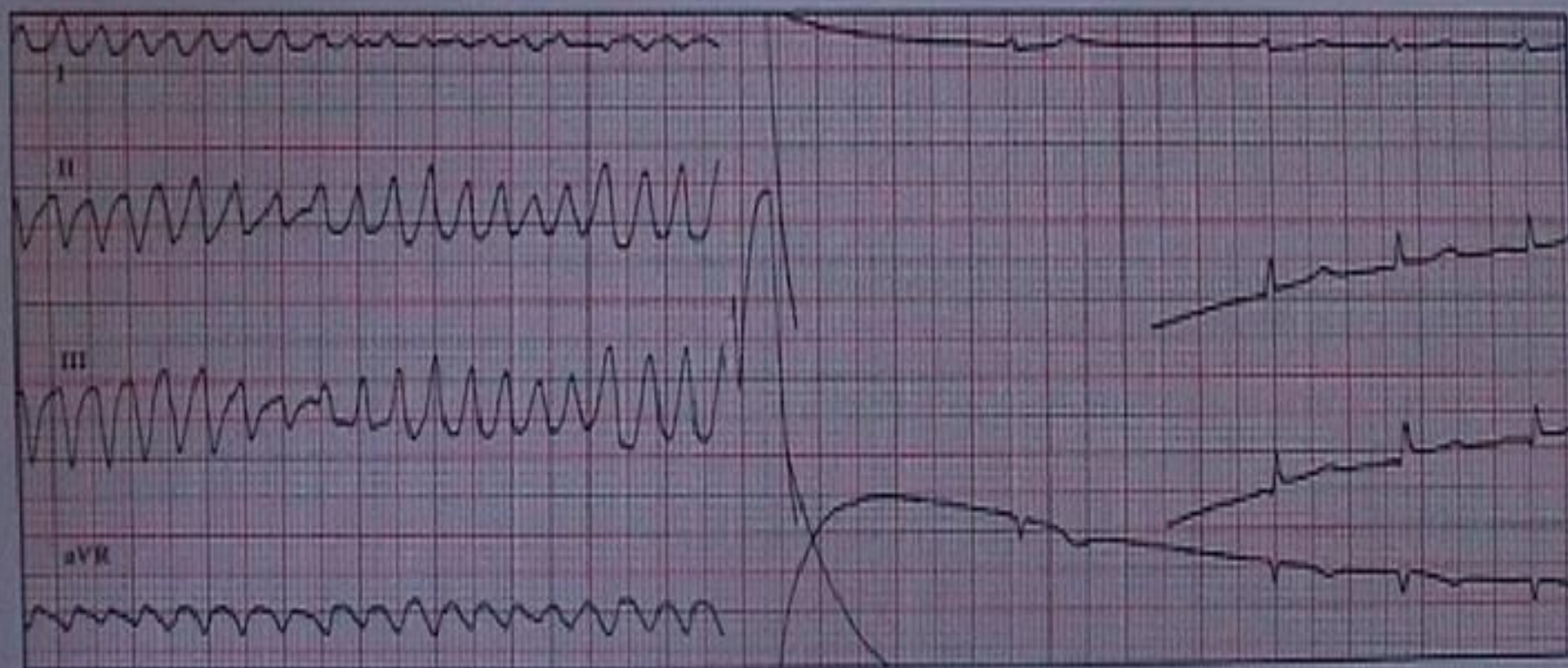
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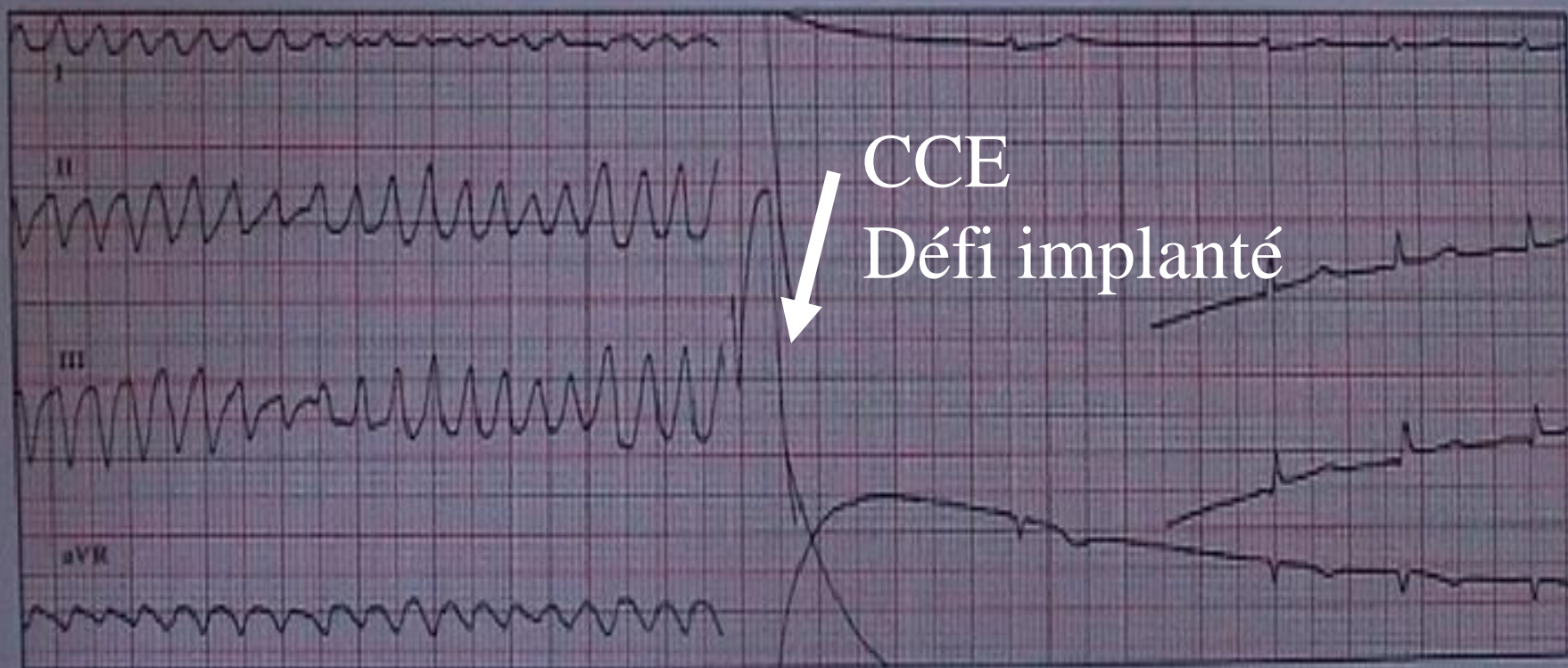
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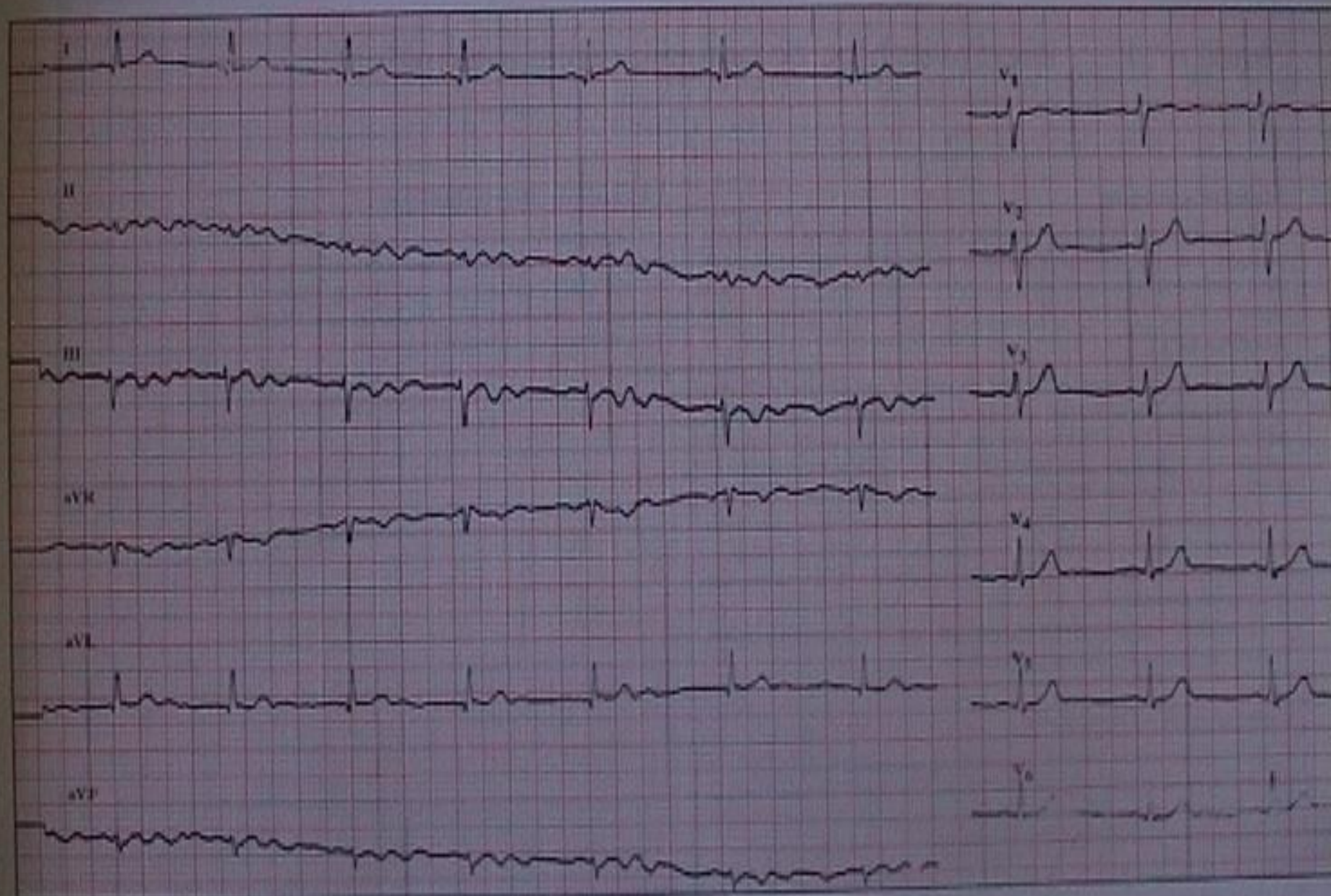
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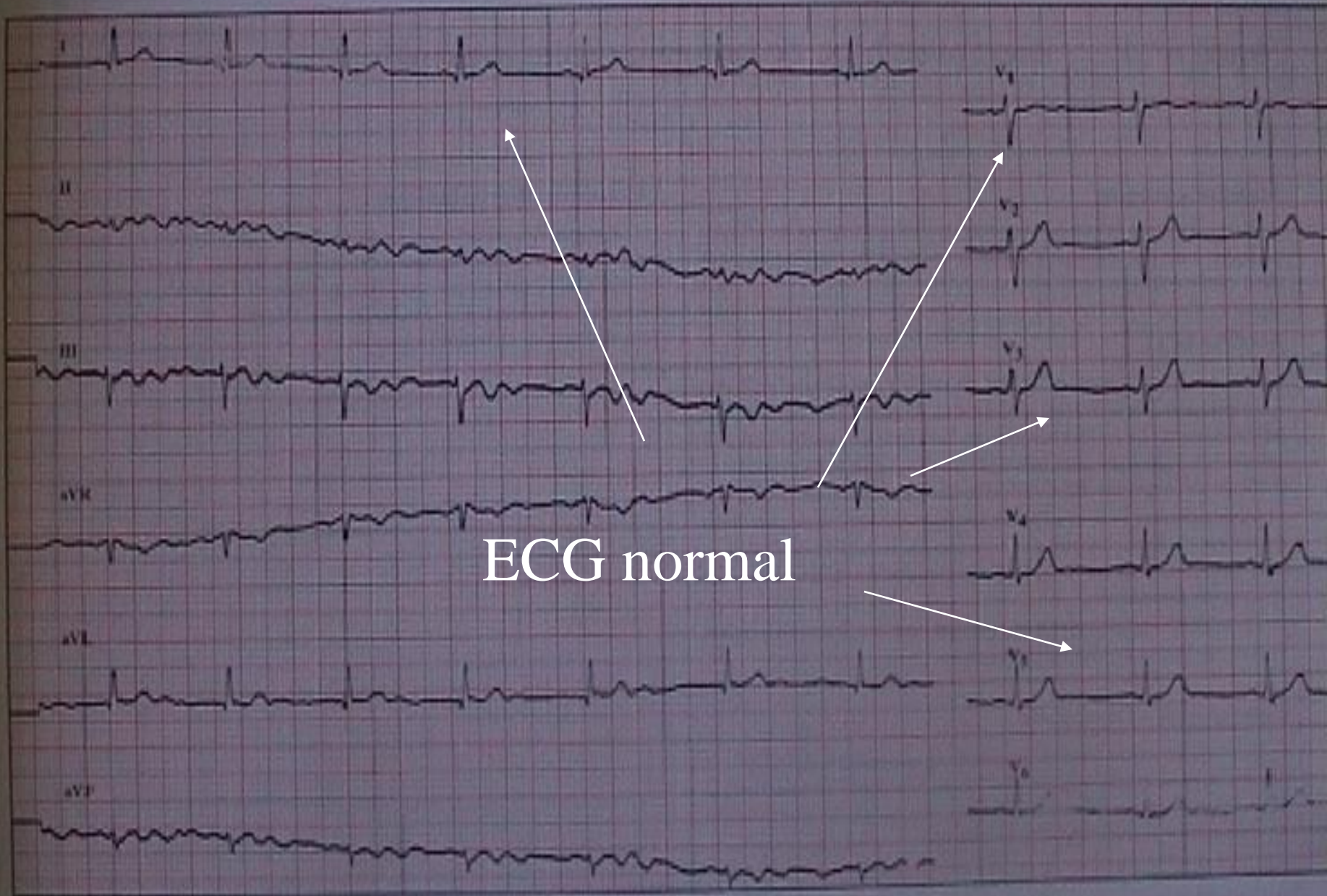
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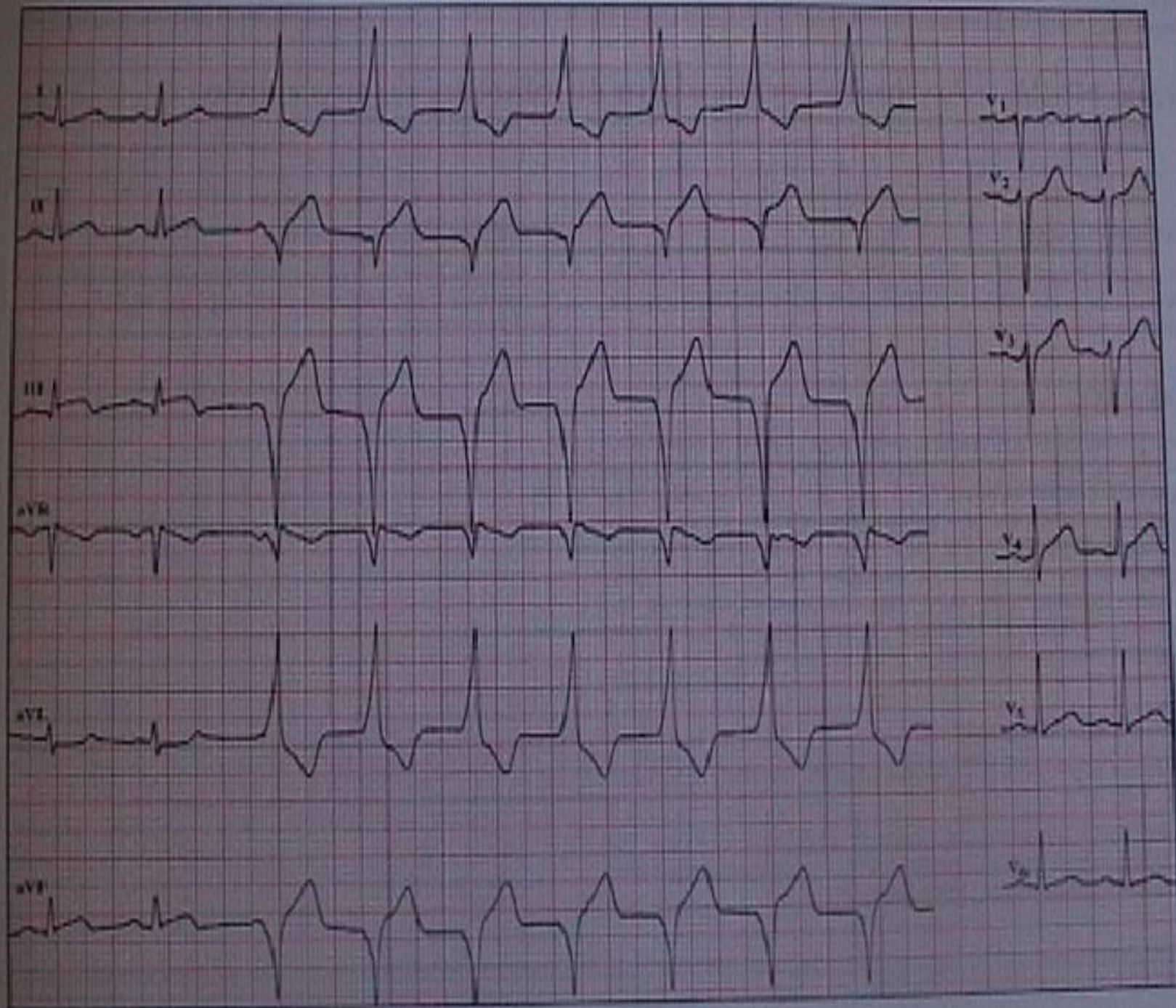


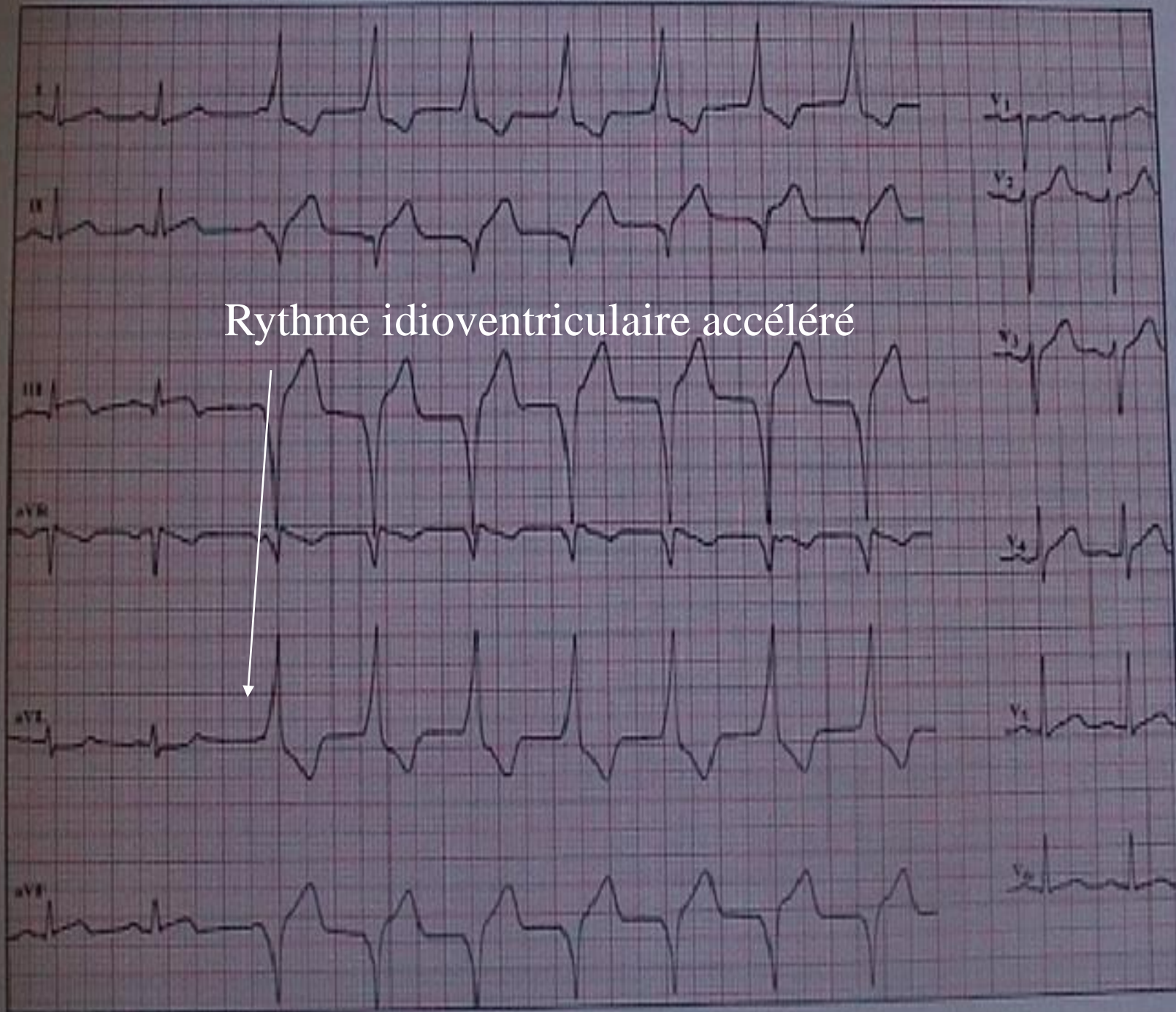


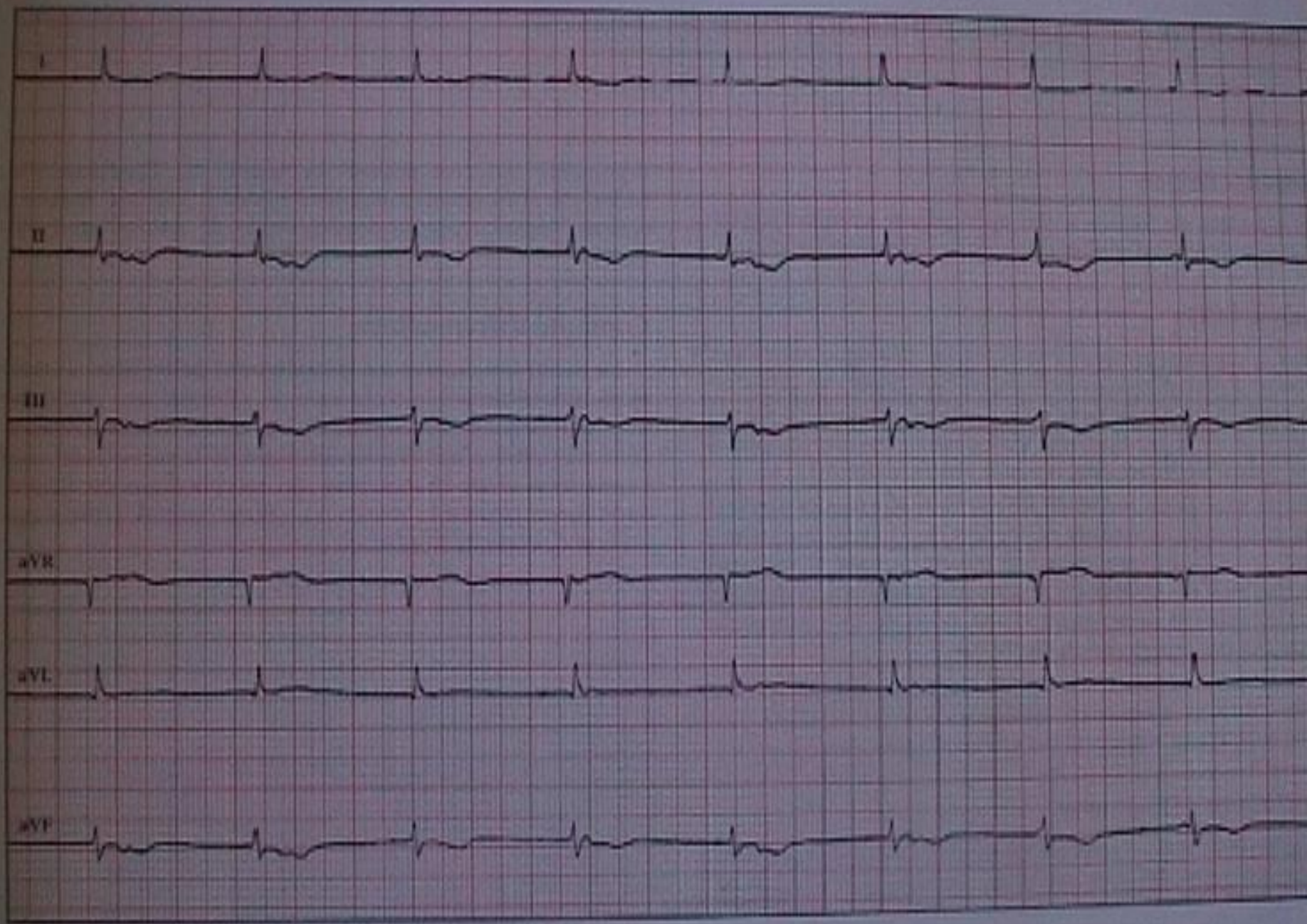


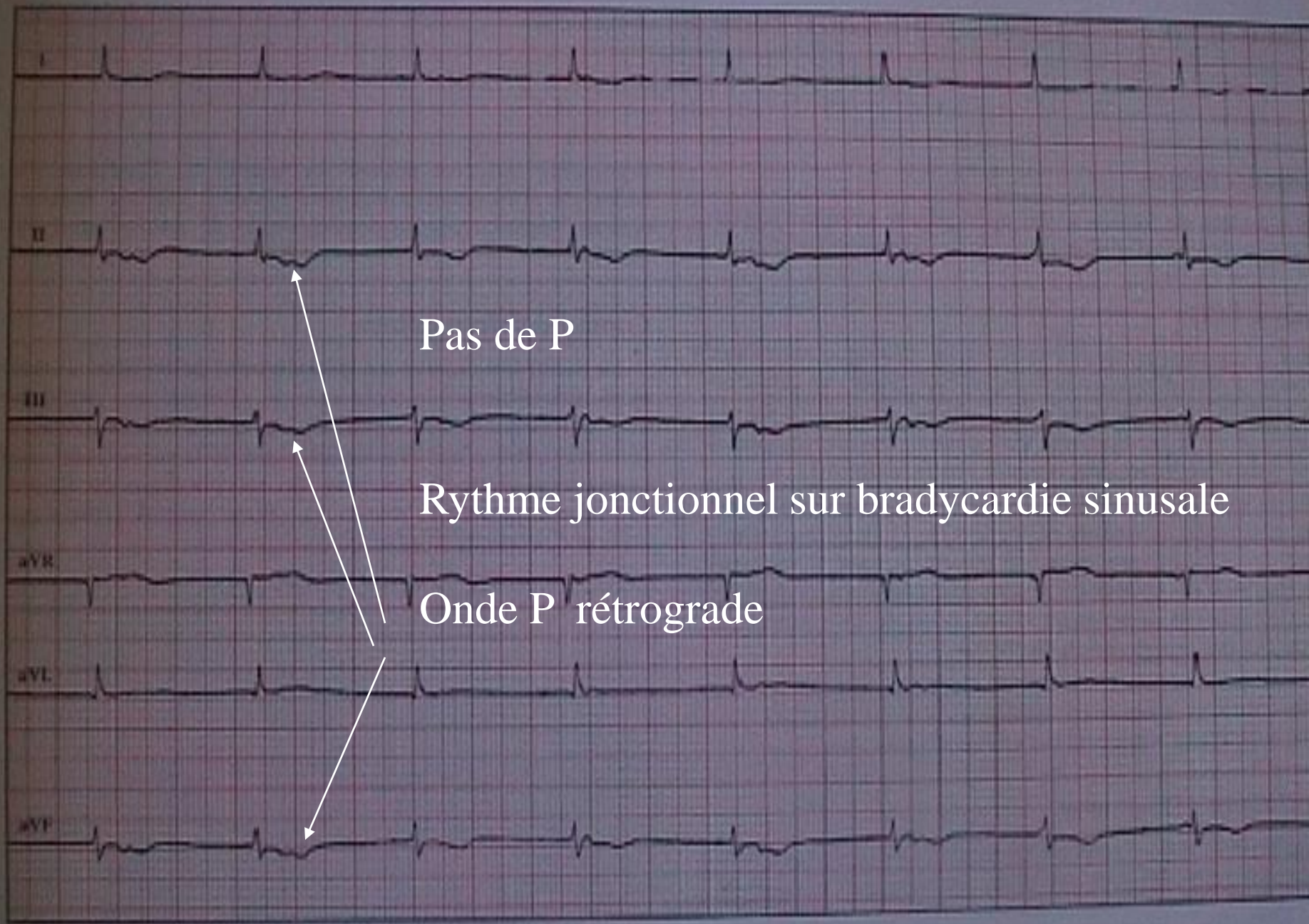


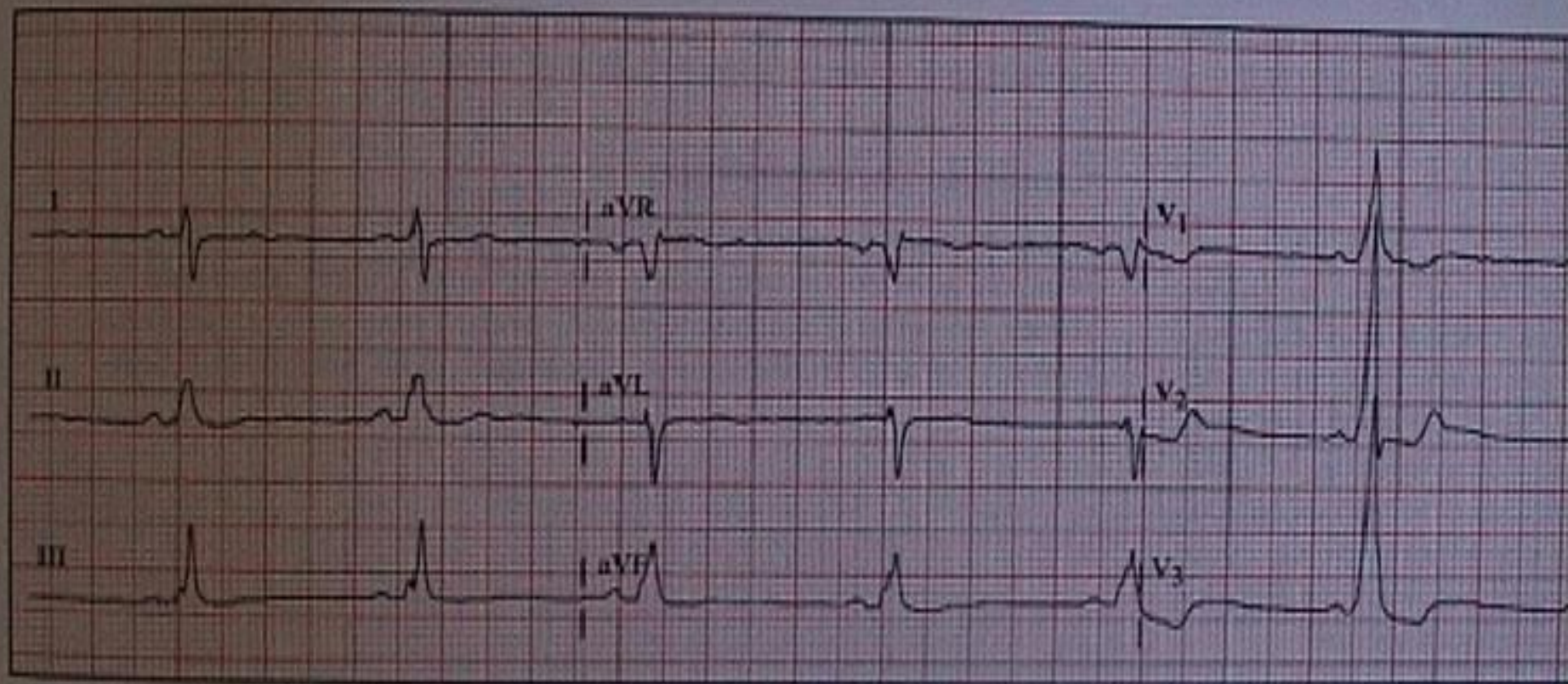




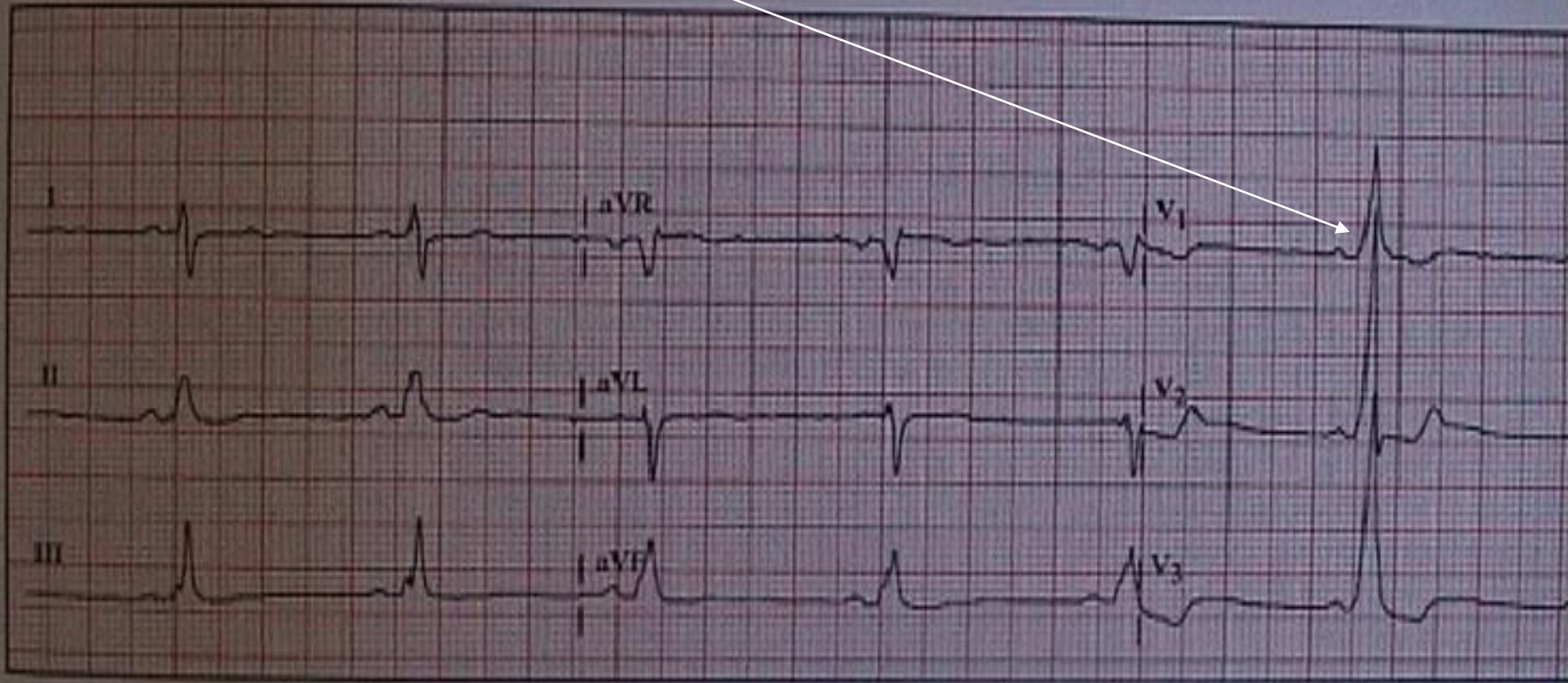




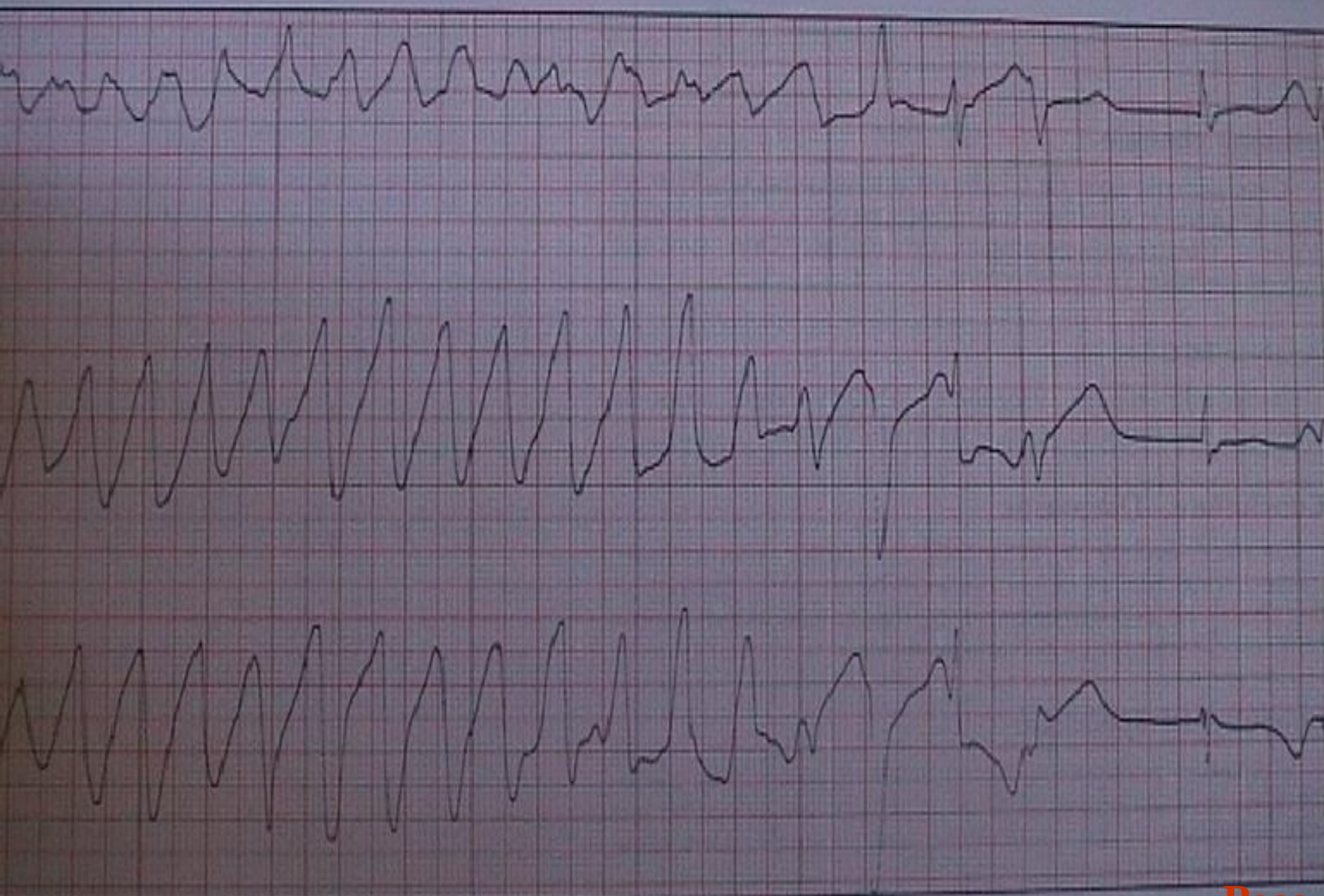


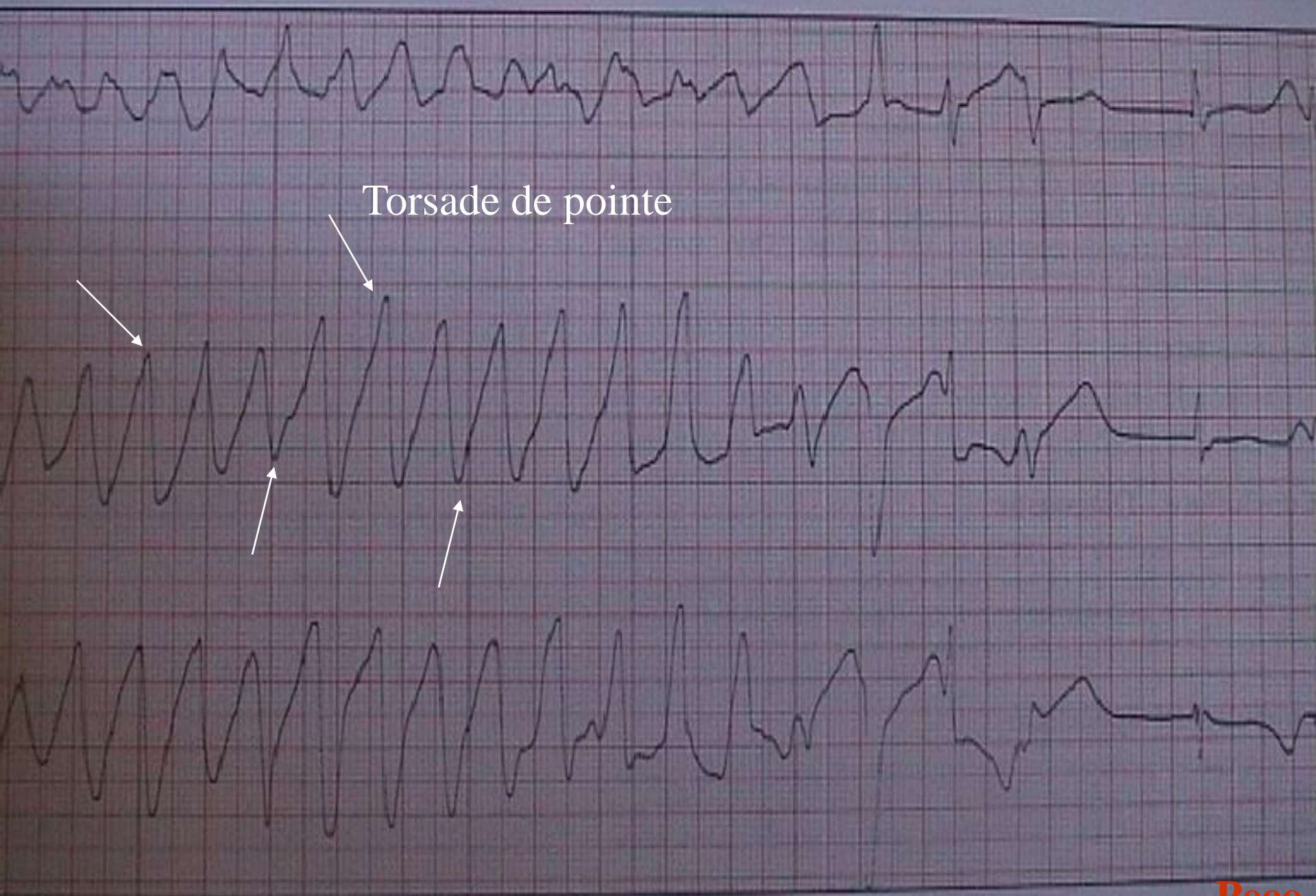


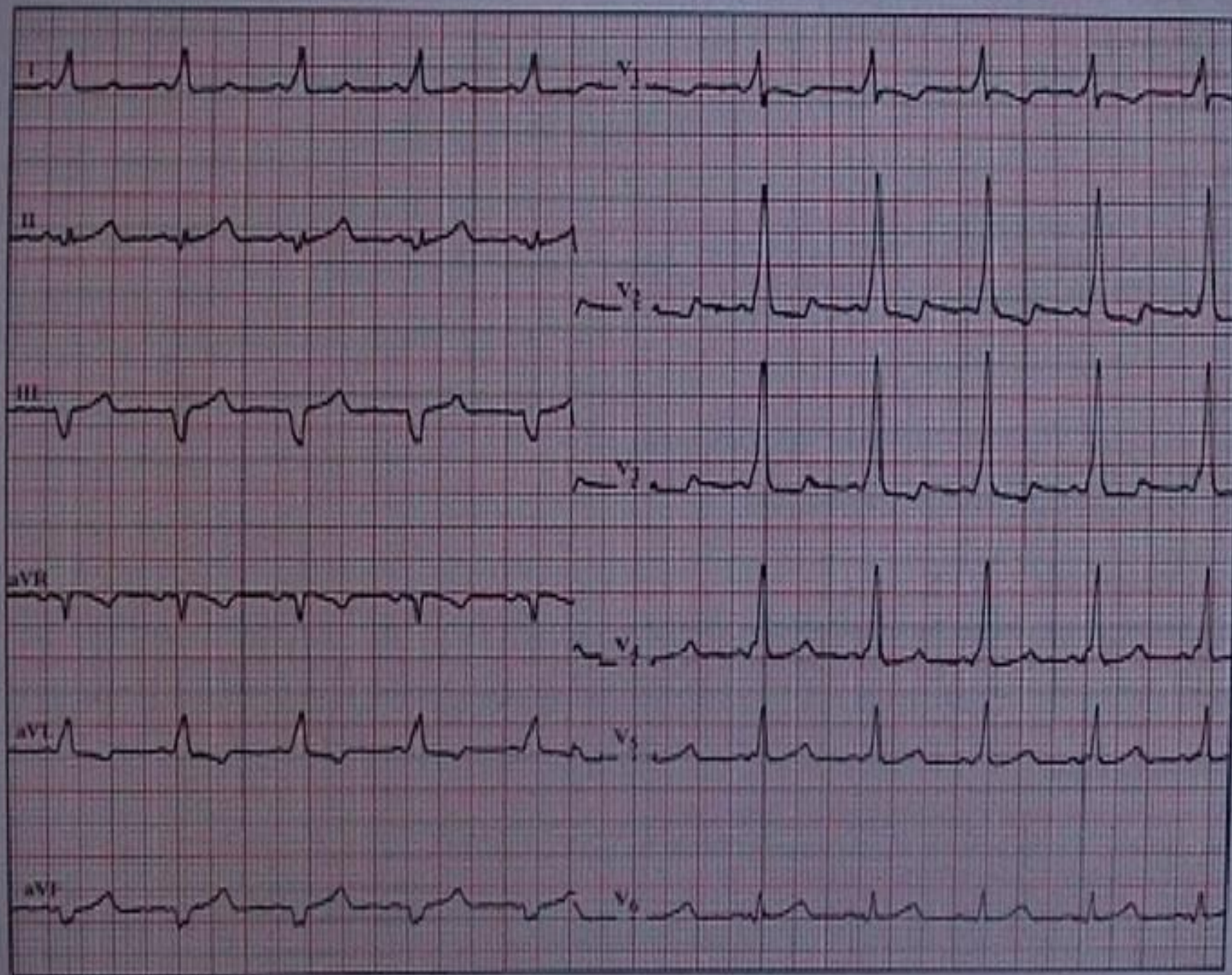
Pr court avec onde delta

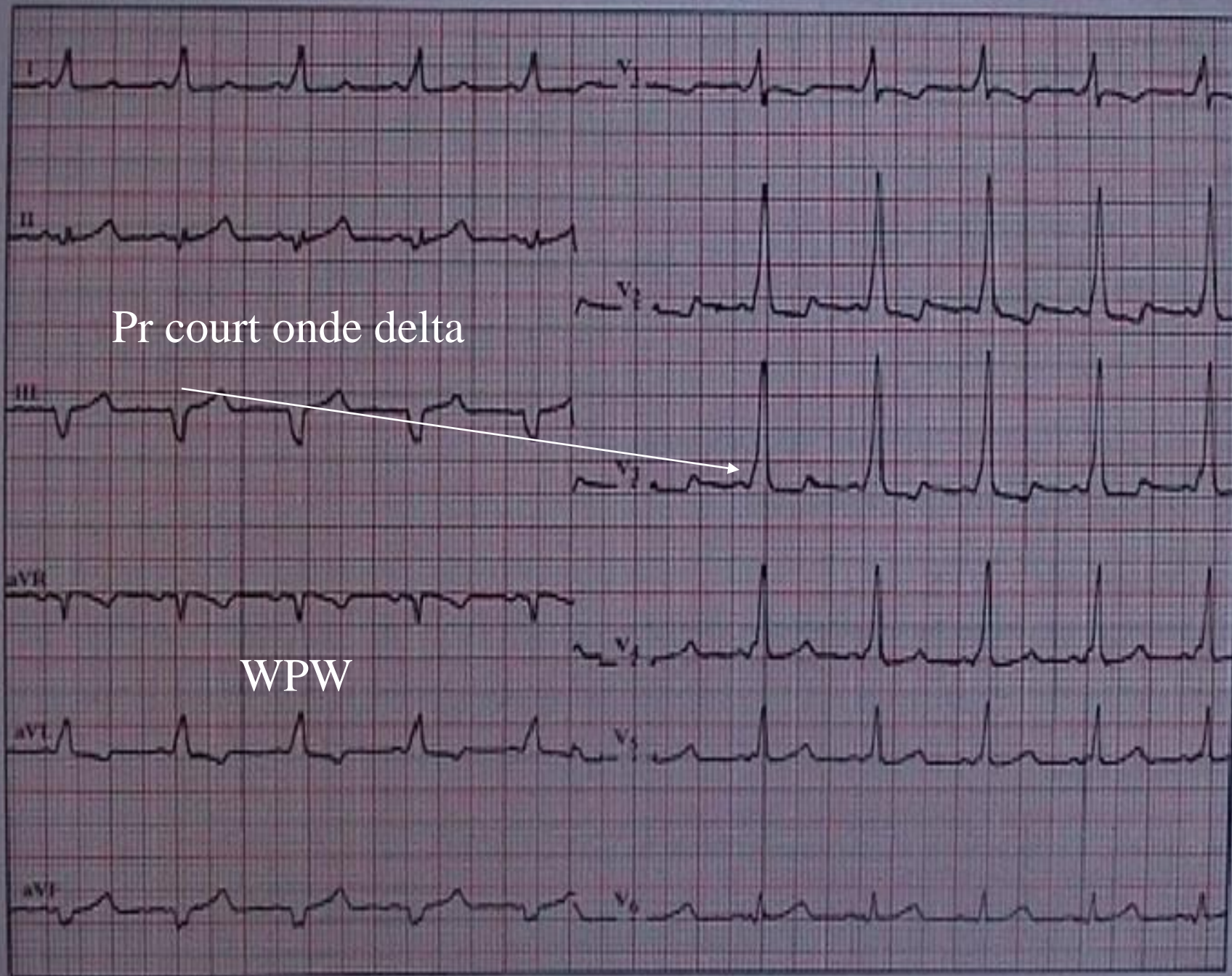


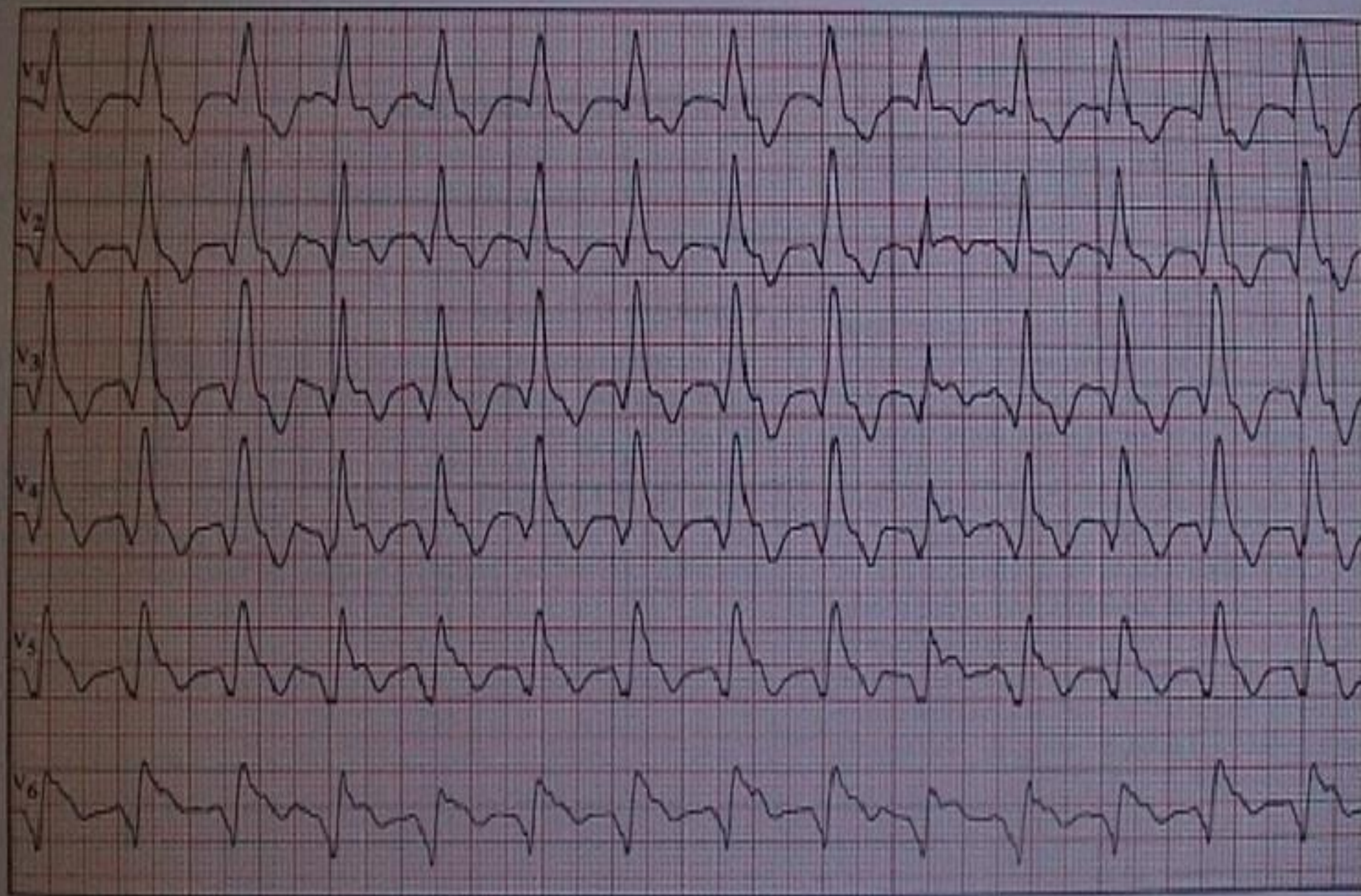
Wolff parkinson White



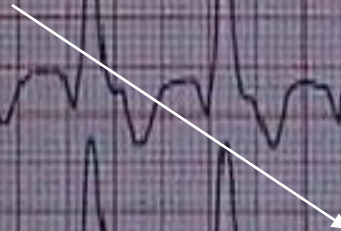


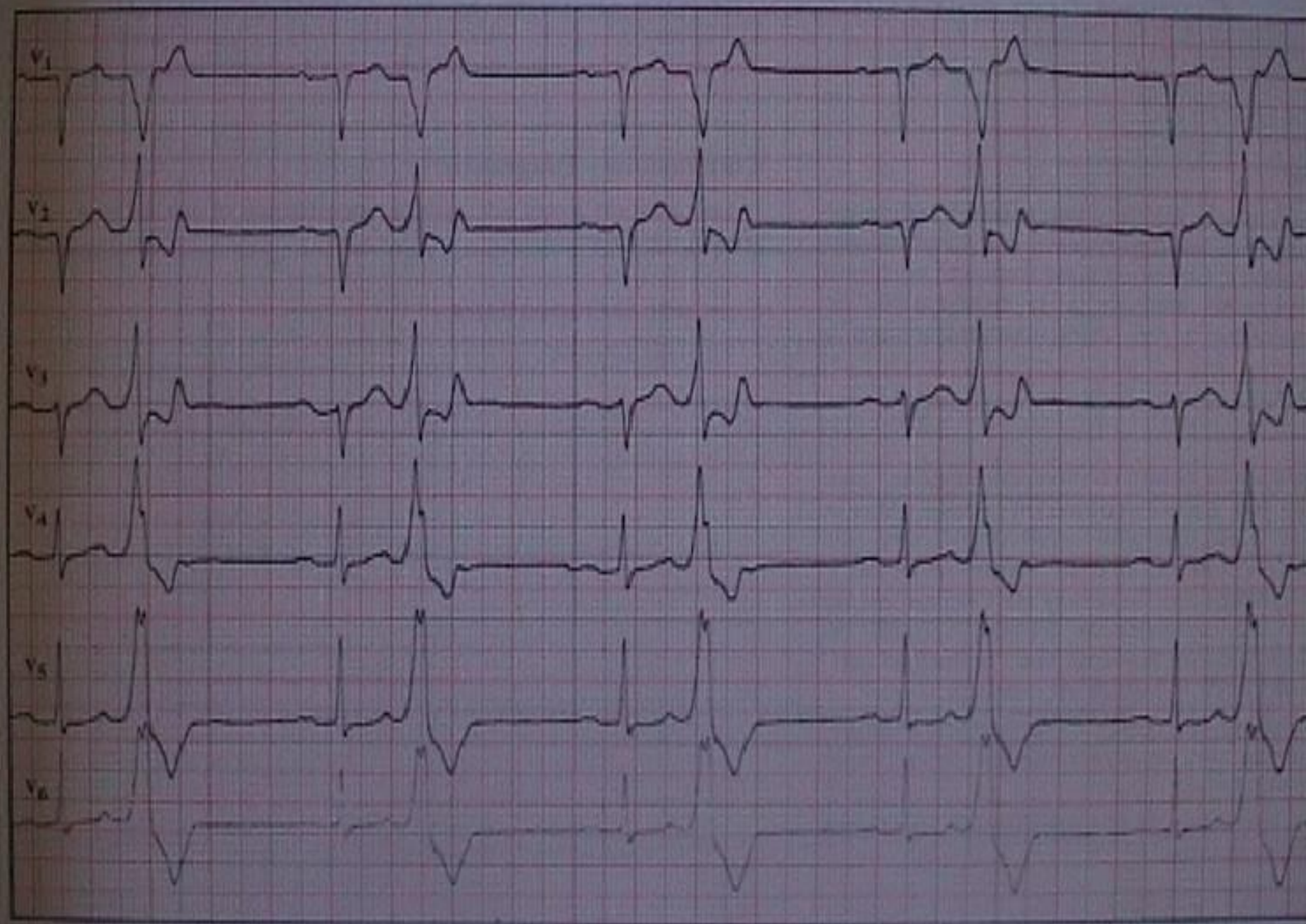


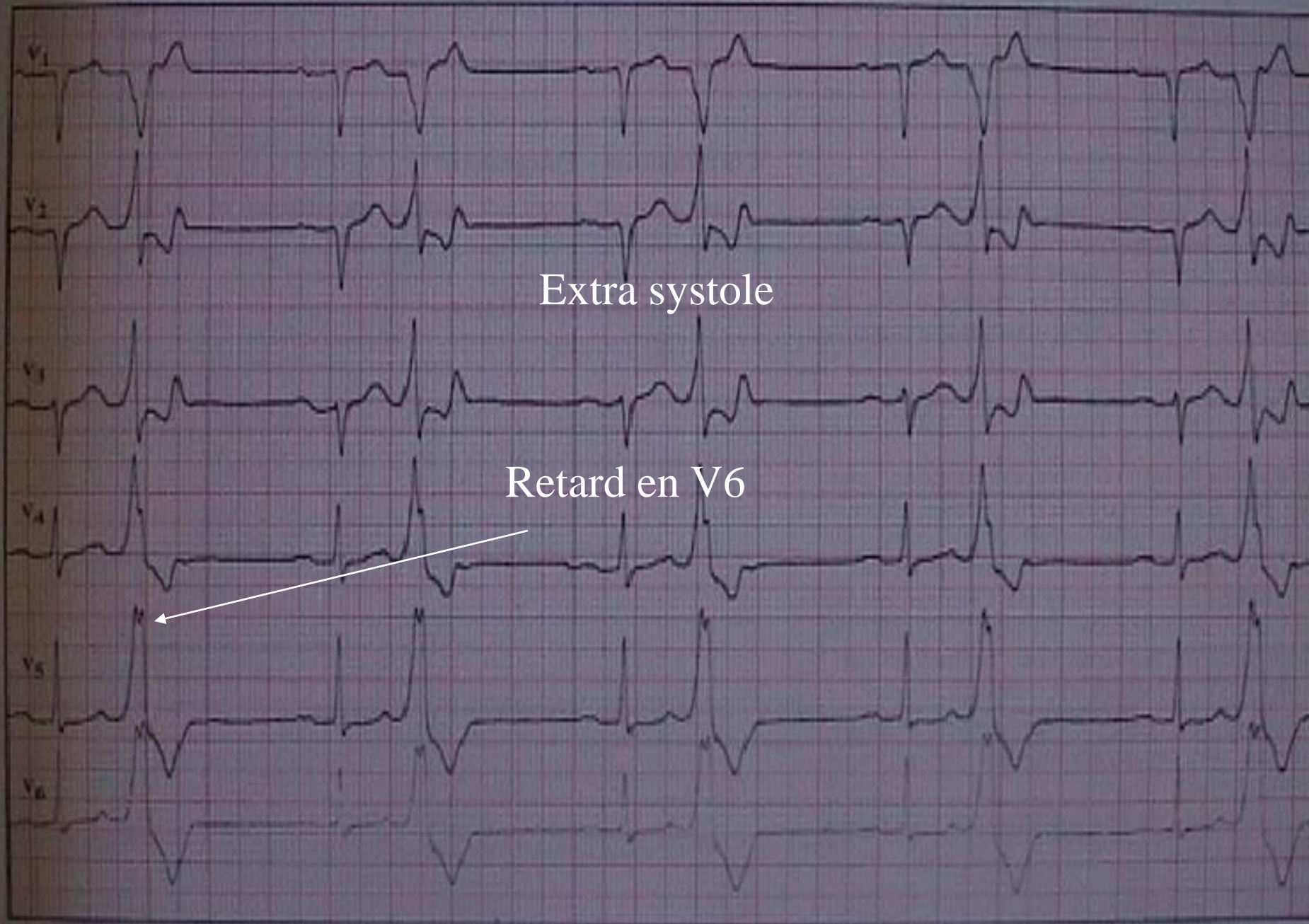




TV avec capture







Extra systole

Retard en V6