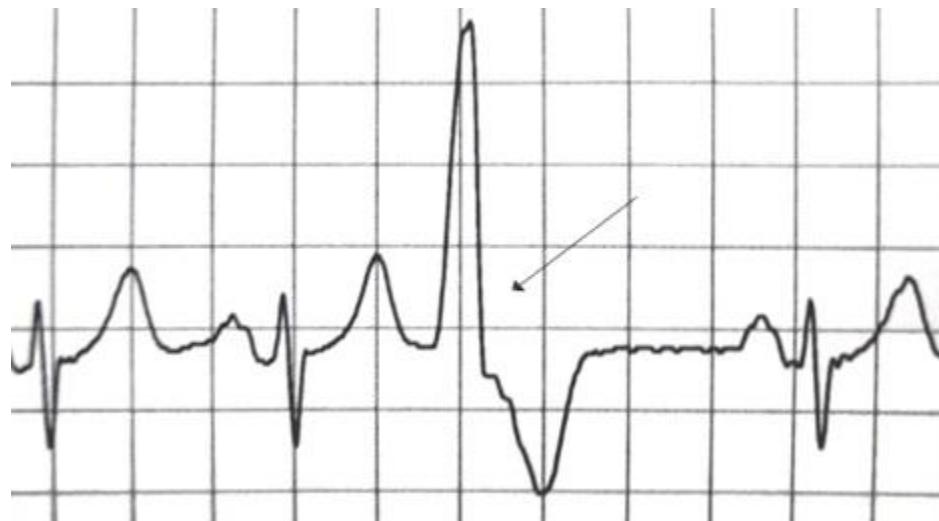
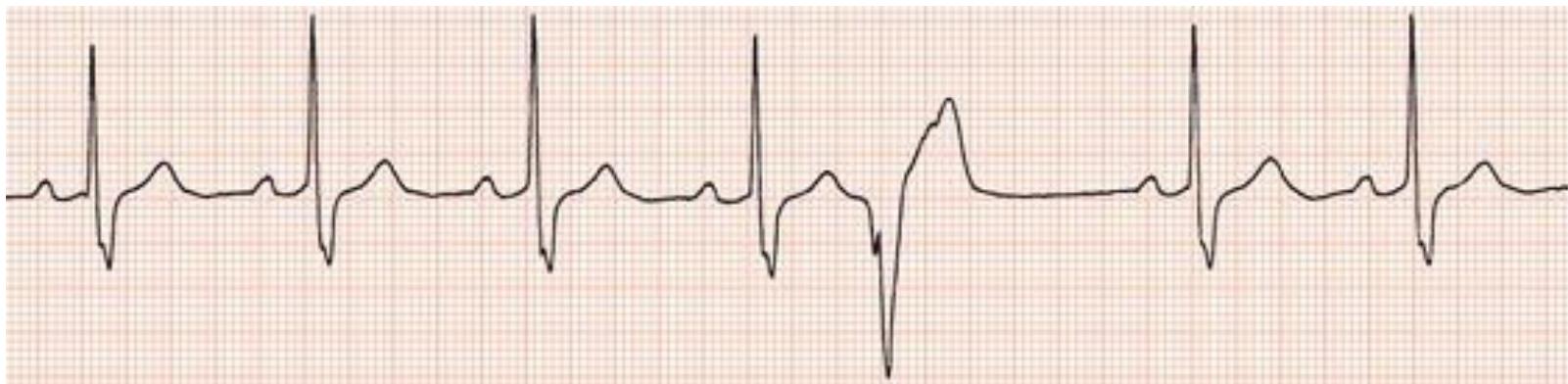


Extrasystole



Экстрасистолия

- a prematurely occurring beat of one of the chambers of the heart that leads to momentary arrhythmia but leaves the fundamental rhythm unchanged



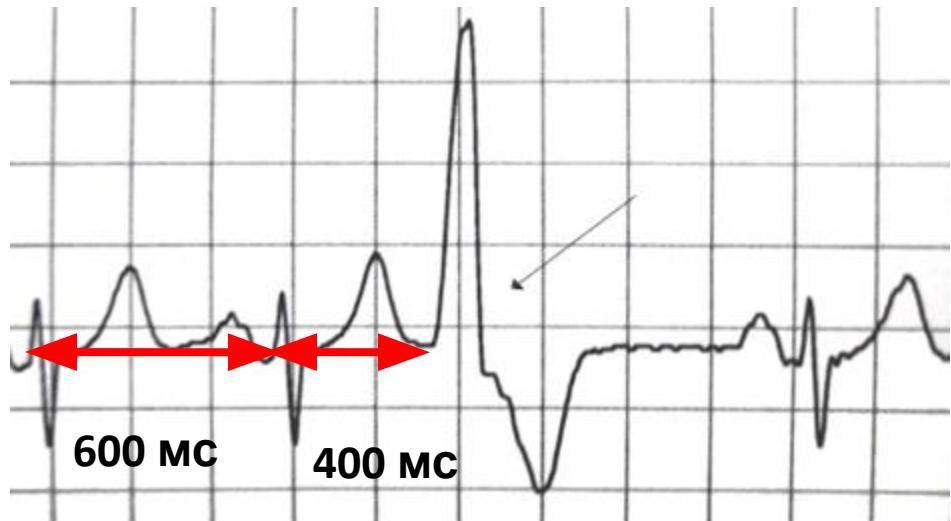
Extrasystole is a special case of ectopic beats.

Ectopic beat is myocardial excitation of non-sinus origin.

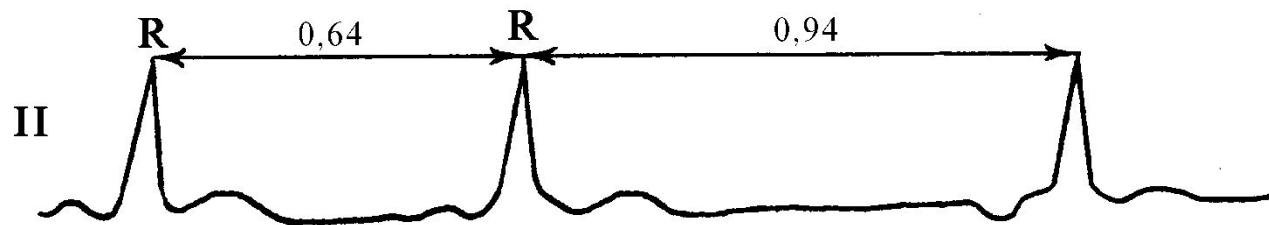
Premature ectopic beat - extrasystole (active rhythm disturbances)

Late ectopic beat is a replacement complex that saves from asystole – escape beat (passive)



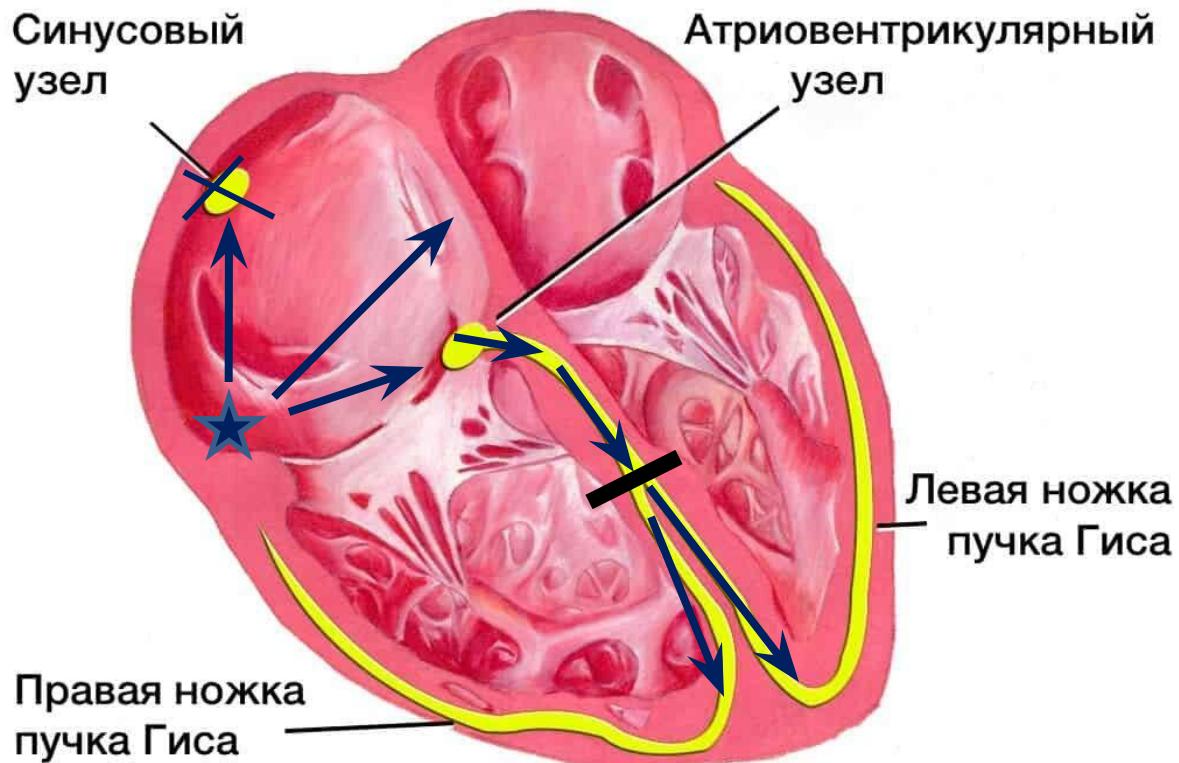


Ventricular extrasystole

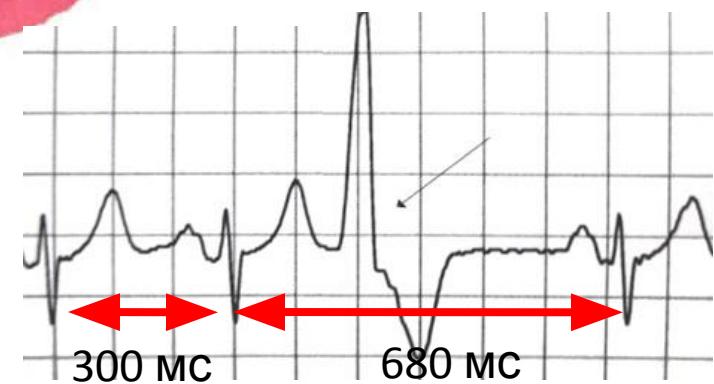
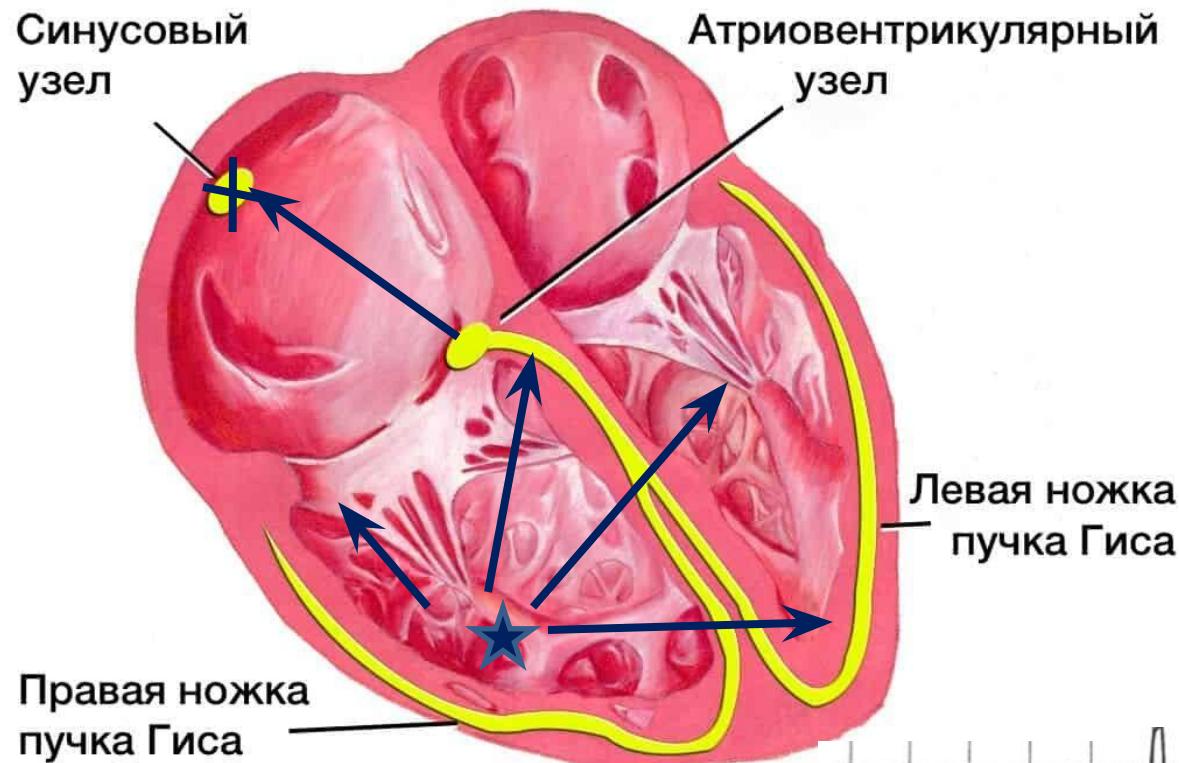


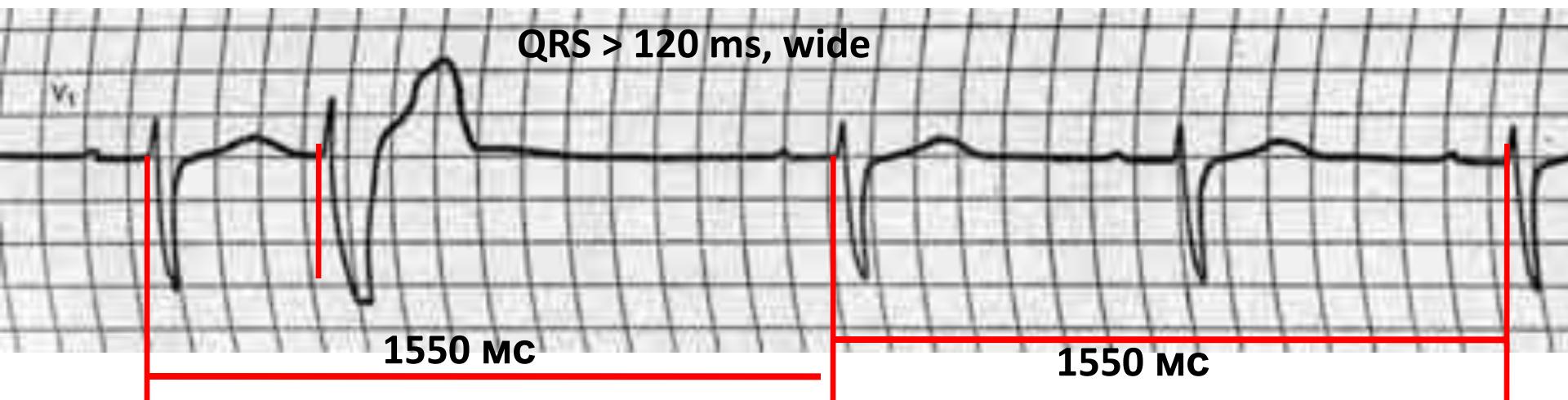
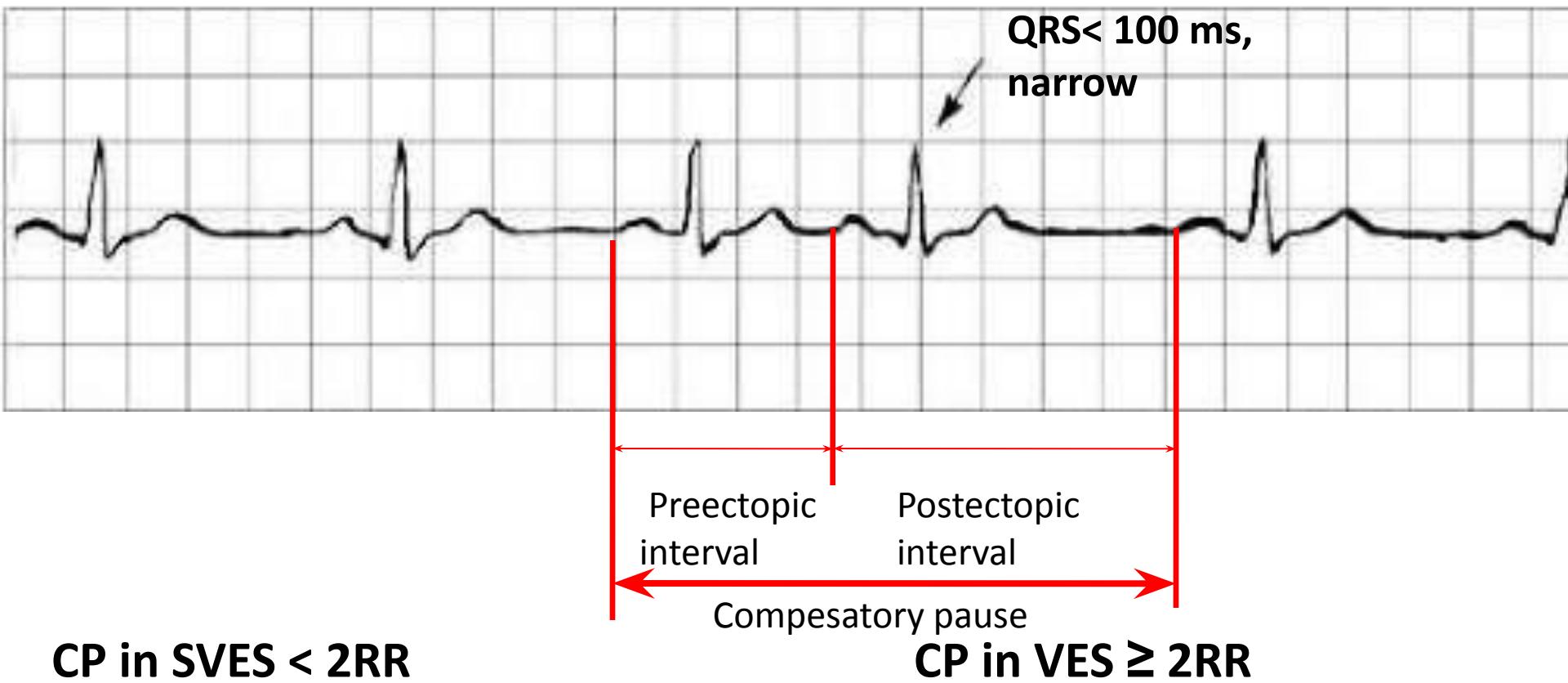
Atrial escape beat

Supraventricular ES

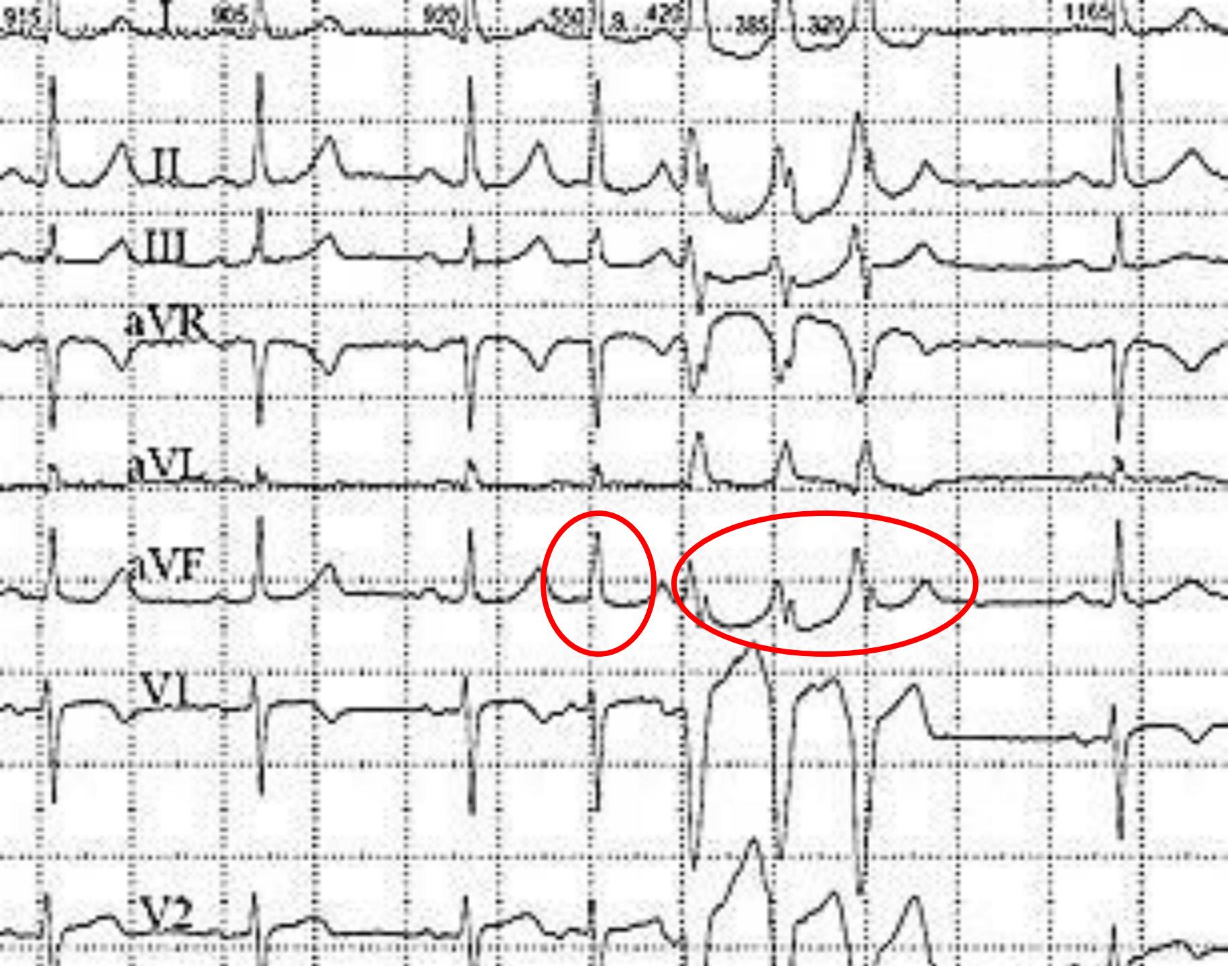


Ventricular ES







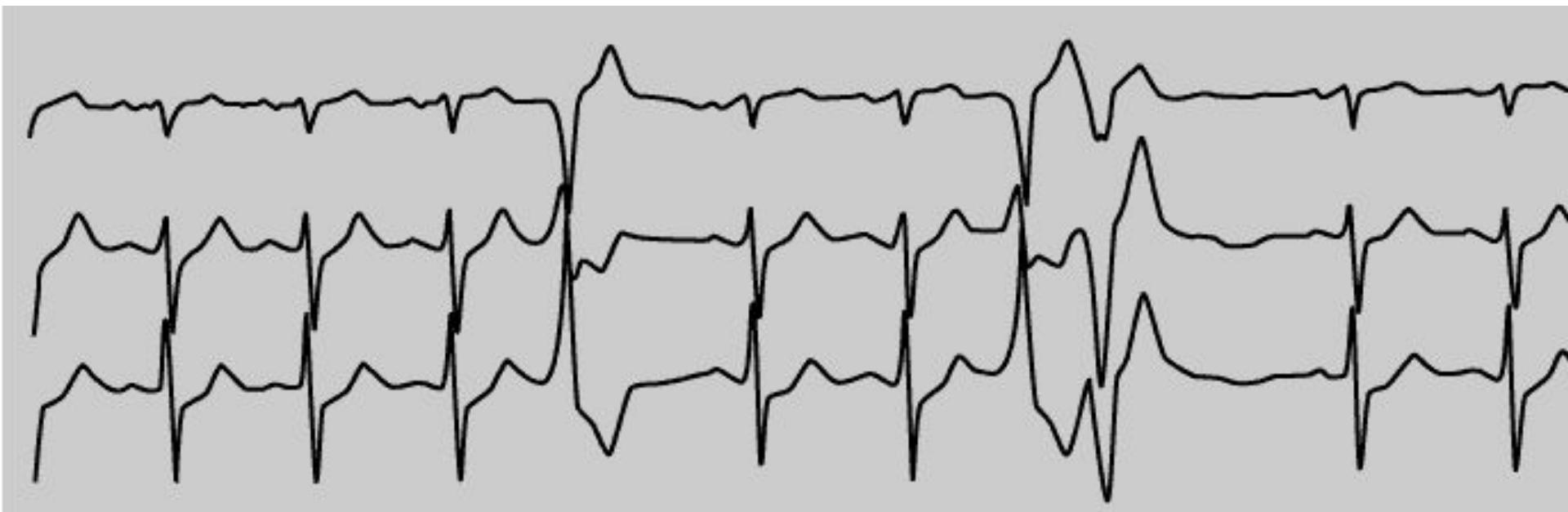


Ventricular ES

Classification (reference criteria):

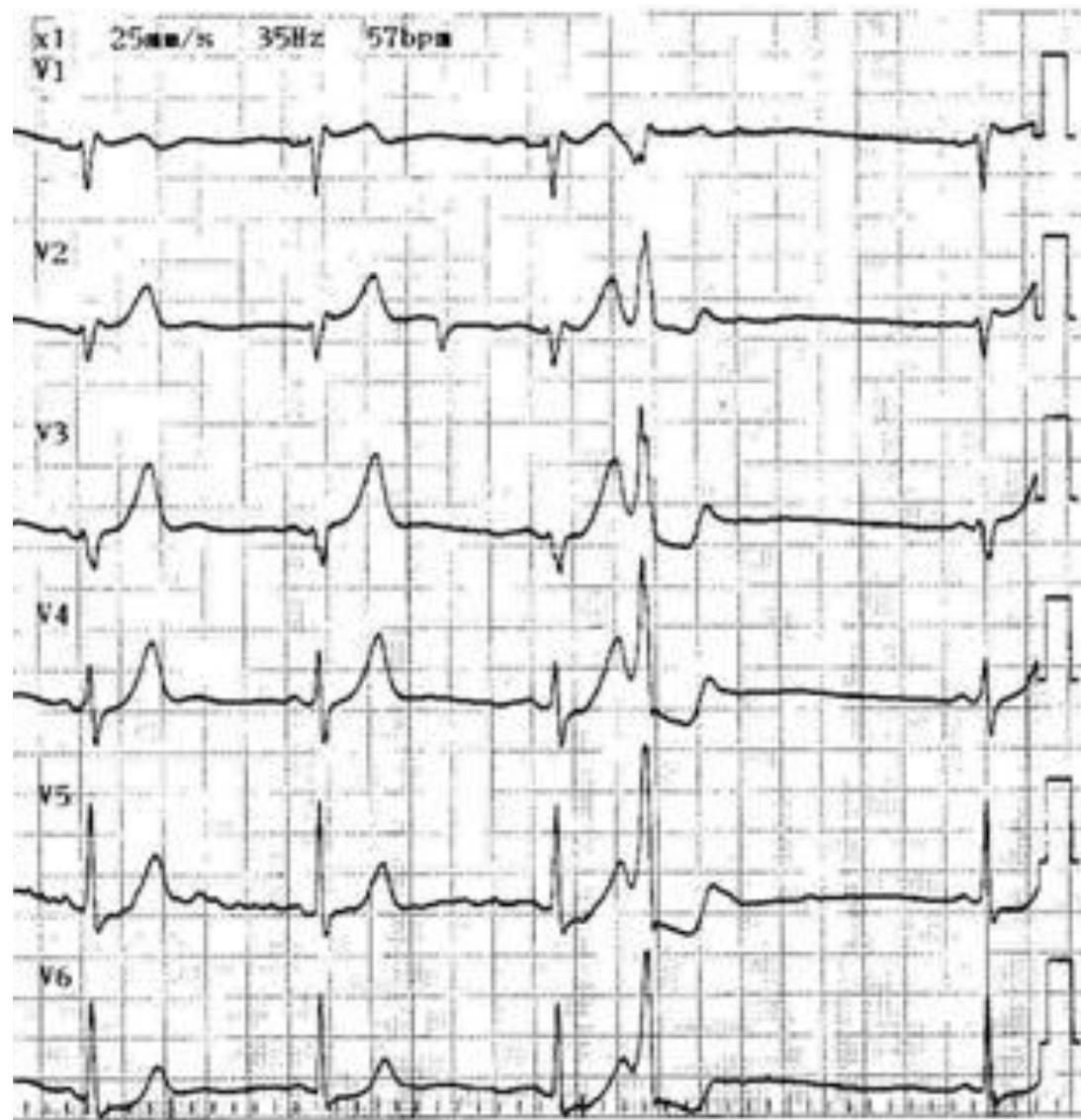
- The form
- A source
- Time of appearance
- Amount
- Allorhythm
- Prognostic value (clinical)

The form (morphology)

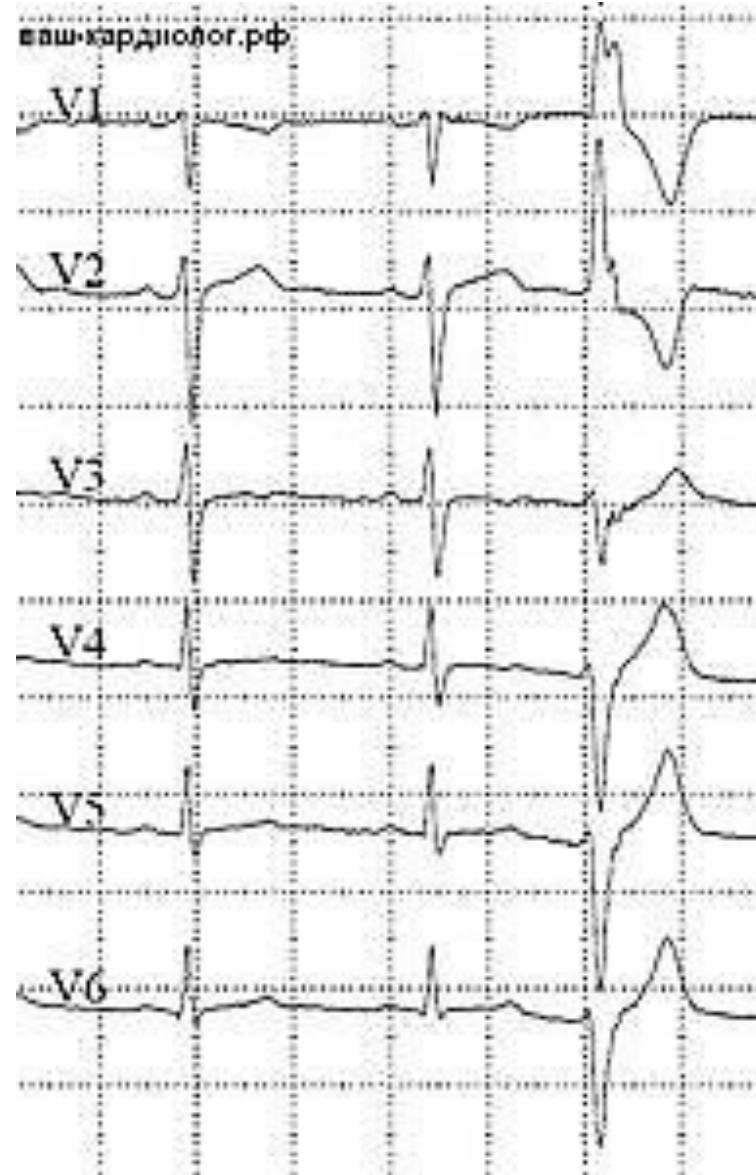


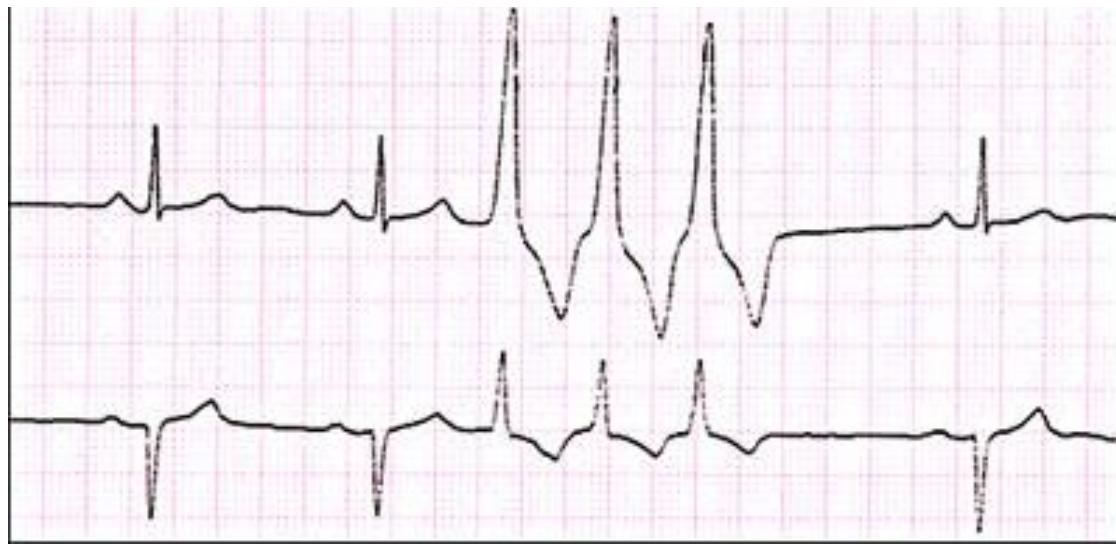
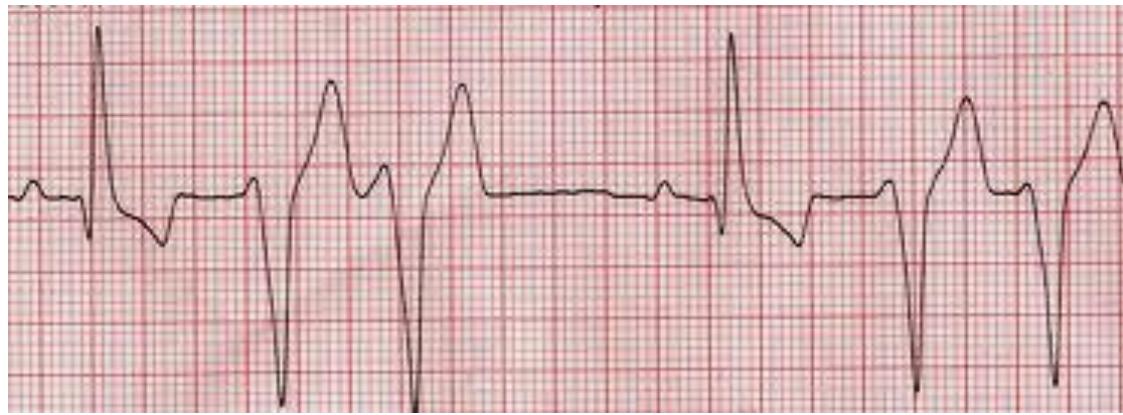


Time of appearance

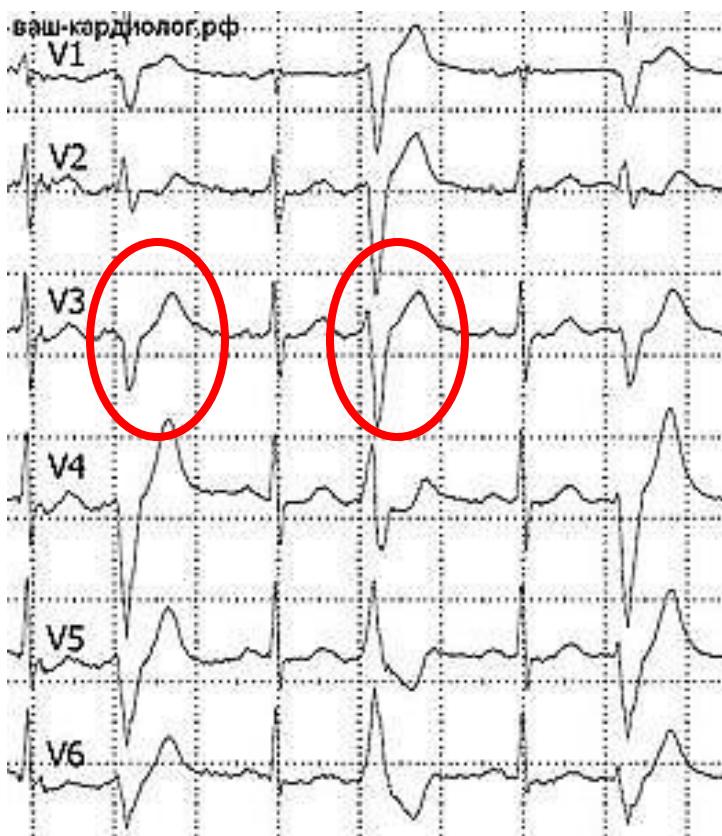


Amount:
-single
-paired



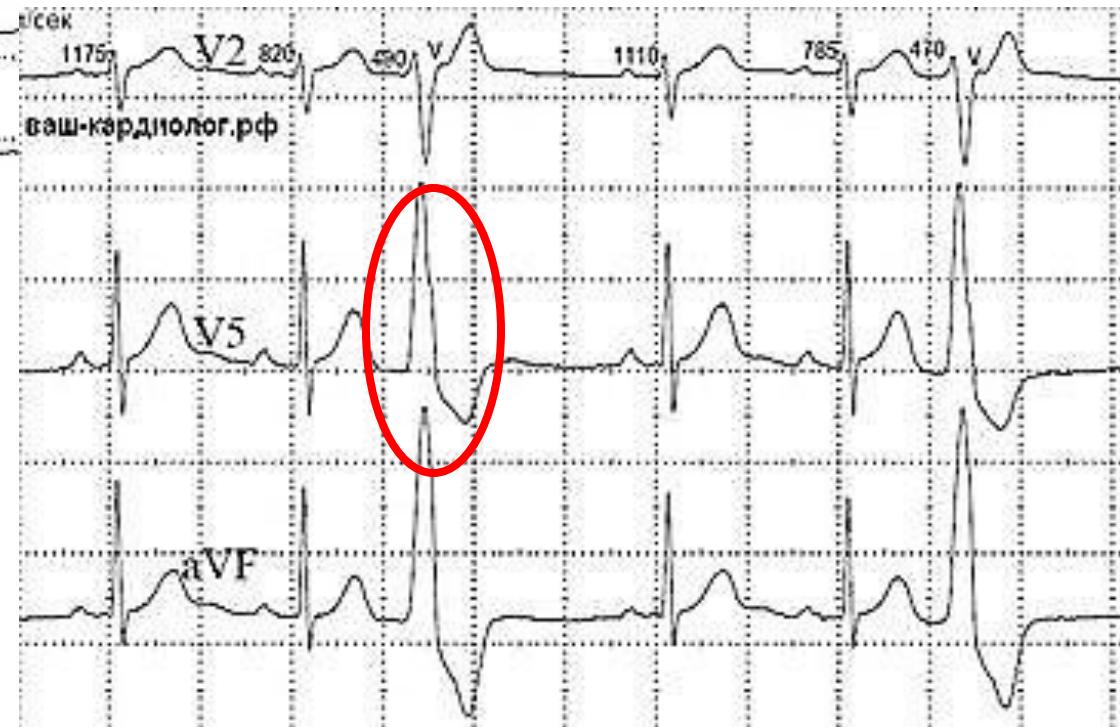




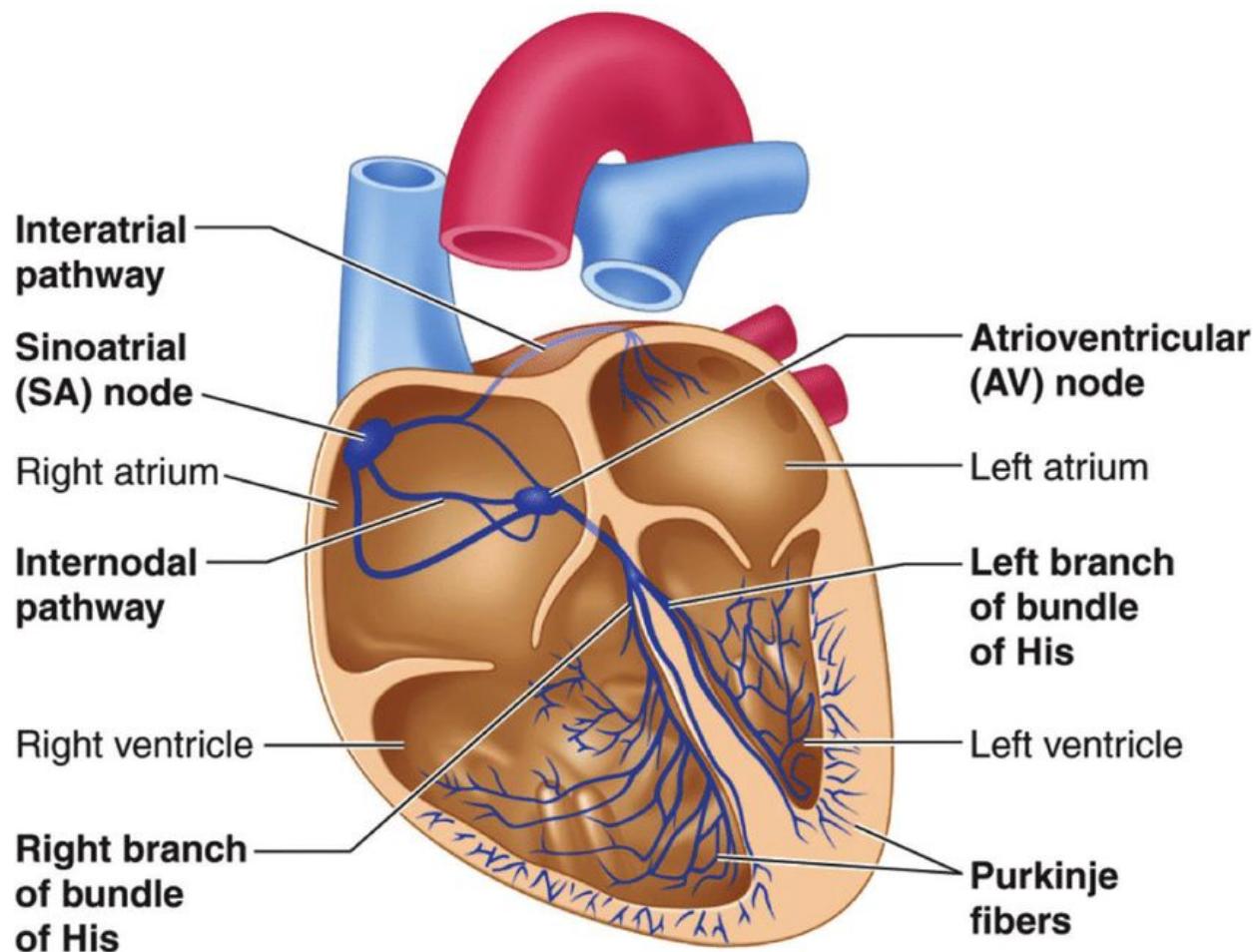


Allorhythmias

- Bigeminy
- trigeminy



Heart block



Heart blocks

Classification:

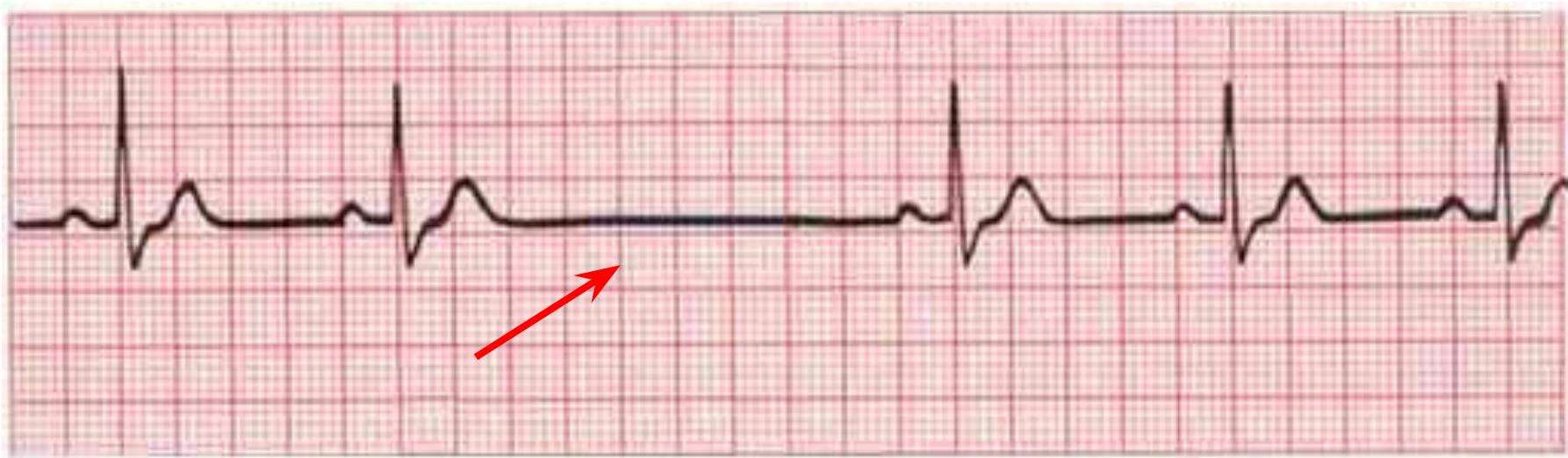
By localization:

- **Sinoatrial block**
- Intra and inter atrial
- **Atrioventricular block:**
 - proximal (AVN)
 - distal (His Bundle)
- **Bundle branch block**

By duration: transitory and permanent

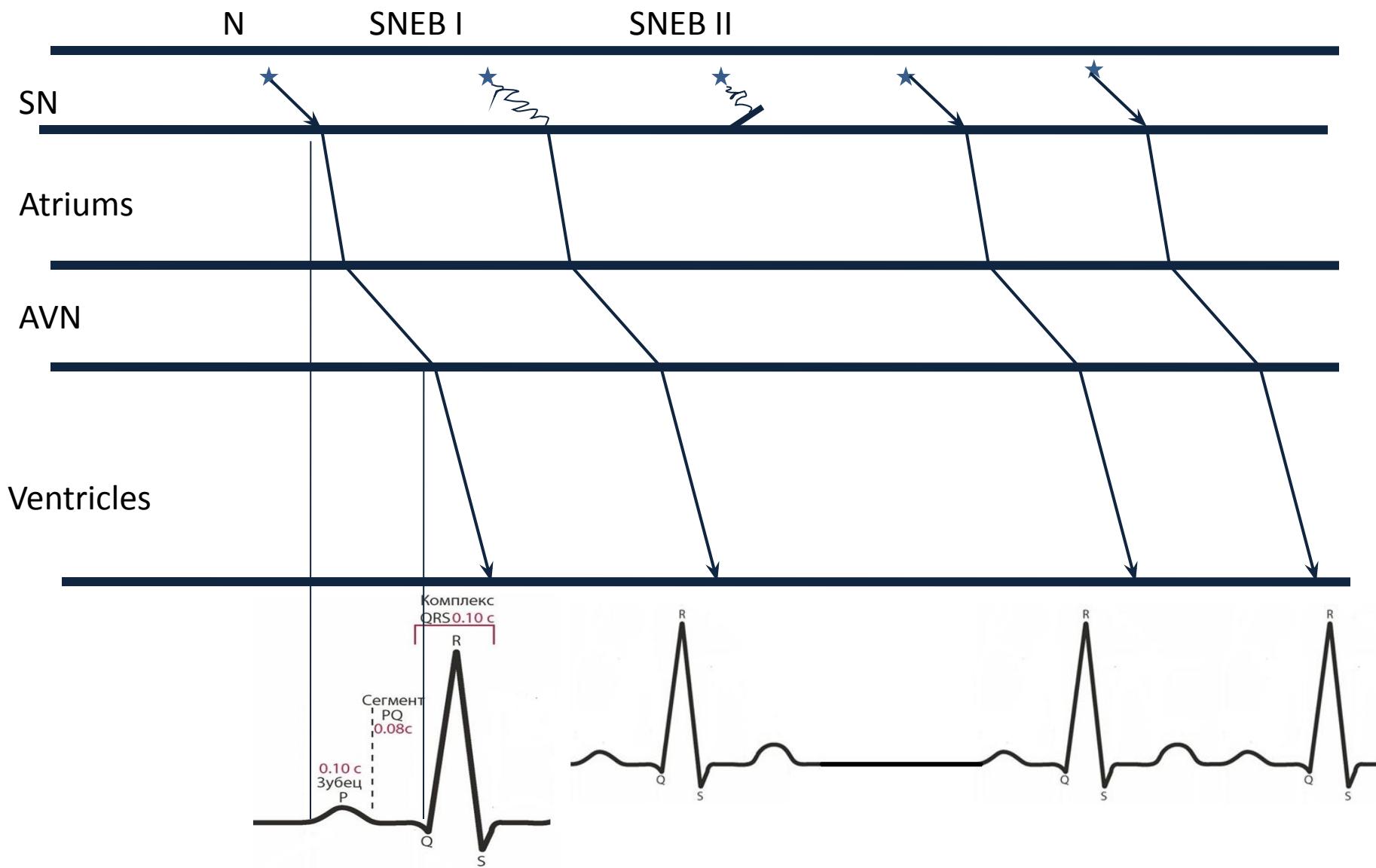
By origin: Structural and autonomic

SN exit block

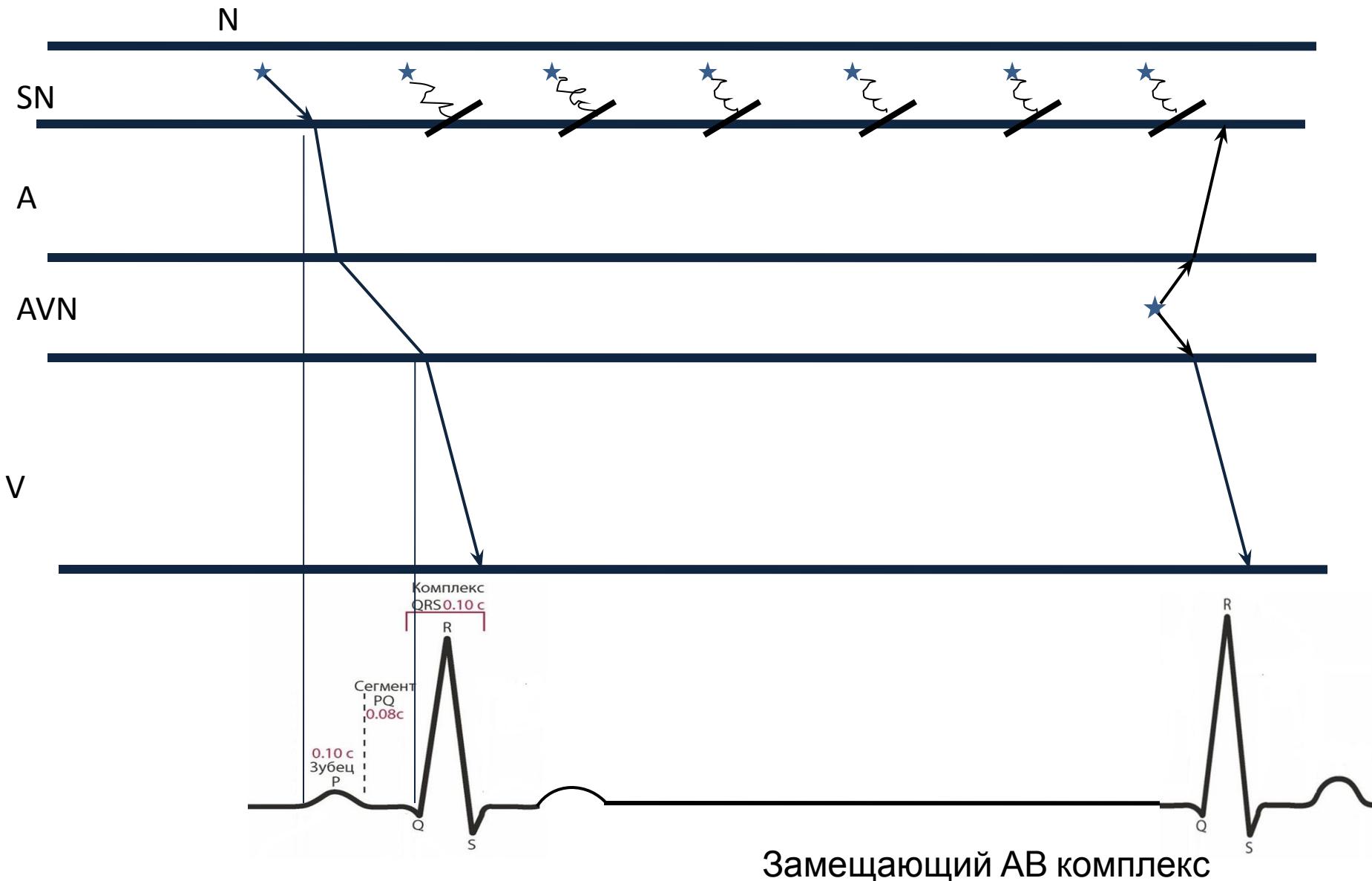


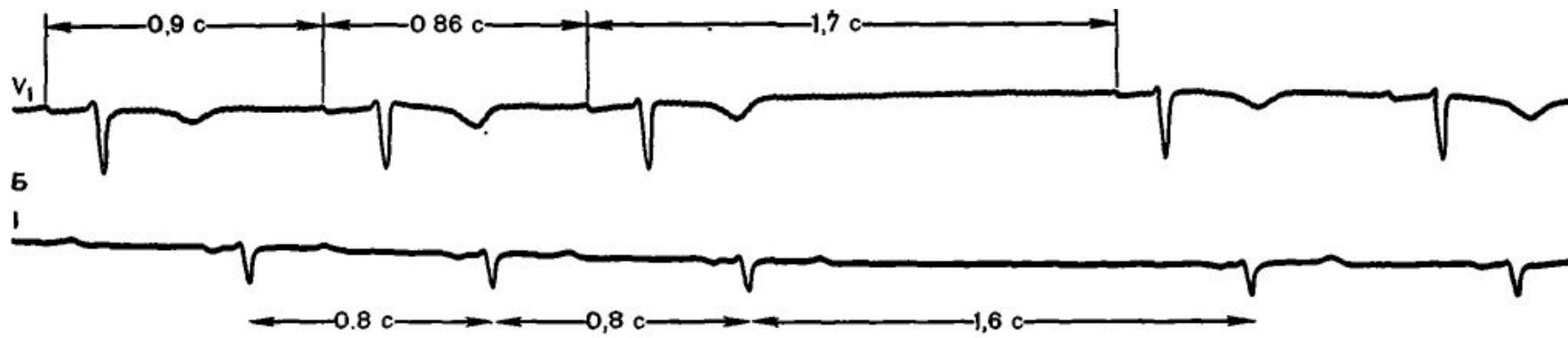
Sinus node exit block occurs when the action potential initiated by the sinoatrial node is suppressed or completely blocked before it leaves the SN and reaches the atrium - therefore, the SN block is an **exit block**

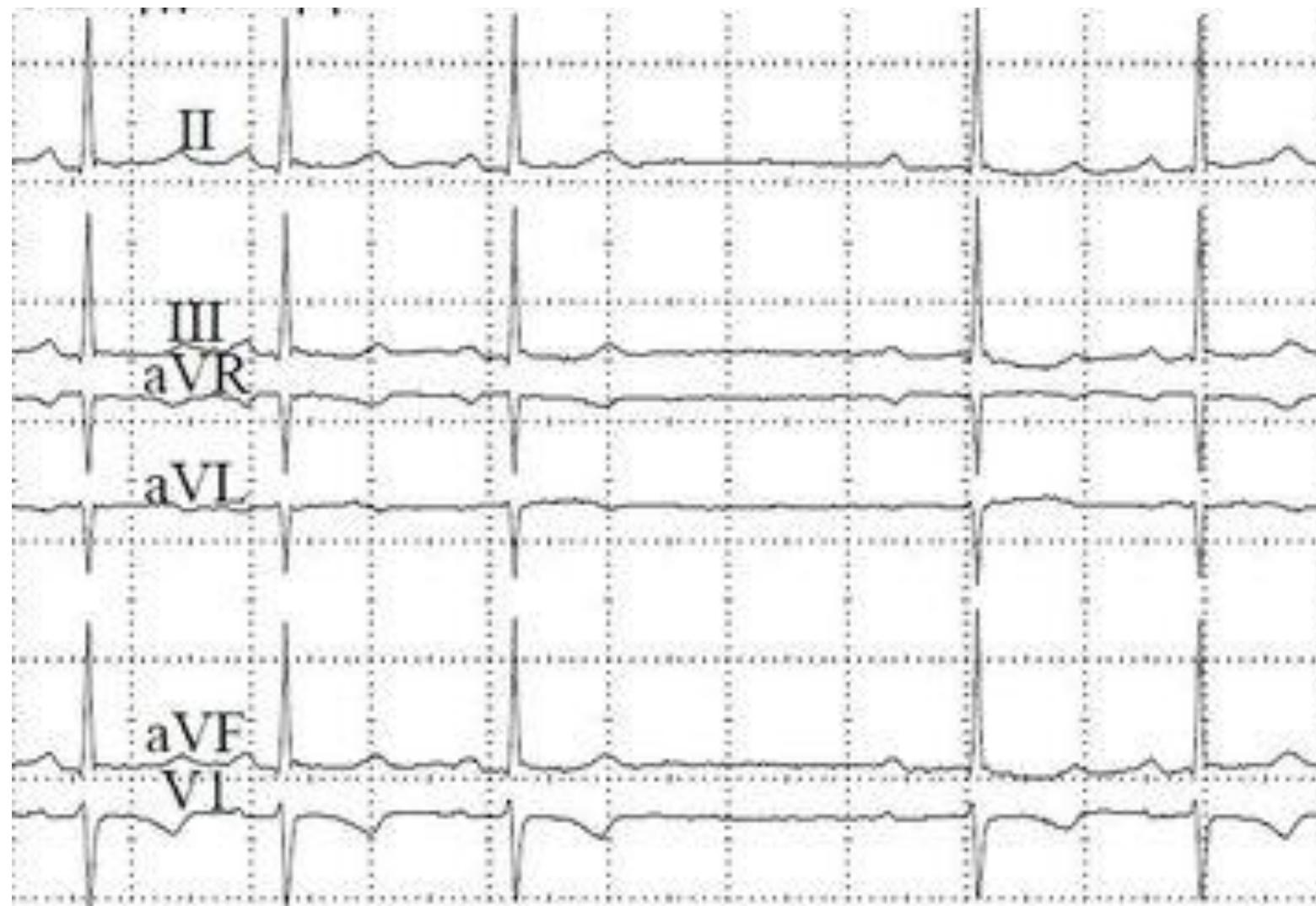
SN exit blocks (SNEB)

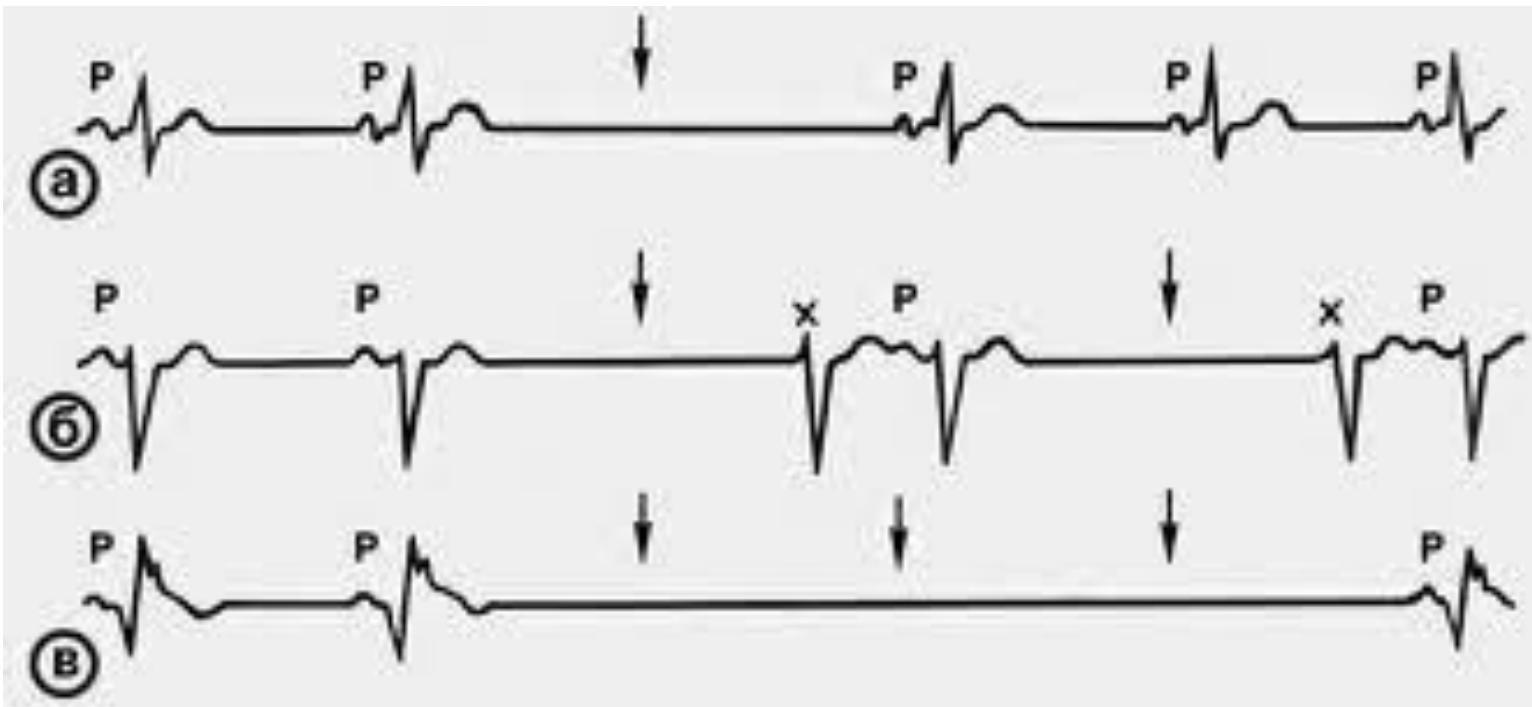


SNEB III degree

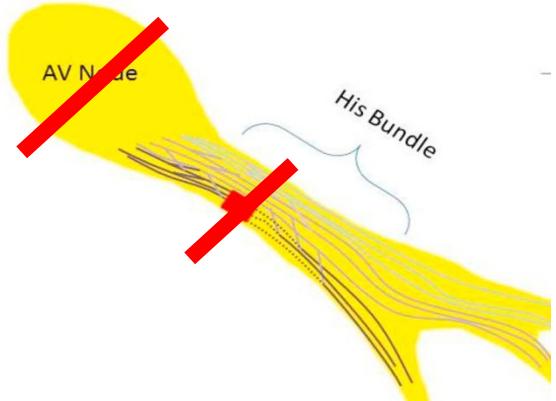








AV blockade

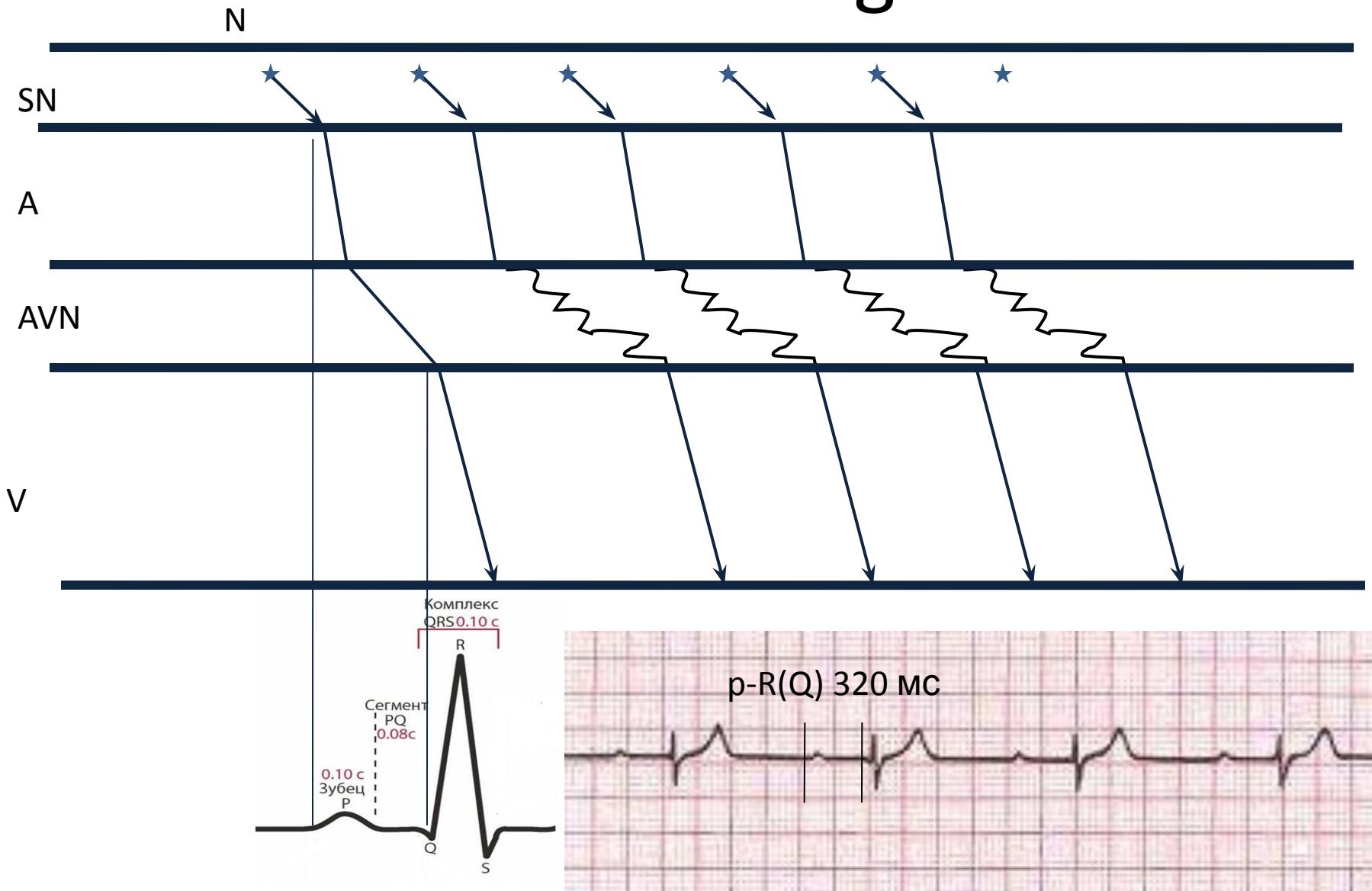


1. Proximal, nodular (benign).
 2. Distal, bundle (irreversible).
-

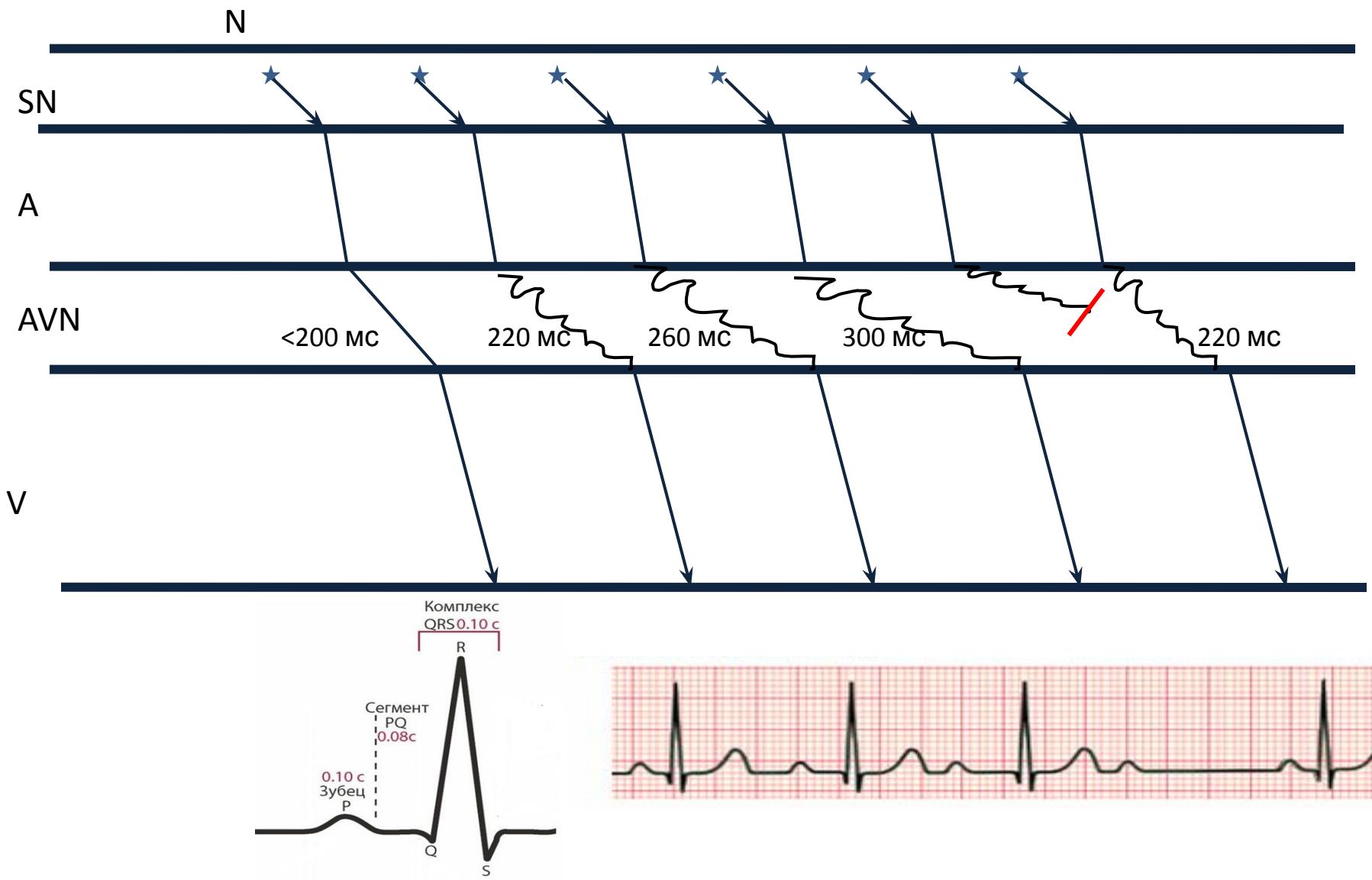
1. Transient (usually nodular): lower AMI, myocarditis, drugs, hyper K+.
2. Persistent (often bundle): anterior AMI, idiopathic fibrosis.

-
1. Functional (usually nodal and up to II degree type 1) - vagotonic, in athletes.
 2. Structural (AMI, myocarditis, cardiomyopathy).

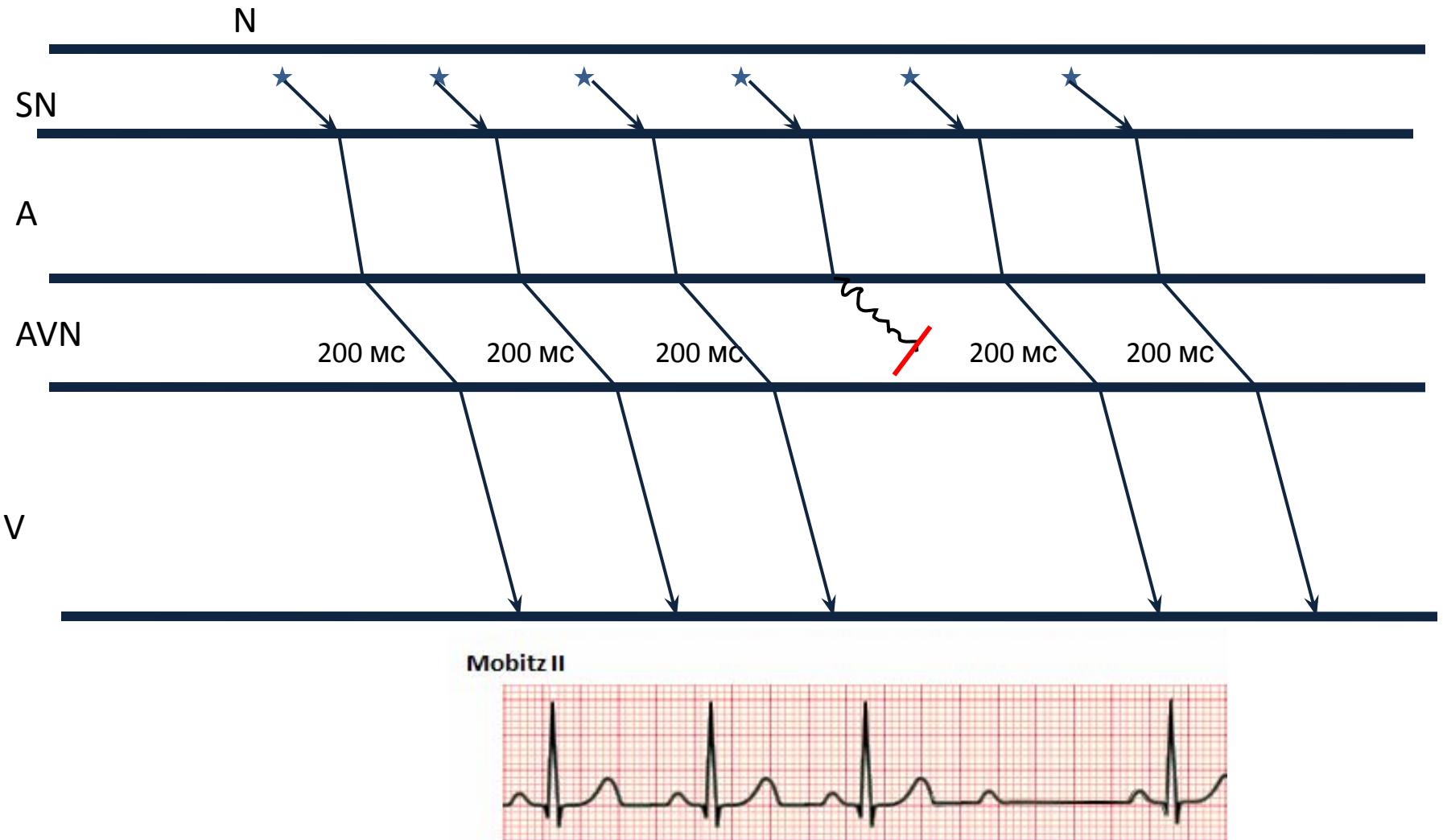
AV block I degree



AV block II degree 1 type



AV block II degree 2 type

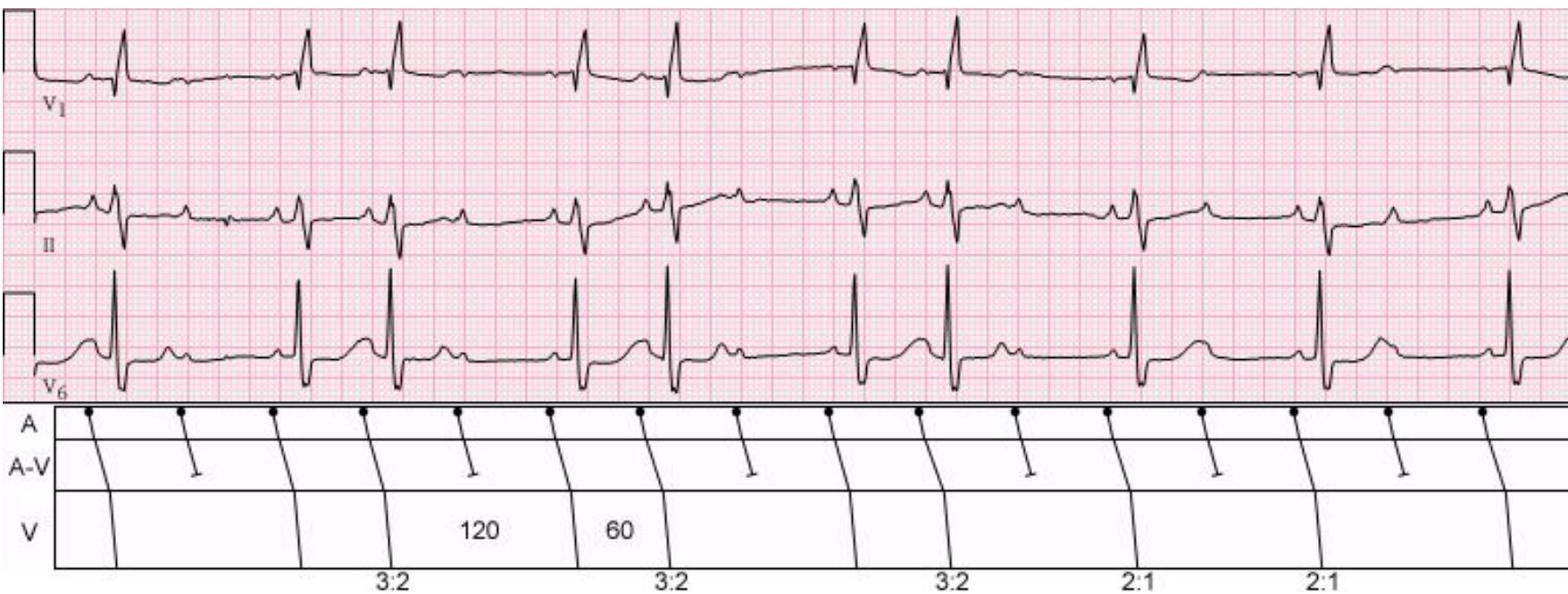


AV block II degree 2:1

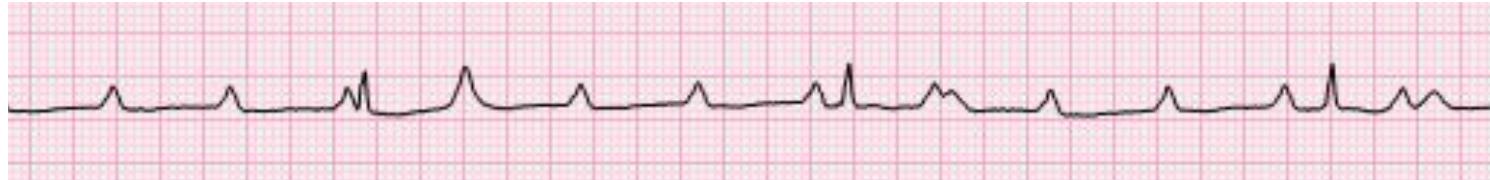
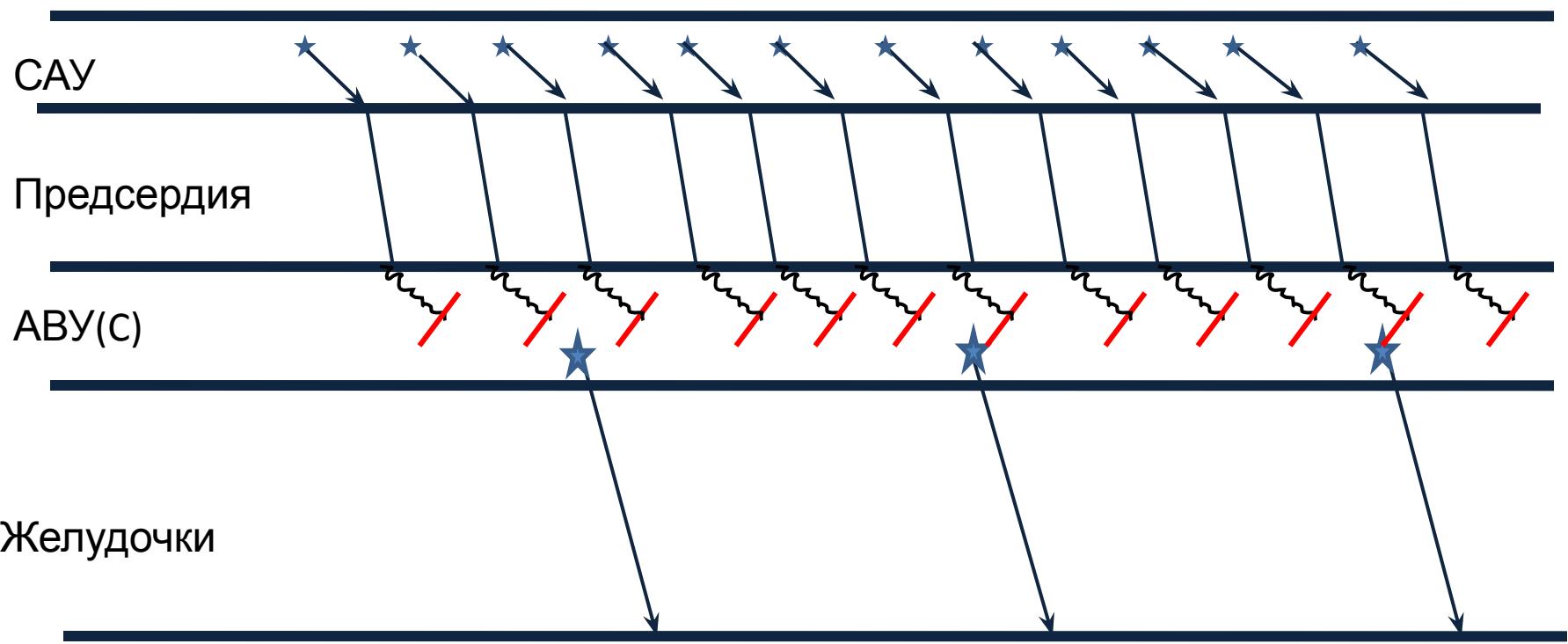
1

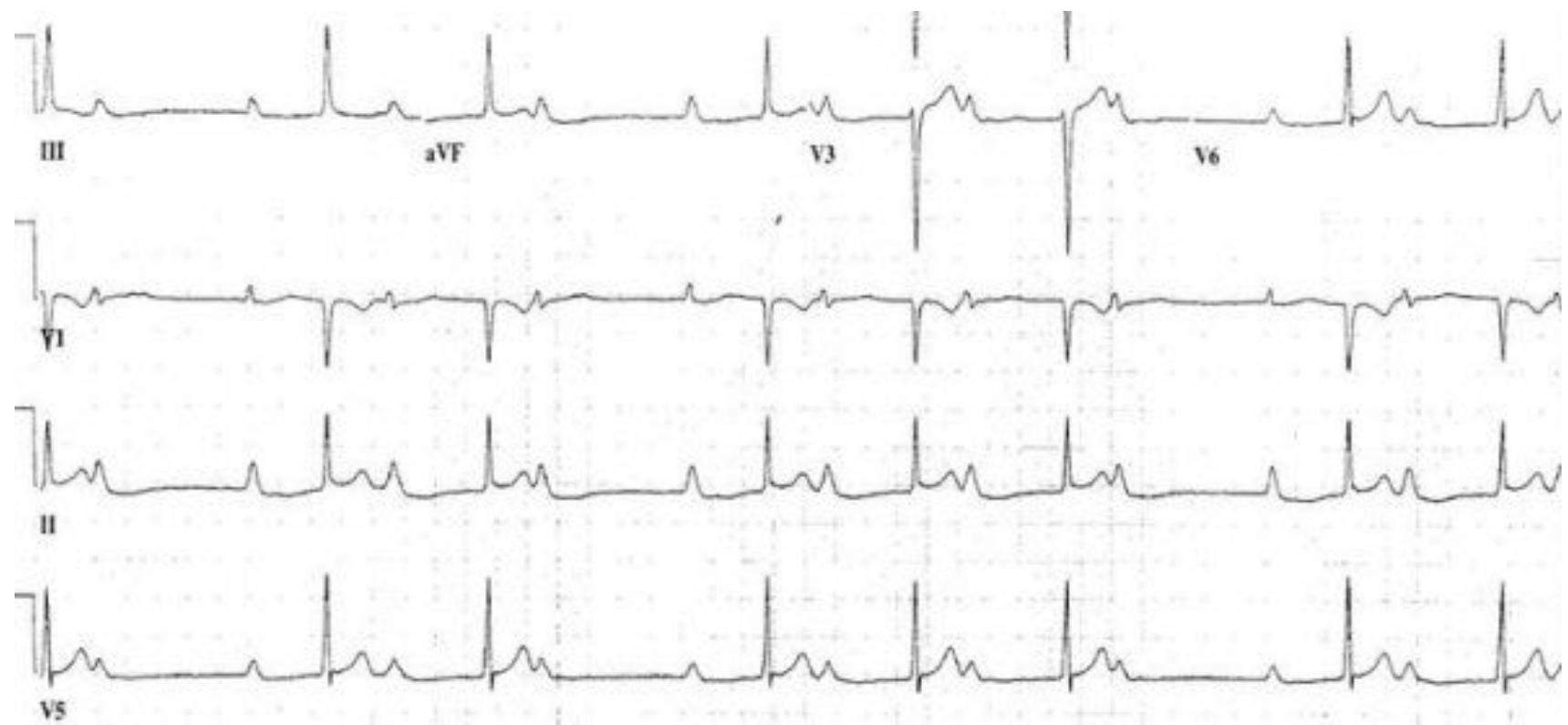


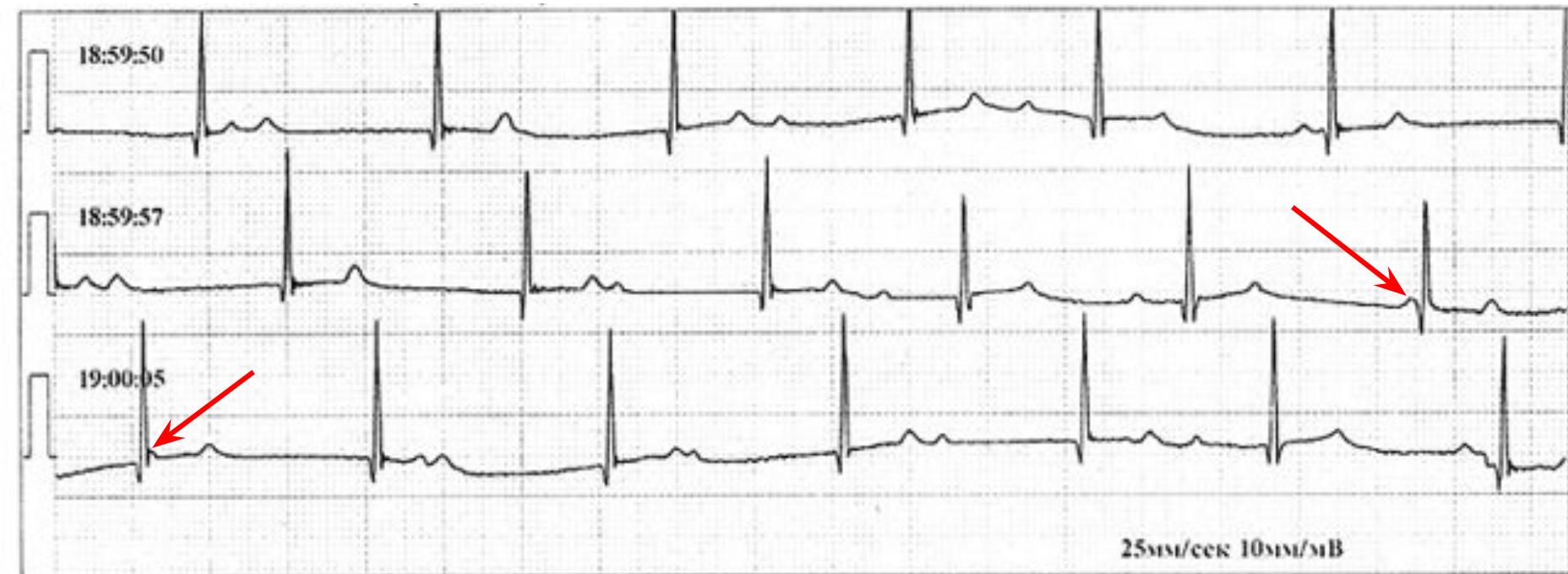
2



AB block III degree (complete)

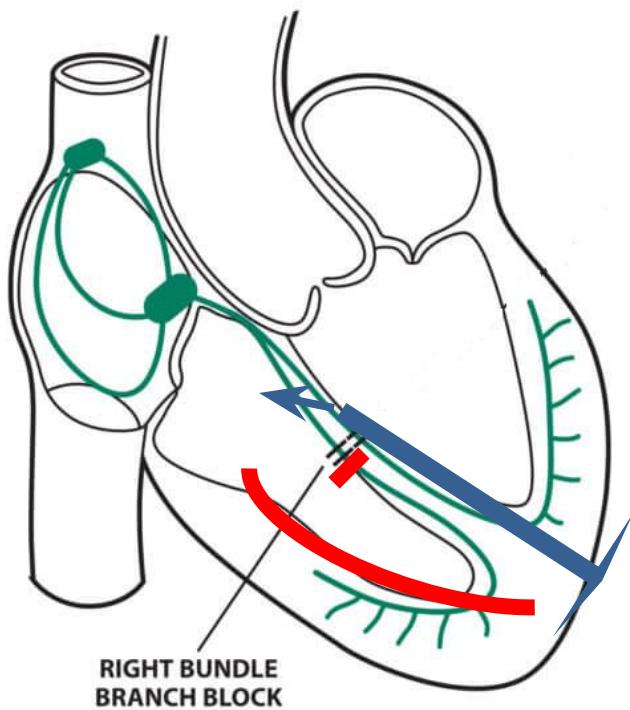






His bundle branch block

RHBBB



Sign of block: deformity of QRS

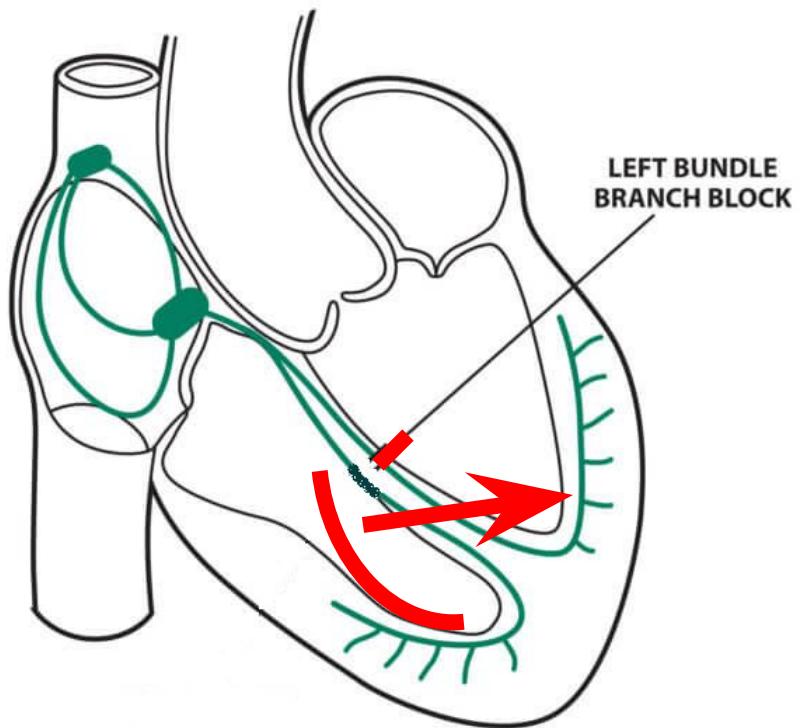
Completeness attribute: QRS width >120 ms



Causes of RBBB

- Congenital heart disease
- Coronary arteryt disease
- PE
- COPD
- Pulmonary hypertension
- Cardiomyopathies
- Degenerative damage to the cardiac conduction system (with aging)

LBBB



Causes of LBBB:

- AH
- CAD
- LVH
- Myocarditis
- Valve defects
- Cardiopathies
- Degenerative damage to the conducting system