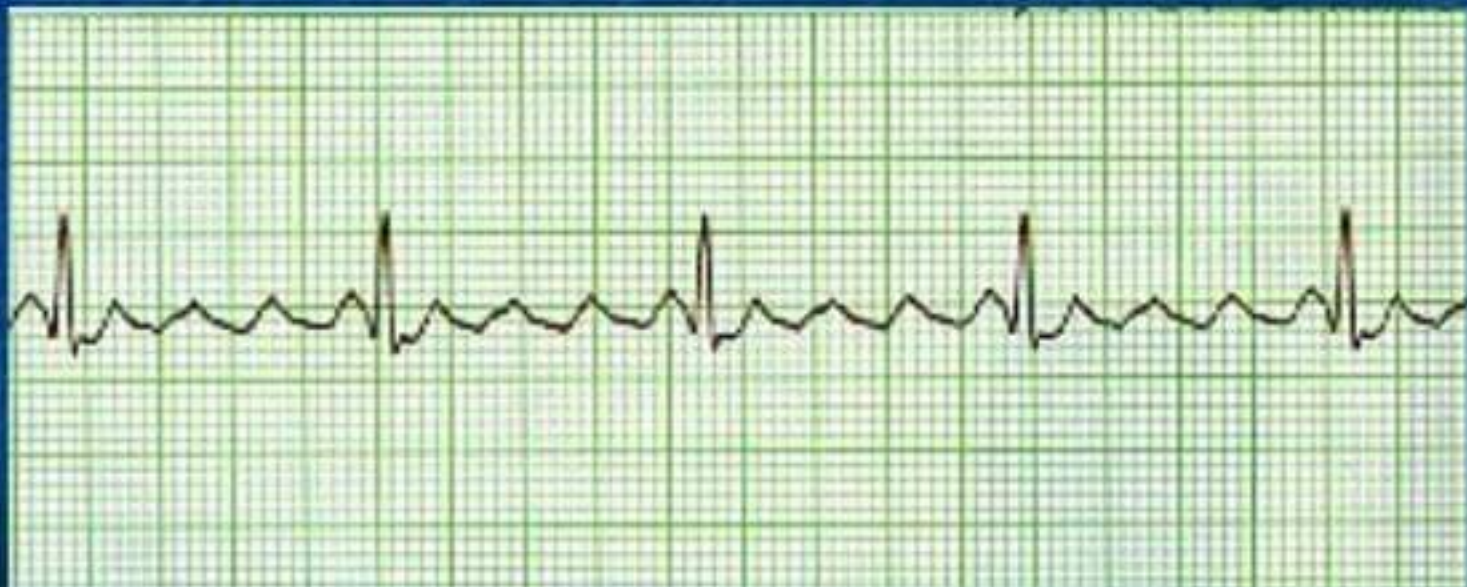


Quiz Yourself

- Name the Rhythm # 1:



Answer:

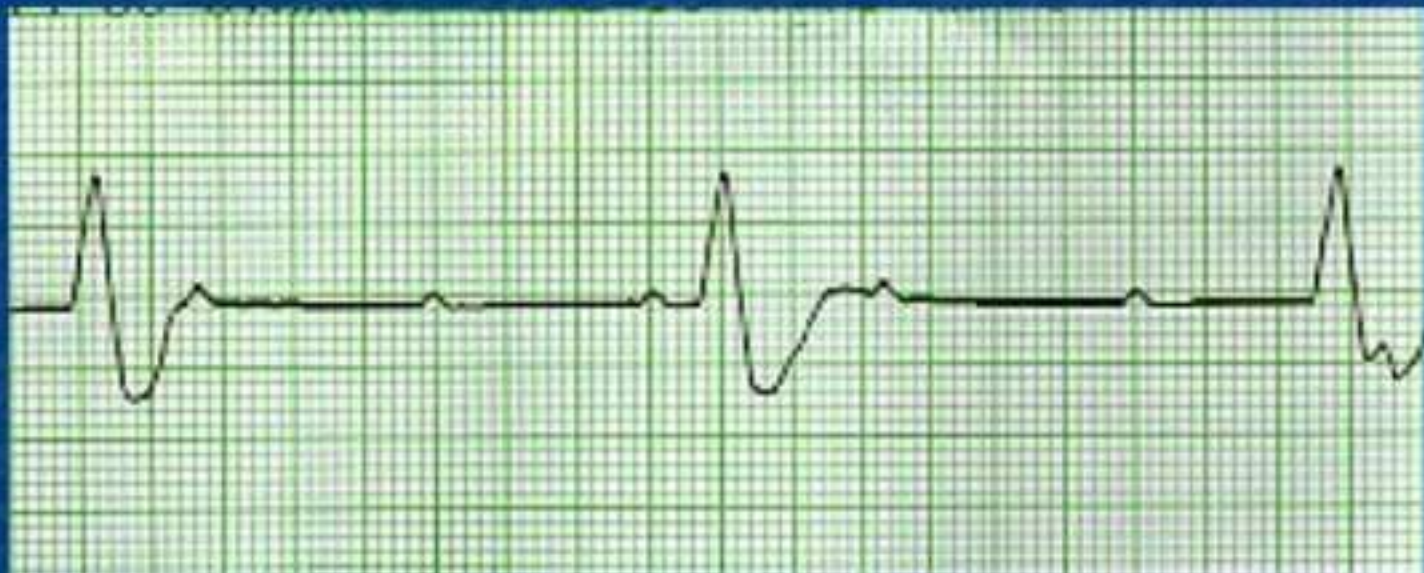
- Atrial Flutter

- Name the Rhythm #2:



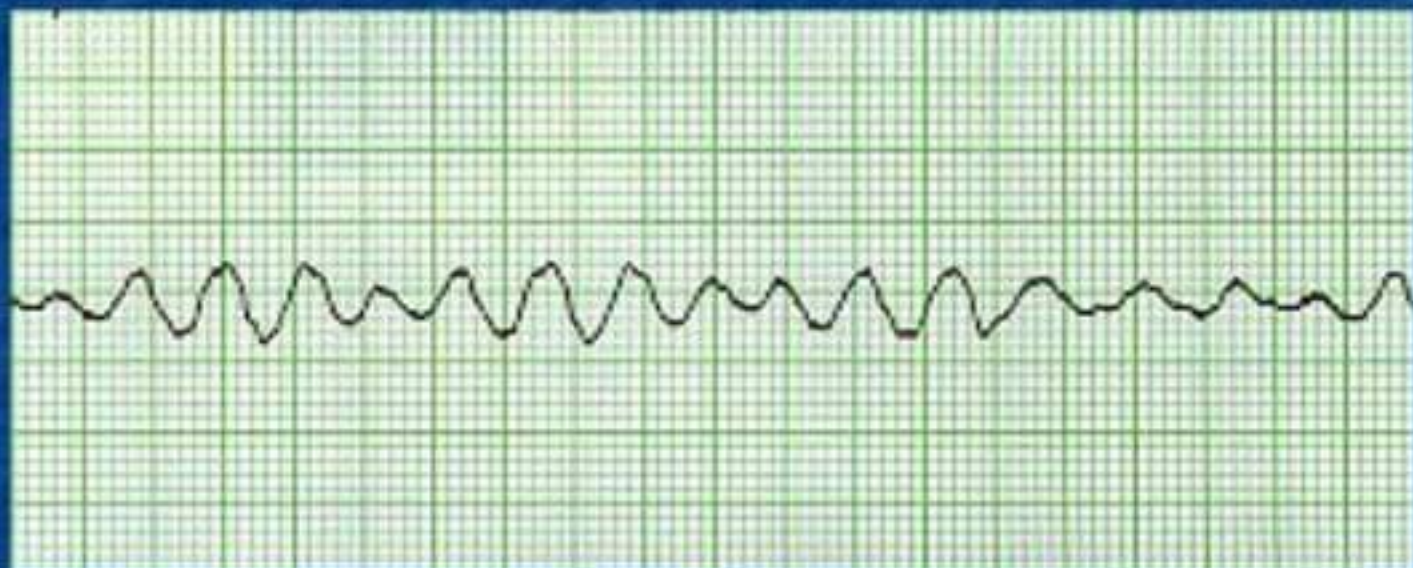
■ Sinus Bradycardia

- Name the Rhythm #3:



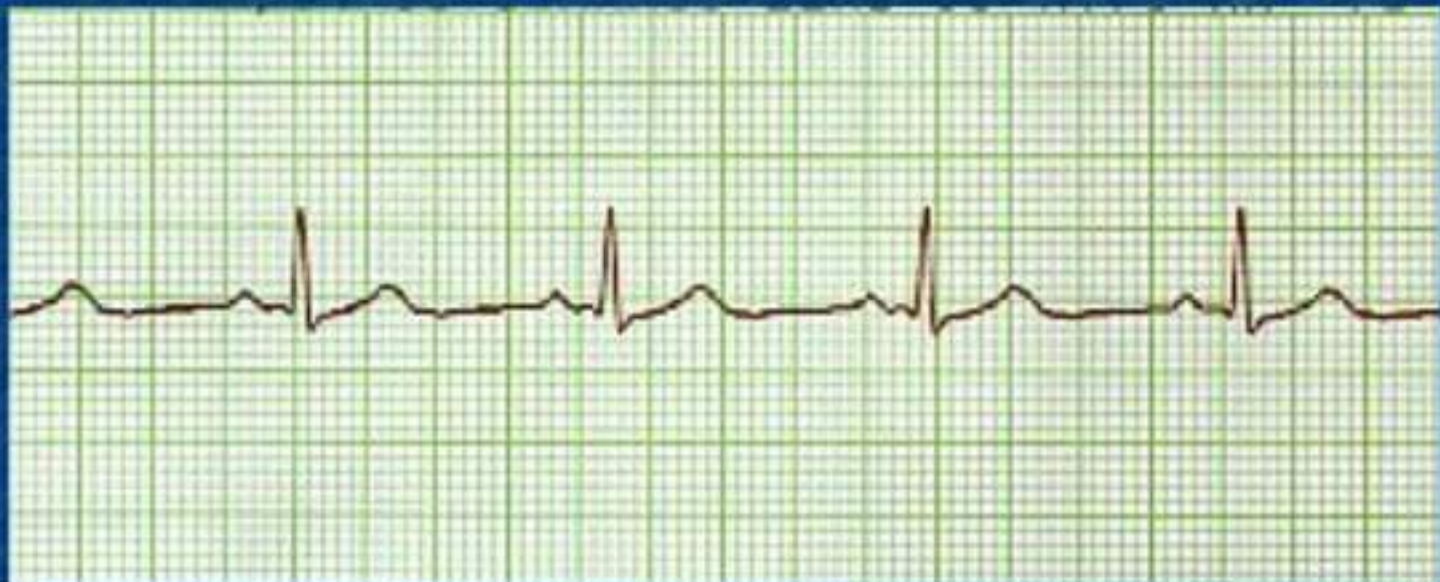
■ Third Degree Heart Block

- Name the rhythm # 4:



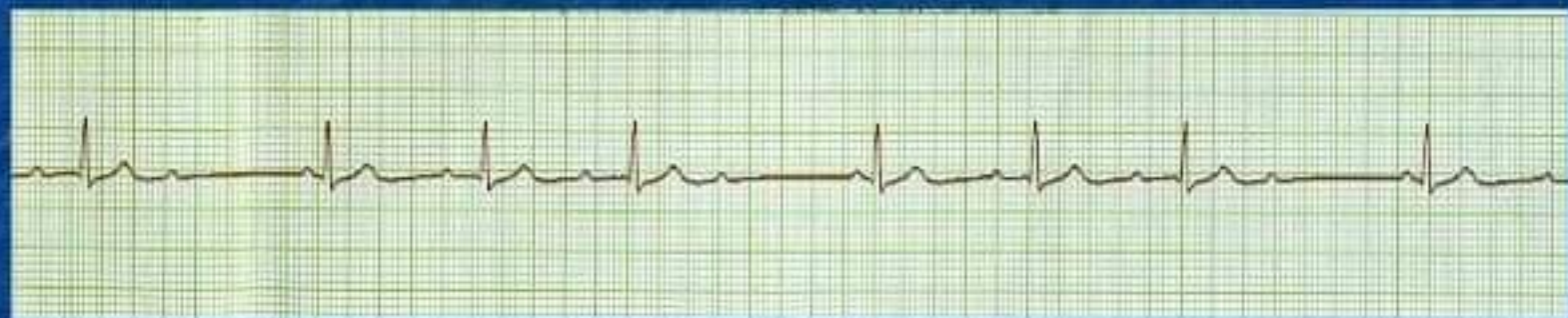
■ Ventricular Fibrillation

- Name the rhythm #5:



■ Normal Sinus

- Name the rhythm #6:



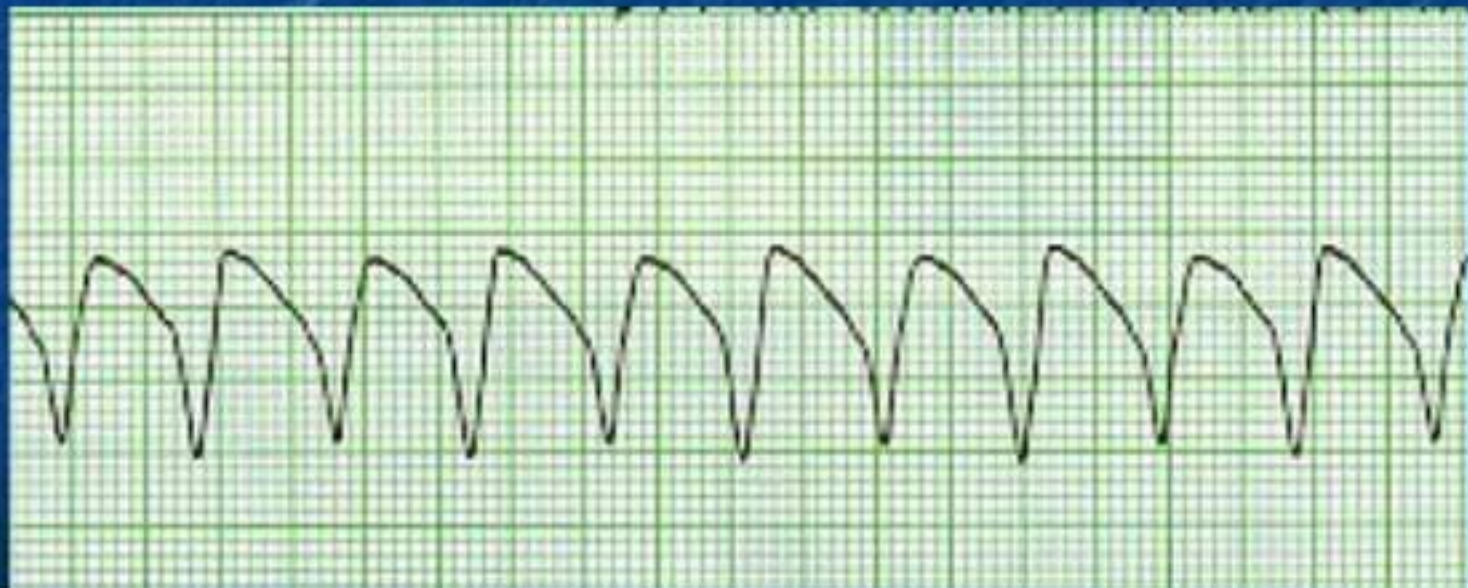
- AV Block 2 First Degree

- Name the rhythm # 7:



■ Atrial Fibrillation

- Name the rhythm # 8:



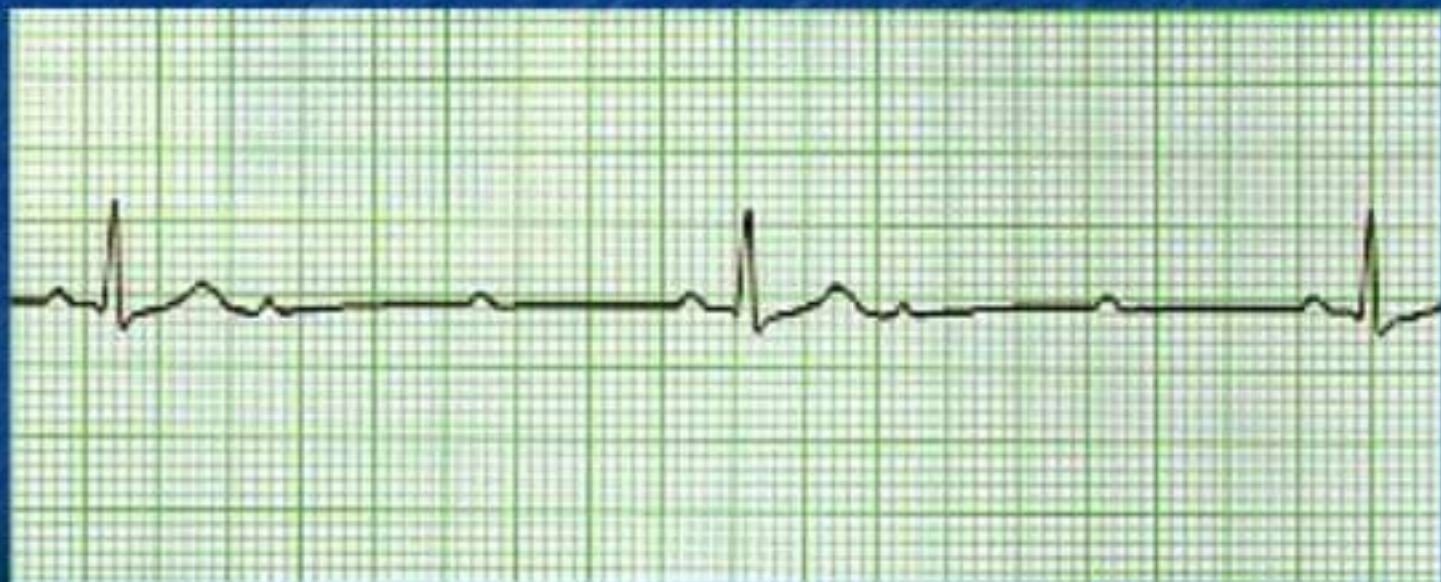
■ Ventricular Tachycardia

- Name the rhythm # 9:



■ Asystole

- Name the rhythm # 10:



- AV Block 2 Second degree

- Name the rhythm # 11:



■ Sinus Tachycardia

- A female patient, aged 43, complains of palpitation, that suddenly appeared after physical exertion, dyspnea and dull pain in the heart area. Over the 12 years she is under a follow-up care because of rheumatism and mitral stenosis without any essential circulatory embarrassment. Objectively: pallor of skin integuments, HR 140/min, PS – 100/min., AP 130/85 mm Hg, ECG: instead of Pw. waves, dissimilar R-R interval. What rhythm disorder is the most probable?

Respiratory arrhythmia;

- Atrial flutter;
- Atrial fibrillation;
- Paroxysmal supraventricular tachycardia;
- Recurrent ventricular tachycardia.

- Patient F., aged 42, suddenly developed palpitation attack attended by general weakness, dyspnea, HR - 170 per min. ECG: number of heart beats – 180 per min, rhythm regular, QRS - 0,10 s. After massage of carotid sinus area decrease of heart beats to 75 beats per min was observed. What rhythm disorder was registered in the patient?

- Sinus tachycardia;
- Paroxysmal supraventricular tachycardia;
- Recurrent ventricular tachycardia;
- Paroxysm of ciliary arrhythmia;
- Ventricular arrhythmia.

- Patient, 35 of age, on strenuous exercise fell suddenly unconscious; is ailing with hypertrophic cardiomyopathy. On an examination: breath aperiodic, stentorous, Pulse and heart tones cannot be detected. AP 50/20 mm Hg. On ECG – chaotic contractions. What has the patient?

- Asystolia ;
- Ventricular fibrillation;
- Ciliary arrhythmia;
- Ventricular tachycardia ;
- Collapse .

- Woman, 64 of age, complains of intermittency in the heart activity, palpitation, performance decrement, general weakness. Over the few months she remarks recrudescence. After a short-term fainting episode consulted a doctor. Objectively: Pulse — 52 per 1 min, arrhythmic. On cardiophony no murmurs were registered. revealed. On ECG: sinus rhythm , irregular. PQ interval — 0,20 s., QRS— 0,08 s. Slowly decreasing of R—R interval with following PQRST-fallout. What is the most probable cause of this condition?

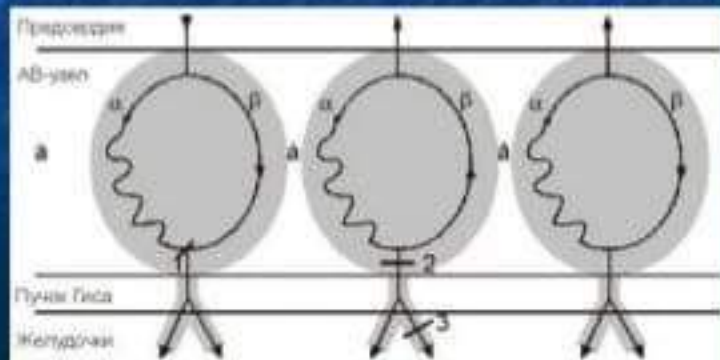
- Sinoatrial block;
- Atrioventricular block I degree;
Atrioventricular block, II degree;
- Atrioventricular block; III degree;
Trifascicular heart block.

- Patient K., aged 50, with large-focal myocardial infarction of the antero-septal area suddenly felt sharp weakness and staggers. AP 160/90 mm Hg. Heart tones sharply muffled. Pulse rhythmic 32 per min. On ECG dissociation between atrial and ventricular activity. Call the most probable clinical setting:

- Atrioventricular block III degree;
- Electromechanical dissociation;
- Sinus bradycardia;
- Synoatrial block;
- Sick sinus syndrome.

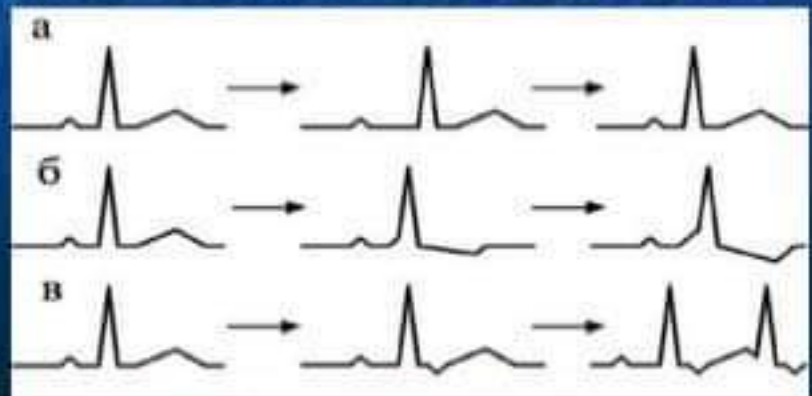
Supraventricular paroxysmal tachycardias

- **orthodromic** supraventricular tachycardia arises with the existence of additional path (syndrome WPW) with conduction through the AV anterograde on the ventricles and then retrograde back through an additional way in atrium, recorded retrograde P waves with short intervals RP ($RP < 50\% RR$), negative P in I lead, the delta wave is absent because the ventricles are activated via AV-zone.



Supraventricular paroxysmal tachycardias

- Antidromic supraventricular tachycardia rarely occur and where there are substantial additional way of (syndrome WPW) holding pulse anterograde through an additional path to the ventricles, followed by the return of retrograde AV-node in the atrium, occasionally recorded anterograde P waves, necessarily delta wave, so as ventricular activation occurs through an additional path is similar to an electrocardiogram of ventricular tachycardia



Strategy for the treatment of patients with atrial fibrillation

Restoration of heart rhythm (Cardioversion):

- Drug Cardioversion
- Electrical Cardioversion

Therapies aimed at preventing the recurrence of AF

Patient with AF

Rhythm control

Prevention of thrombo-embolic disorders

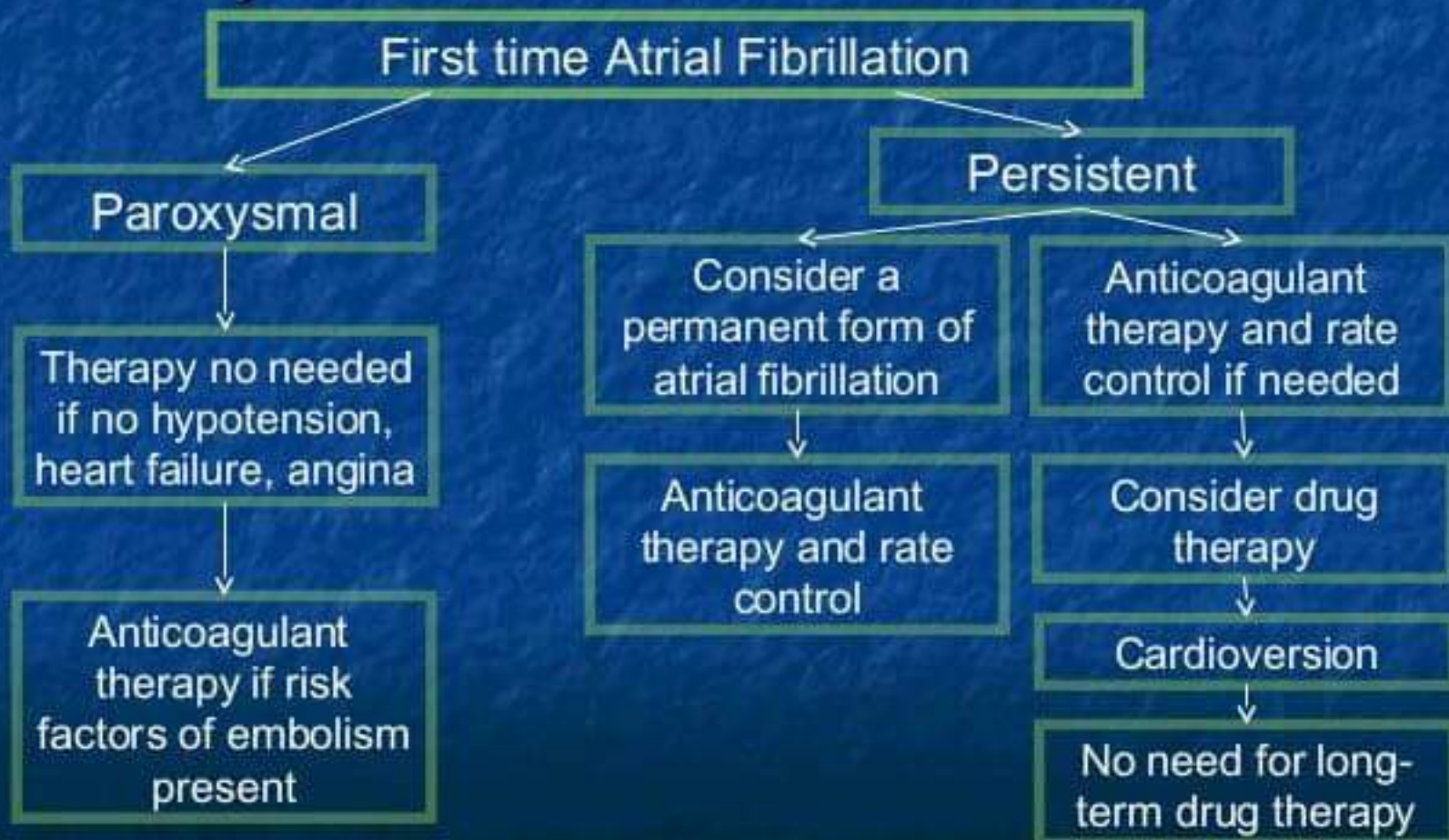
Catheter ablation

Diseases and conditions under which the recovery rate at a constant atrial fibrillation is not appropriate

- Heart defects, subject to operational correction.
- Small (less than six months) period from the date of commissurotomy.
- Not removed activity of rheumatism of second and third degree.
- Not treated thyrotoxicosis.
- Arterial Hypertension III degree.
- Heart Failure III degree.
- Obesity III degree.
- Cardiomegaly (cor bovinus).
- Age over 65 years in patients with heart defects and 70 years for patients with IHD.
- Duration of atrial fibrillation over 3 years.



Pharmacological therapy of patients with first time AF



Cardioversion**Drug Cardioversion****Drug****Class\
Level****Dosage****Drugs with recognized efficacy**

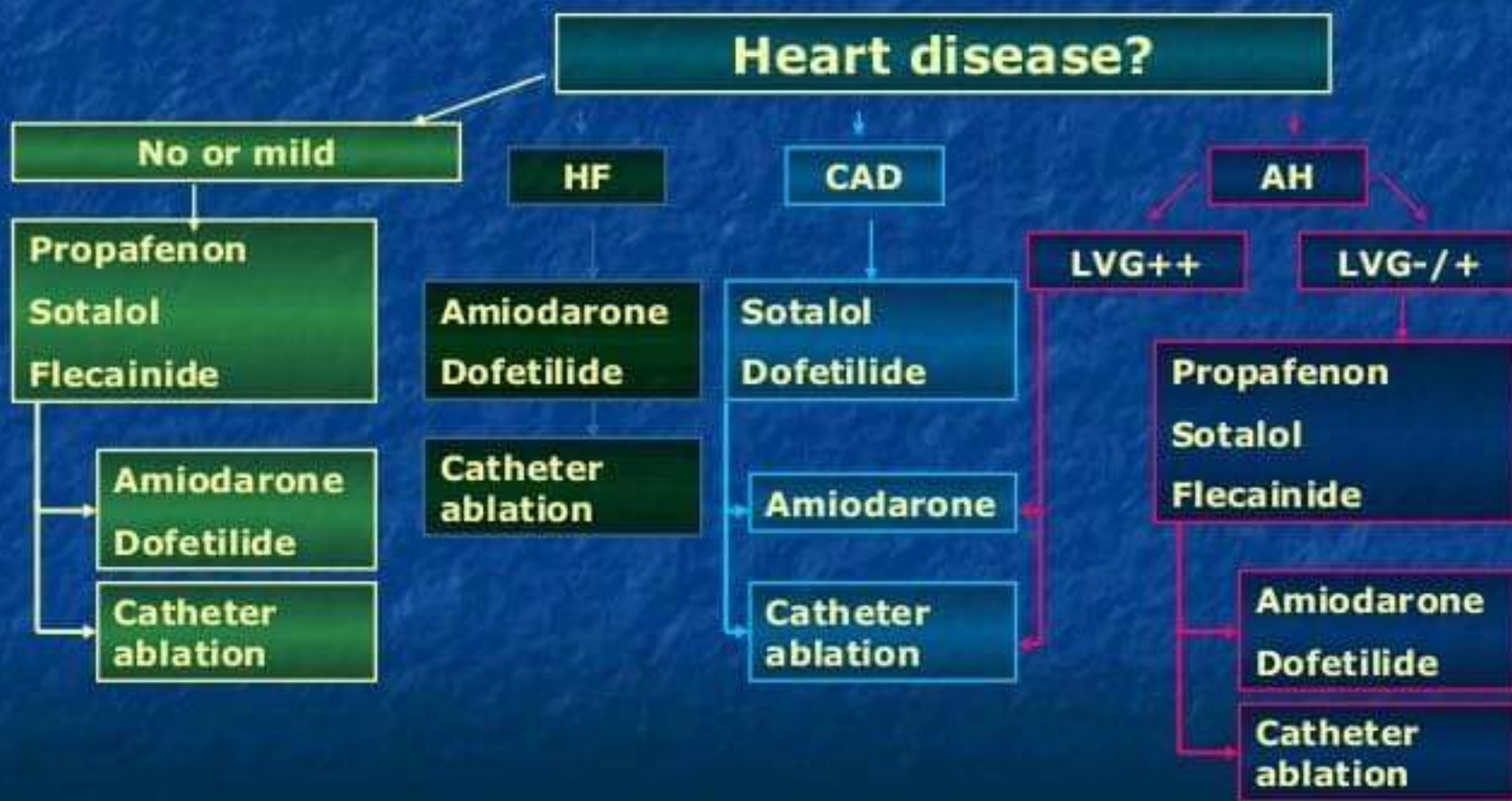
Dofetilide	I / A	125-500 mcg 2 daily
Flecainide	I / A	200-300 mg oral; 1,5-3,0 mg/kg i/v
Ibutilide	I / A	i/v 1 mg per 10 min, if necessary again 1mg
Propafenone *	I / A	Oral 600mg; i/v 1,5-2mg/kg per 10-20min
Amiodarone *	IIa/A	i/v: 5-7 mg/kg per 30-60 min, then to 1,2-1,8 g/day i/v or oral up to 10 g, then 200-400 mg/day – support dosage

Less efficacy /insufficiently studied

Disopiramide	IIb /B	Oral to 300 mg
Procainamide	IIb /B	Oral to 3,0-4,0 g
Quinidine	IIb /B	Oral 0,75-1,5 g per 6-12 h

Do not use**Digoxin****Sotalol***** - can used ambulatory, after safety control in hospital**

Prevention of recurrence of paroxysmal or persistent AF)



Amiodarone

- (tab. 200 mg, amp. 150 mg daily dose i/v 150-300 mg. The drug is most effective antiarrhythmic, for a long time still means third-line antiarrhythmic protection affects practically all types of arrhythmias, is minimal compared to other antiarrhythmics side effects);
- anti-adrenergic effect;
- increase action potential refractory period of an additional path, in AV node, in the system of His-Purkinje;
- operates with paroxysmal and ventricular arrhythmia, ventricular fibrillation;
- Contraindicated in case of increasing of interval QT, thyroid dysfunction, chronic lung diseases.



Propafenone

- (Tab. 150-300 mg, 450-900 mg internally daily):
- increases the threshold of stimulation, tripled carefully at constant elektrokardiostimulation;
- may increase the action potential, strengthen the effect of beta-blockers;
- with increased action potential leads to decrease in the rate of (treatment of arrhythmias with additional conduction ways);
- prolong the interval PQ, QRS complex.



Treatment of VT with antiarrhythmic drugs

Herzrhythmusprogramm

