



Heart Blocks

- Vishwas Govindaraju
La 1 174(2)



Table of Contents

01

The Disease

Heart blocks its
classification

02

Diagnosis

Ecg's , symptoms and
other possible tests

03

Etiology

Risk factors & prevalence

04

Pathology

Mechanisms and the
pathogenesis

05

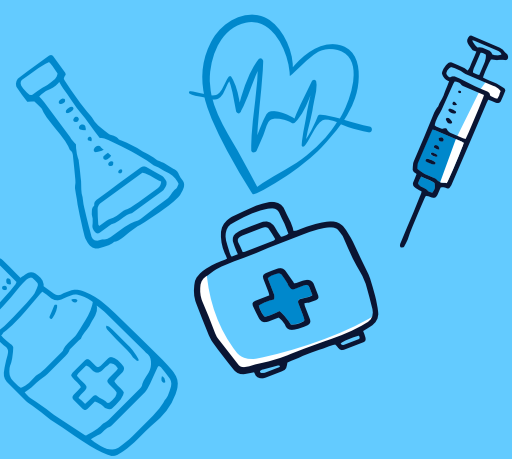
Treatment

About drugs and
instrumental methods

Introduction

- Heart block is a condition where the heart beats more slowly or with an abnormal rhythm.
- It's caused by a problem with the electrical pulses that control how your heart beats
- Cardiac arrhythmias are caused by disorders in the automaticity, excitability and conducting systems of the heart





01

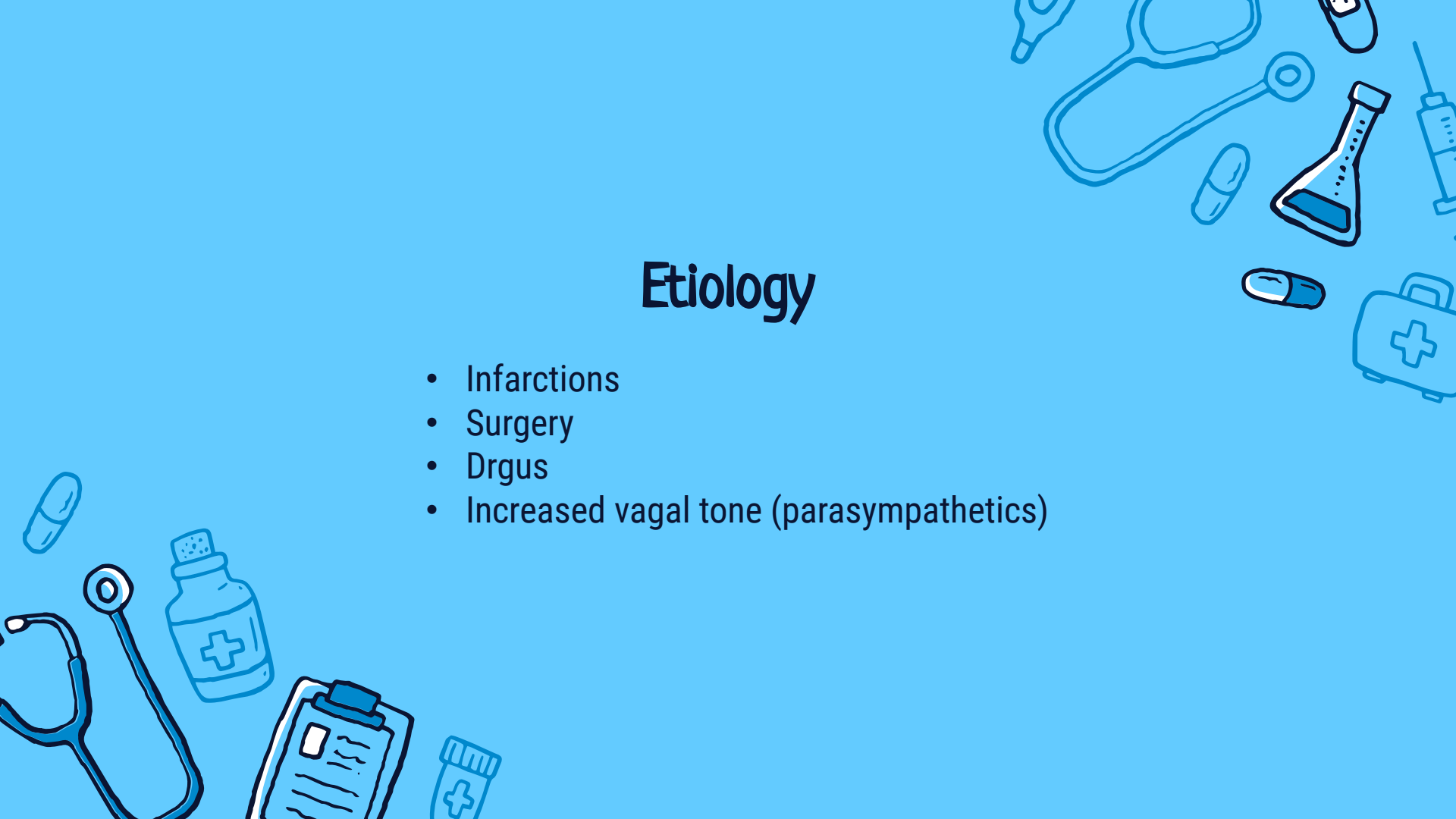
About the Disease

Heart blocks



Etiology

- Infarctions
- Surgery
- Drgus
- Increased vagal tone (parasympathetics)



Risk factors



Drugs

B- blockers, anti arrhythmatics, Ca blockers & Digoxin



Infarction /surgery

Previous infarction and surgery blocks the impulse conduction

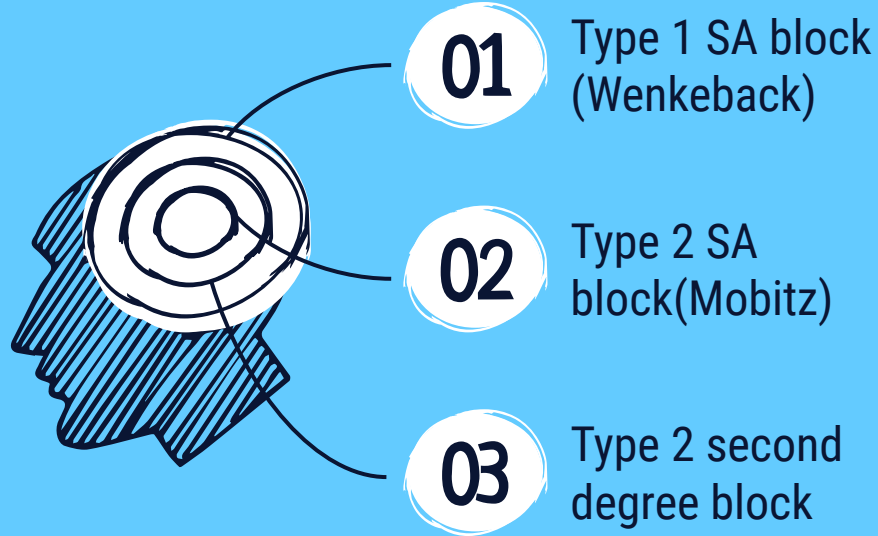


Congenital

Usually turner syndrome

Sinoatrial block

SA block is a disorder in the normal rhythm of the heart, known as a heart block, that is initiated in the sinoatrial node.



Pathology



Type 1 SA block

This is the result of decremental conduction where the **increment** in conduction delay



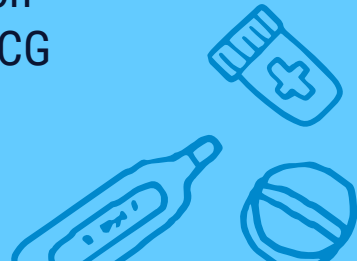
Type 2 SA block

PP intervals are fairly constant (unless sinus arrhythmia present) until conduction failure occurs



2nd degree SA block

This is the only degree of SA block that can be recognized on the surface ECG



Symptoms of the Disease

A

Brain

Hypoperfusion to brain causes altered mental status & signs of shock

A

B

Heart

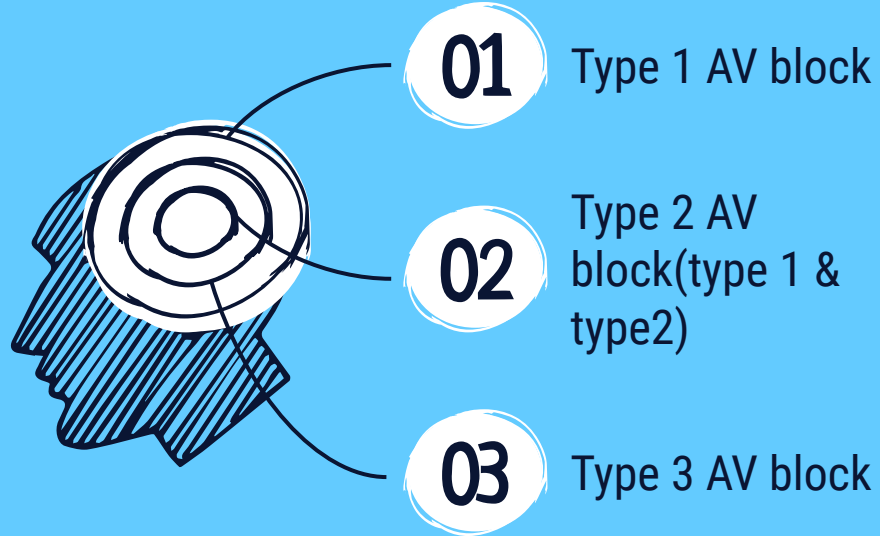
Palpitations, dysrhythmias

B



Atrioventricular block


AV block is a disorder in the normal rhythm of the heart, known as a heart block, that is initiated in the AV node.





2,500,000

People die because of the
complication of heart block



Diagnosis (ECG)

Type 1 SA block

Increased PR intervals and QRS complex are present without p waves

Type 2 AV block (M1)

2 QRS complex are close and 3rd absent

Type 2 SA block

Same as type 1 but irregular

Type 2 AV block (M2)

Absence of QRS complex after 2-3 p waves

Type 1 AV block

PR interval increased & all p waves are conducted

Type 3 AV block

PR interval prolonged and QRS are regular

Treatment



Drugs

Anti arrhythmatics & b blockers

Cardioversion

It can be done by defibrillator or chemically (ibutilide)

01

02

03

04

Surgery

Open heart surgery must be performed

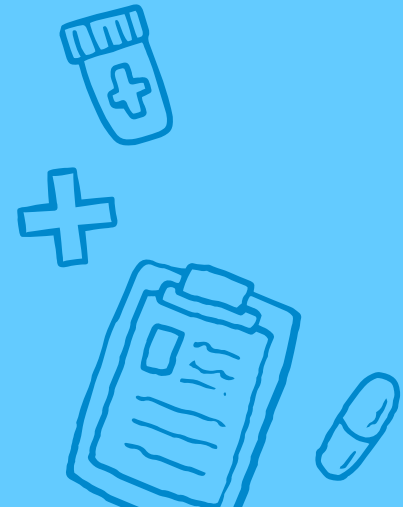
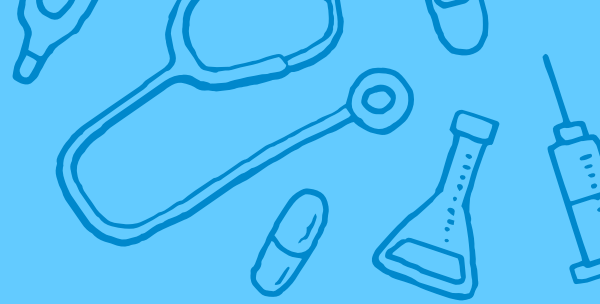
Pacemakers

Artificial pacemakers must be installed



References

- ^ "sinuatrial block". TheFreeDictionary.com.
- ^ Mesirca, Pietro; Torrente, Angelo G.; Mangoni, Matteo E. (2015). "Functional role of voltage gated Ca²⁺ channels in heart automaticity". Frontiers in Physiology. 6. doi:10.3389/fphys.2015.00019 . ISSN 1664-042X. PMC 4313592. PMID 2569 8974.
- ^ "sinoatrial heart block". TheFreeDictionary.com.



A collection of hand-drawn medical icons in the top-left corner, including a syringe, a flask with blue liquid, a stethoscope, a pill, and a first aid kit with a cross symbol.

Thank you!

A collection of hand-drawn medical icons in the bottom-right corner, including a pill, a bottle with a cross, a clipboard with a checklist, a stethoscope, and a small tube with a cross.