



Heart Blocks

- Vishwas Govindaraju
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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

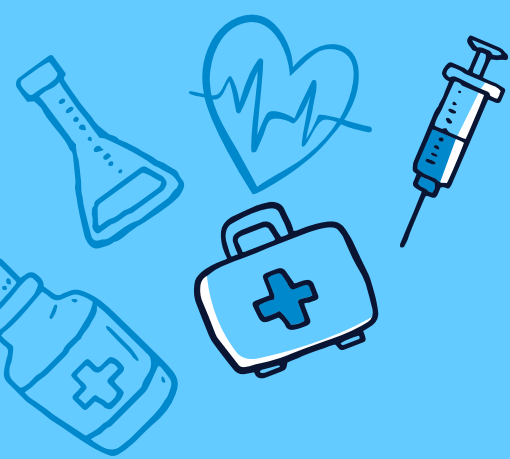
Treatment

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

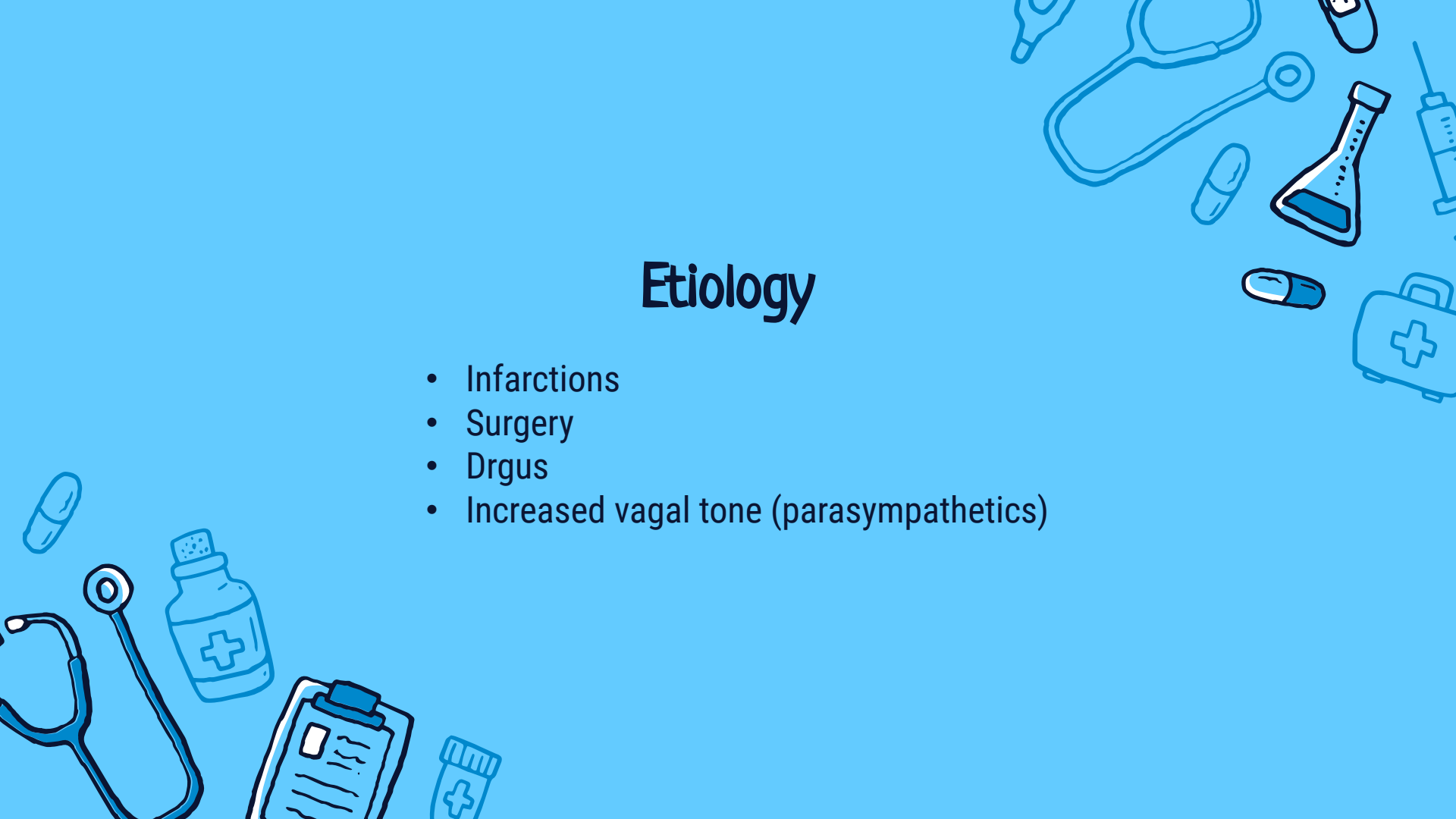
About the Disease

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

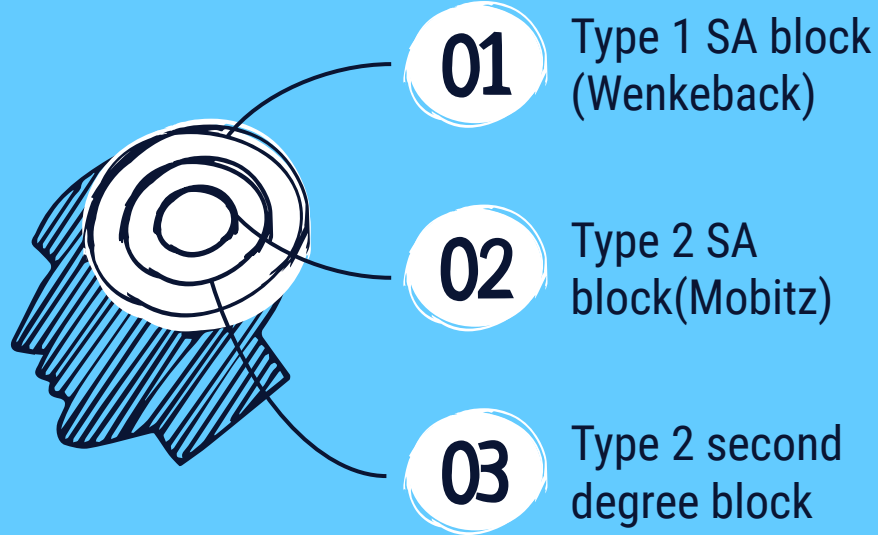


Congenital

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



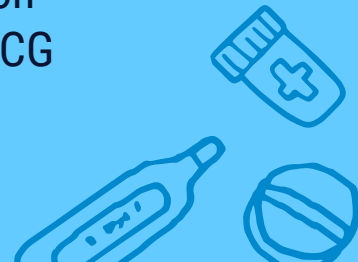
Type 2 SA block

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



2 nd 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

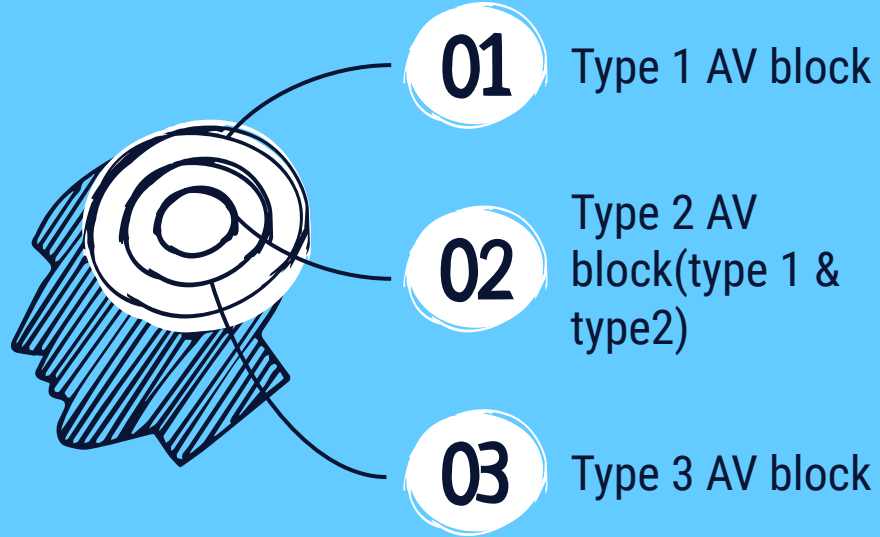
Palpitations, dysrhythmias

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.



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

2,500,000

People die because of the
complication of heart block

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



Diagnosis (ECG)

Type 1 SA block

Increased PR intervals
and QRS complex are
present without p
waves

Type 2 SA block

Same as type 1 but
irregular

Type 1 AV block

PR interval increased &
all p waves are
conducted

Type 2 AV block (M1)

2 QRS complex are
close and 3rd absent

Type 2 AV block (M2)

Absence of QRS
complex after 2-3 p
waves

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

Pacemackers

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](https://doi.org/10.3389/fphys.2015.00019). ISSN 1664-042X. PMC [4313592](https://pubmed.ncbi.nlm.nih.gov/25698974/). PMID [25698974](https://pubmed.ncbi.nlm.nih.gov/25698974/).
- ^ "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.

Thank you!

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