

Antihyperlipidemic drugs

1) Statins

* Atorva Statin
* Rosuva Statin

Stronger
↳ 20+

: mezi!

⊖ ↓↓↓ LDL

↑↑ HDL

lova--
Prava--
Simva--
Fluva--

by Sulfation → intermediat
↳ 40+

grapefruit juice?

→ HMG CoA inhibitors

* → VLDL ↓ * → LDL ↓

→ ⊕ ↑ Receptor for LDL in liver
↑ uptake of LDL from Blood

CYP3A4

AE:

* lattel effect in liver function !!
(we need to test Beta)

* myopathy & rhabdomyolysis

↓ ♂
↓ ♀
↓ 14%
↓ grave 0.6%
↓ جگر
↓ کبد

Contra. in Pregnancy *

+ Children & teenager

2) fibrates

* Gemfibrozil → Contra with statin

Fenofibrate

Bezafibrate

↓ TAG ↓

Peroxisome proliferator activated receptor
(PPARs)

↑ lipoprotein lipase ↑

Adipose tissue → FA →

Use for:

hypertriglycerolemias

CYP3A4 inhibitor

→ AE:

→ mild gastrointestinal disturbances ms ⊕

→ lithiasis: ↑ cholesterol excretion → gallstones ↑ biliary cholesterol excretion

→ myositis: inflammation of voluntary muscles

fibrates contra with statins

3) Niacin

HDL ↑

many side effect

↑ GI
↑ HLS

↓ lipolysis

Class II, III

↓ -lol ↳ digoxin

β-Adrenergic receptor
↓ Ca²⁺ channel blockers



Class Ia "quinidine, Procainamide" moderat

↗ Conduction syndrome
↘ Lupus like syndrome

block Na channel (Phase 0)
1 → 10 sec

- ↓ Action Potential
- ↑ refractory, ↑ AP duration

Use in:

- supraventricular tachy Arry.
- Ventricular tachycardia

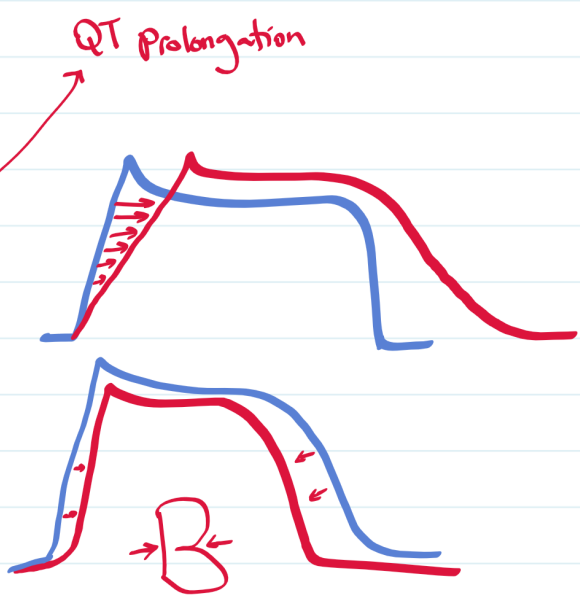
Side effect → syncopezimi

Class Ib "lidocaine"

Na blockers and K⁺

0.1 → 1 s

- ↓ AP duration, ↓ refractory
- so we use it in prolonged QT + ventricular tachy Arrhythmia
- Side effect → hypotension



Best Post MI

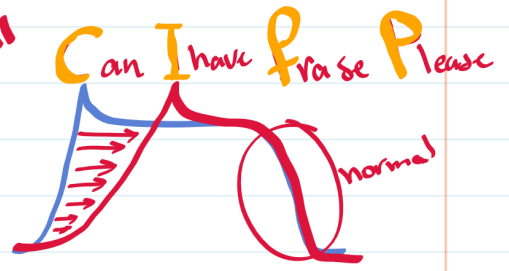
لأنها تقال
QT
class Ia عكس

Class Ic "flecainide, Propafenone"

↑ 10 s (marked block)

↓ AP

normal Refractory & AP duration



Use in ^{ما يصير نقيه كرايف عنده من كل باقالت} Supraventricular tachy. (atrial flutter)

Side effect → arrhy.

Class III

K⁺ blockers

Prolong AP & Refractory ↑

↓ repolarization

⊗ amiodarone

++ Side effect → Lung fibrosis
T₃, T₄ ↑ or ↓ ??

↗ effect in Na

AE → torsades de pointes with QT elongation

Class IIe "Adenosine"

30 sec

hyperpolarization (<130)



arrest or AV block

Use Acute termination of AV node

Class II d "Digoxin"

AV node inhibition

* Bile Acid-binding resins

Cholestyramine
Colestipol

↓ LDL ↓

Conversion of cholesterol to bile Acid

bind to bile Acid in intsts & form insoluble complex
shuts excreted in feces

↓ Cholesterol concentrations ↓↓

Use in :

type IIa ← elevated LDL

AE:

• GI disturbances

• ↓ Absorption of (AKED) Ⓢ

• drug-drug

→ tetracyclin
→ digoxin
→ warfarin
→ Aspirin

* Ezetimibe

inhibit cholesterol absorption

headach & diarrhea

* Bempedoic Acid

Same as statin
but less AE

Pro drug!
need the liver

↓ ACLY enzyme → ↓ HMG
ATP-citrate lyase

Side effect:

↑ Uric Acid ↑ urea nitrogen ↑ Cr ↑ → gout
↓ hemoglobin ↓

* PCSK9 inhibitor "by monoclonal antibody"

→ Evolocumab
→ alirocumab

LDL Receptor

↑ LDL Receptor on liver ↑

* PCSK9 inhibitor "by RNA silencing"

→ Inclisiran
PCSK9 inhibitor

inhibit the synthesis of PCSK9

higher rate of injection compared with placebo group

short!

* APOC-III inhibitor → thrombocytopenia

→ Volanesoren inhibit the synthesis of APOC-III

↓ APOC-III → ↑ Lipoprotein Lipase ↑ → ↓ TG ↓

Use in:

↑ plasma TG & familial chylomicronemia syndrome

* ANGPTL3 inhibitor

Evinacumab → monoclonal

Upanorsen → inhibit synthesis → lipids

↓ APOC-III → ↑ Lipoprotein Lipase ↑ → ↓ TG ↓

by: IBN