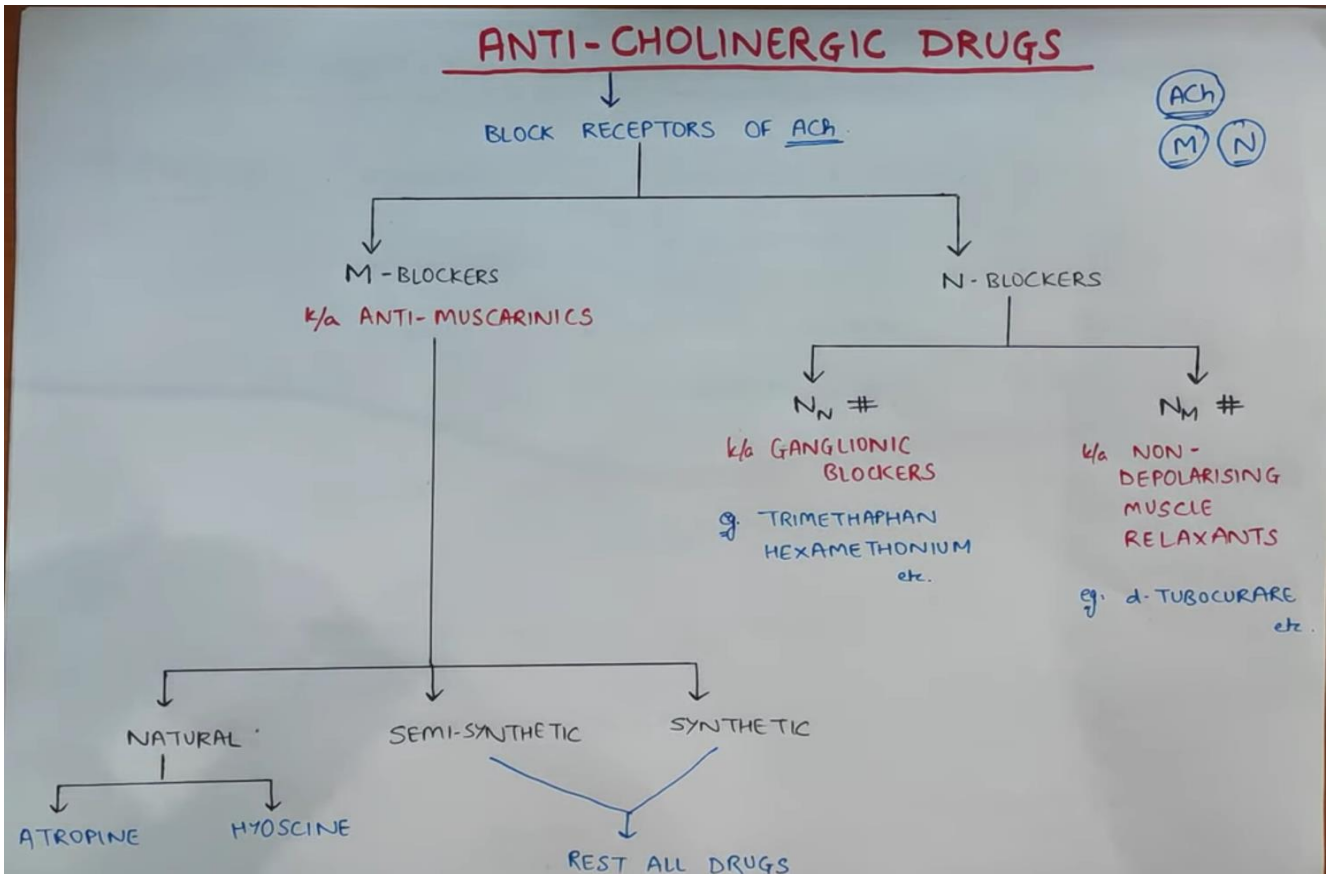
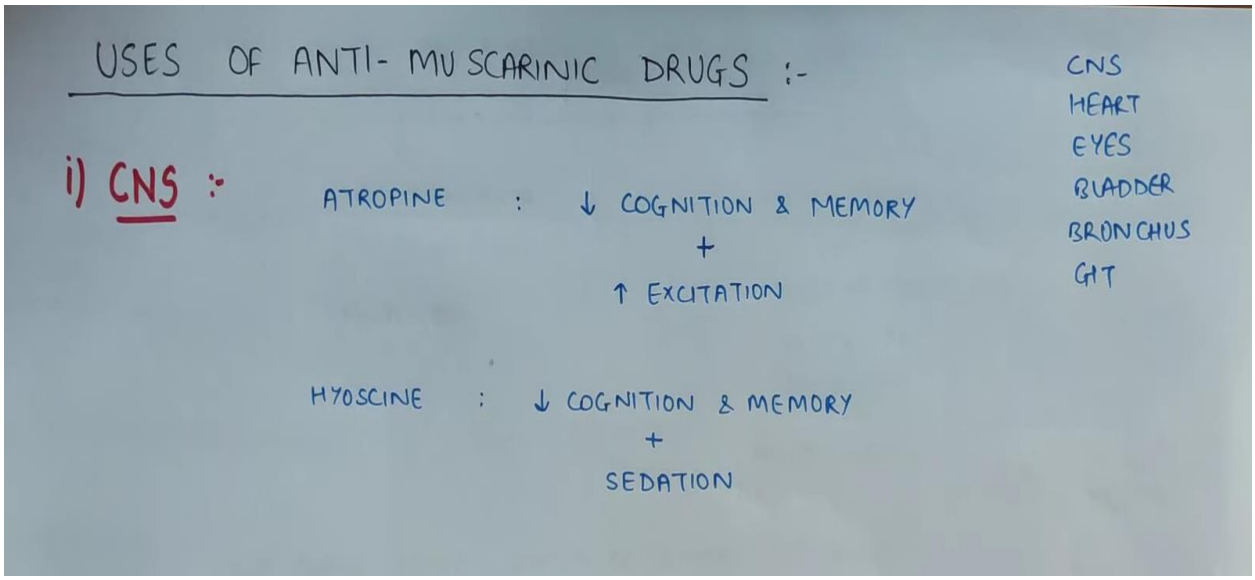
# Parasympatholytic drugs



a) HYOSCINE - USED AS TRUTH SERUM / NARCO-ANALYSIS ✓

DOC - THIOPENTONE ✓

b) MOTION-SICKNESS - DOC - HYOSCINE ✓ → $M_1$ #

Journey → Head Movement → semicircular canal move

↓

Endolymph move

↓

Stimulates Vestibular Nerve ($M_1$ & ) ← stimulate Cerebellum ← stimulate CTZ Area ← Nausea, Vomiting

T/t - Motion Sickness

ANTI-MUSCARINIC ($M_1$)

- HYOSCINE (DOC)

Route : ORAL

ANTI-HISTAMINIC ($H_1$)

(1st generation)

- DIPHENHYDRAMINE
- PROMETHAZINE
- CYCLIZINE

Route : ORAL

* THESE DRUGS SHOULD BE GIVEN 30 MINUTES BEFORE JOURNEY.

NO EFFECT AFTER VOMITING HAS STARTED.

c) PARKINSON'S DISEASE -

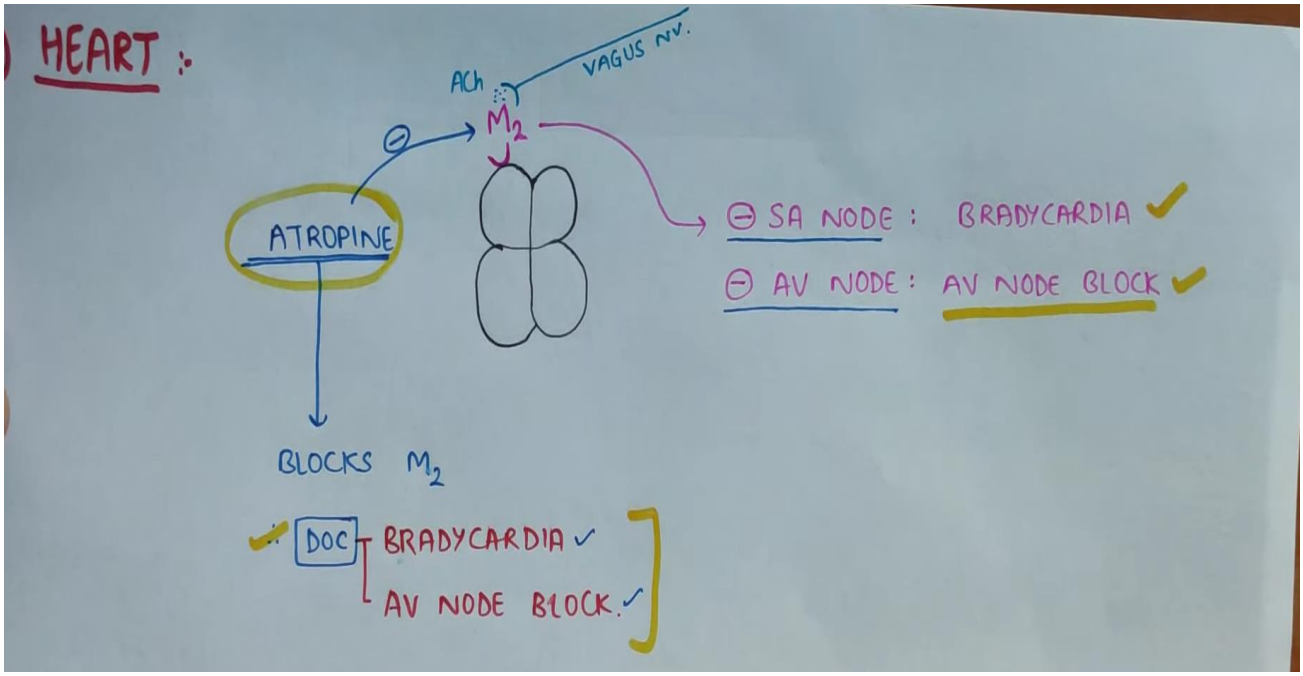
ACh ⇌ DOPAMINE

ACh ⇌ DOPAMINE

DRUGS ACTING ON BASAL GANGLIA :
- BENZHEXOL (TRIHEXPHENID
- BENZTROPINE
- BIPERIDIN

DOC :- DRUG INDUCED PARKINSON'S DISEASE.

HEART :-

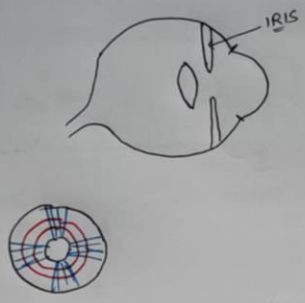



∴ BRADYCARDIA IN TRANSPLANTED HEART ⇒ DOC ISOPRENALINE [⊕ β1 RECEPTOR]

β1 → HEART → ⊕ ↑

## iii) EYES :-

### MIOSIS






IRIS
↓
2 MUSCLES

| SPHINCTER PUPILAE (CIRCULAR) | DILATOR PUPILAE (RADIAL) |
|---|---|
| ↓ | ↓ |
| $M_3$ (R) | $\alpha_{1A}$ (R) |
| ↓ | ↓ |
| ACTIVE MIOSIS | ACTIVE MYDRIASIS |

CILIARY MUSCLE : HAS $M_3$ (R).
↓
CONTRACT CILIARY MUSCLES
↓
ACCOMODATION.

ANTI- MUSCARINIC DRUGS
↓
$M_3$ #

| PARALYSIS OF SPHINCTER PUPILLAE | PARALYSIS OF CILIARY MUSCLES |
|---|---|
| ↓ | ↓ |
| PASSIVE MYDRIASIS | CYCLOPLEGIA |

∴USES : ① FUNDOSCOPY (mydriatic use)

② REFRACTIVE ERROR TESTING
③ SPASM OF CILIARY MUSCLES (e.g. IRIDO-CYCLITIS)
} (Cyclopegic Use)

DRUGS : Topical Eye Drops

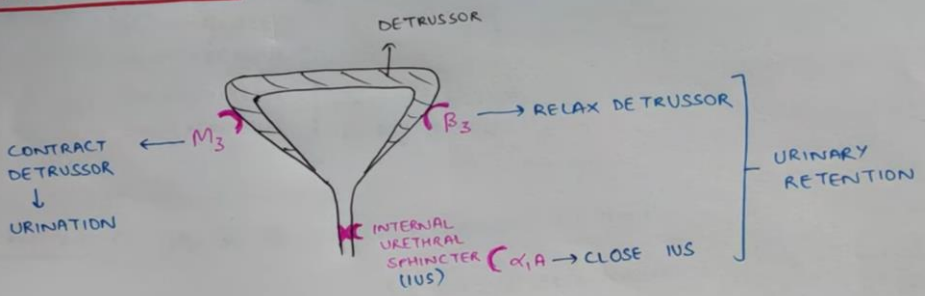
i. ATROPINE
ii. HOMATROPINE
iii. CYCLOPENTOLATE
iv. TROPICAMIDE

Longest Acting → Shortest Acting.

ATROPINE : (DOC) : ANTERIOR UVEITIS
(DOC) : FUNDOSCOPY IN CHILDREN

TROPICAMIDE : (DOC) : REFRACTIVE ERROR TESTING.

## iv) URINARY BLADDER :




ANTI-CHOLINERGIC DRUGS (↓/a VESICO-SELECTIVE AGENTS) : BLOCKS $M_3$ (R)
↓
RELAX DETRUSSOR
↓
↓E : URINARY INCONTINENCE OR OVERACTIVE BLADDER

DRUGS (VESICO-SELECTIVE) :
. OXYBUTININ
. FLAVOXALATE
. FESOTERODINE
. SOLEFENACIN
. DAREFENACIN
} MOST SELECTIVE $M_3$ BLOCKERS.

OFF SD

## v) BRONCHUS :- $M_3$ ® ⊕ ⟶ BRONCHOCONSTRICTION + ↑↑ MUCOUS SECRETIONS

ANTICHOLINERGICS

**PRE-ANAESTHETIC MEDICATION**
(to ↓↓ RESPIRATORY SECRETIONS)

- ATROPINE
- HYOSCINE
- GLYCOPYROLATE

**BRONCHODIALATORS**
(T/t : COPD ; ASTHMA)

* GIVEN BY INHALATIONAL ROUTE

- IPRATROPIUM (shortest Acting)
- TIOTROPIUM (longest Acting)

etc.

## vi) GIT :- k/a ANTI-SECRETORY – ANTISPASMODICS.

~~$M_1$~~

~~$M_3$ CONTRACT~~

DRUGS :- 3° AMINES – PIRENZIPINE, TELENZIPINE, DICYCLOAMINE } $M_1$ # : ↓ ACID PRODUCTION ∴ T/t. PEPTIC ULCERS.

4° AMINES – GLYCOPYRROLATE, BUSCOPAN

$M_3$ ® ⟶ CONTRACTION ⟶ SPASM OF SPHINCTERS ↓ ABDOMINAL COLICKY PAIN.

DRUGS: BUSCOPAN, GLYCOPYROLATE } ANTI-CHOLINERGIC
DROTAVERINE } PDE-4 INHIBITOR

# Atropine Poisoning