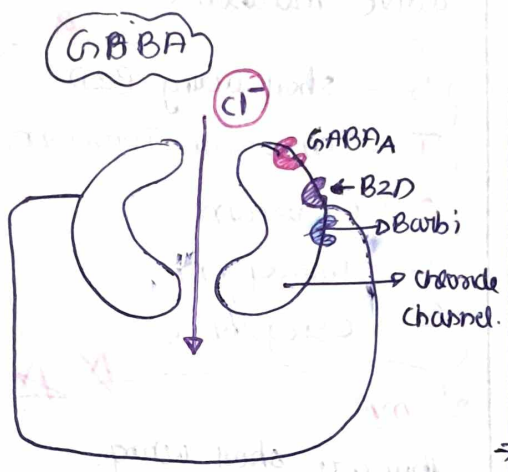


AIDS
Pill

Sedative Hypnotics

Sedation - sleepy
 Hypnosis - sleep.
 they are same drugs
 "CNS" depressants... if we give
 small dose → sedation.
 large dose → hypnosis

The A.A that depresses
 brain is



GABA_A receptor binds to GABA.
 Cl⁻ channel opens & Cl⁻ enters
 ↓
 hyperpolarization
 firing can't occur
 ↓
 Brain depression.

Benzodiazepines

- binds to BZD receptor and ↑ GABA binding to it's receptor.
- facilitatory.
- ↑ frequency of opening.
- DRC - flat. i.e. safe.

Bob	Bzd
Induces ++	XX
addictive ++++	++
anterograde Amnesia. ++++	++
no Antidote	Antidote ✓ ↓ FLUMAZENIL ↓ Kudikumbha Indekanna Meye nil akkam.
(Rx) alkalinization of urine @ Bob are acidic drugs.	

Barbiturate

- thiopentone - anesthetic
 - phenobarbitone - epilepsy
- they are not that used.
 as sedative hypnotics,
 we use BZDs.

Benzodiazepines.

- Sedative-hyp.
↓
Diazepam.
Flurazepam.
Nitrazepam.
Flunitrazepam.

Anti-anxiety

- Diazepam.
Oxazepam.
Clonazepam.
Lorazepam.
Alprazolam.

Anti-epileptic.

- Diazepam.
Lorazepam.
Clonazepam.
Clobazam.

muscle relaxants.

↓
Diazepam.

they all produce active metabolites

Diazepam: works 6hrs

↓
Oxazepam: it also works 6hrs.

duration = long acting.
due to active metabolite.

they produce:

⇒ Hangovers due to long duration of action.

• C/I in elderly.
due to long depression.

• C/I in liver disease.

* ~~active metabolite with~~
~~activity.~~

So we need the ones that doesn't produce active metabolite.

- S - short acting BZD.
- T - Temazepam, Triazolam
- O - Oxazepam
- L - Lorazepam
- E - Estazolam.

✓ Imp

- they are short acting.
- less hangover
- not C/I in old age
- not C/I in liver disease.

Sleep.

REM - dreams are ^{rem.} remembered

Non-REM - not remembered.

• REM - 2 minutes.

Non-REM.

eg:
phase - 1 - 5 mins

2 - 15 min

3 - 7 min

4 - 10 min.

if they occur in ~~fixed~~ sequence & cyclically, then there is good quality of sleep.

* giving sedative hypnotic will ↑ duration of sleep. But doesn't ↑ all phases proportionately.

* Cause distortion of sleep architecture.

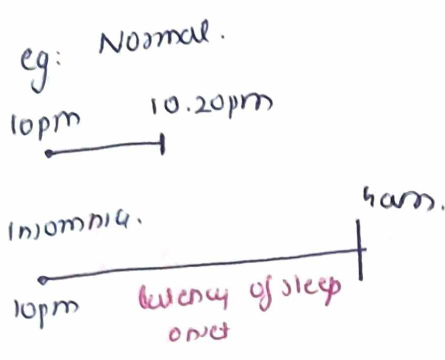
* poor quality sleep.

* won't feel refreshed.

* Quantity ↑
Quality - Bad.

Insomnia.

- ഉണ്ടാകാൻ സാധ്യമാണ്
- ഉണ്ടാകാൻ ഉണ്ടാകാം but ഉണ്ടാകാൻ സാധ്യമാണ്.



- Sedative hypnotics
- ↓ latency of sleep onset
- distortion of sleep architecture.
- quality of sleep - bad

we need drugs that doesn't distort sleep architecture & makes poor quality sleep they are:

Z-DRUGS. DOC for insomnia.

- Zolpidem
 - Zaleplon
 - Zopiclone
 - Es-zopiclone
- ↓ Latency ✓
Quality - good ✓
• won't distort sleep architecture. ✓
↓ no change in duration. ✓
• no risk of hangovers ✓
• Non-addictive. ✓
- if we have to induce sleep.. give melatonin (R) agonist
- ↓
- RAMELTEON**
- also used in insomnia.

MOA

- Stimulate ω₁ subunit of BZD.
- but there won't be
 - X Anxiety relief.
 - X seizure relief.
 - X MR.
- sedative hypnotic effect ✓

only sedation action seen... rest ones will not be there.

Antidote : FLUMAZENIL.

Melatonin

- maintains sleep-wake cycle.
- melatonin is sedative.
- ↓
- it is produced when dark occurs.
- Sometimes we have to change it

- Shift workers.
- Jet lags.

drawback

- Oral B.A < 2%.
- causes psychiatric side in some patients

OREXIN Receptors.

- when orexin receptors are stimulated, (wakefulness, alertness come).
- OREXIN Receptor antagonist.
- ↓
- Sleep
- ↓
- antagonist
- Suvorexant
- Lemborexant