

Antidepressants:

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Antidepressants:

- A. Heterocyclic antidepressants:
(tricyclic and tetracyclic), e.g.amitryptaline ,imipramine.
- B. Monoamine oxidase inhibitors(M.A.O.I),
e.g.phenelzine.
- C. Selective serotonin reuptake inhibitors SSRI's
,e.g. flouxetene, paroxetene, fluvoxamine.
- D. Atypical antidepressants.
- E. Sympathomemetic agents.

Antidepressants do not elevate normal mood and do not have any abuse potential except amphetamine antidepressants have other clinical uses in medicine and psychiatry.

Antidepressants:

Action:

A. heterocyclic:

1. exert its antidepressant action by blocking the reuptake of norepinephrine and serotonin in the synapse so increase their availability and improve mood.
2. also block muscarinic, acetylcholine and histamine receptors causing anticholinergic effects, sedation and weight gain, dangerous in overdose.

B. SSRI's :

1. selectively block the reuptake of serotonin, have limited effects on NE, dopamine, histamine, and acetylcholine.
2. because of their selective action cause fewer side effects and are safe in overdose than heterocyclics and MAOI's.

Antidepressants:

c. MAOI's:

1. irreversibly limit the activation of MAO, so increase the availability of norepinephrine and serotonin in the synapse and improve mood.
2. MAO metabolize tyramine in the GIT so that food rich in tyramine e.g. aged cheese ,chicken, beef liver, smoked meats or fish, broad beans , beer and wine) or sympathomemetic drugs e.g. epinephrine, methylphenidate(retalin) can increase the level of tyramine and cause hypertensive crisis may lead to stroke or death.
3. MAOI's and SSRI's if used together can cause another life threatening drug-drug interaction (serotonin syndrome)marked by autonomic instability , hyperthermia, convulsions, coma and death.

Antidepressants:

Problems encountered with heterocyclic's:

- ❖ Anticholinergic side effects: dry mouth, blurred vision, constipation, glaucoma, retention of urine, delirium.
- ❖ Noradrenergic: postural hypotension, sedation.
- ❖ Dysrhythmia
- ❖ Low fit threshold.
- ❖ Inappropriate ADH.
- ❖ An orgasmia.
- ❖ Abnormal liver function.
- ❖ Weight gain
- ❖ Cardiac toxicity in overdose.

Antidepressants:

Problems of MAOI's:

- Cheese reaction.....hypertensive crisis.
- Drowsiness.
- GIT disturbances.
- Headache.
- Postural hypotension.
- Drug interaction (opiate, anesthetic's, sympathomimetic's).
- Liver damage.

Problems with SSRI's:

- GIT, nausea , vomiting, diarrhea, appetite loss.
- Agitation and insomnia.
- Headache.
- Inappropriate ADH secretion.
- Cost (more than others).

Antidepressants:

Choosing an antidepressant:

- Clinical picture.
- Need for sedation.
- C.V.D.
- Tolerance of side effects.
- Cost

Mood stabilizers:

Lithium:

Antimanic (need 5-6 days) and mood stabilizer, and augmentation of antidepressant.

Mechanism of action:

rapidly absorbed and replaces sodium and potassium in the cells, this alters the flux of Mg, Ca across cell membrane, lithium is filtered by the kidney and only partially reabsorbed.

Mechanism of action of lithium:

- Changing the concentration of Na and K within the cell
- Changing the dynamic of Mg and Ca.
- Changing the responsiveness of Na/K ATPase.
- Changing the permeability of blood brain barrier.
- Changing the sensitivity of the dopamine receptors.
- Decreasing uptake of noradrenalin into cells.
- Altering sensitivity of beta adrenoceptors.

Lithium:

The physical work up for lithium:

- Urea and electrolytes.
- Creatinine clearance.
- Full blood count.
- Thyroid function test.
- ECG.
- Pregnancy test.

Therapeutic level

0.6-0.8 mmol/l.

Side effects of lithium:

GIT side effects, tremor, weight gain, muscle weakness, leucocytosis, hypothyroidism, ECG changes, nephrogenic diabetes insipidus 5%, ataxia, nystagmus, delirium, coma, death.

Other mood stabilizers:

Na-valproate and carbamazepine.

THANK YOU...

Antipsychotic Drugs

Antipsychotic Drugs:

- The first effective drug to be used for the treatment of schizophrenia was chlorpromazine then a wide range of drug with differing potency and side effect profile has been introduced it is better to become familiar with small range of these drugs that will cover differing situations.
- The choice and dose depends on:
 - The severity
 - The required Sedation
 - The patient size
 - His medical condition .

Mechanism Of Action :

- D2 receptor antagonism which can be found principally in the limbic system .
- Most antipsychotics are non specific in thier site of action
- The new antipsychotics are probably more D2 specific antagonist so it has better side effects profile

Side Effects :

- Anti dopaminergic (extrapyramidal symptoms) mediated by D1 receptor .
 - Acute dystonia
 - Akathesia
 - Parkinsonism
 - Tardive dyskinesia
 - Amenorrhoea
 - Galactorrhoea

- Antiadrenergic
 - Postural hypotension
 - Sedation
- Anticholinergic
 - Constipation
 - Blurred vision
 - Precipitating glaucoma
 - Urinary retention
 - Dry mouth

➤ Other side effects

- Weight gain

- Dysrhythmia

- Low seizure threshold

- Chlorpromazin is associated with photosensitivity and cholestatic jaundice and Neutropenia

- Thioridazine in high doses can cause retinitis pigmentosa

Atypical Antipsychotics (New...)

- Are highly selective D2 blockers so cause fewer extrapyramidal symptoms e.g Olanzapine and Clozapine

Antianxiety (Anxiolytics)

- Benzodiazepine act by enhancing the action of GABA
 - Anxiolytics (long half life)
 - Hypnotics (short half life)

Anxiolytic Effects :

- Reduced pathological anxiety ,agitation and tension but it is addictive
- Should not be used more than one month
- Should be avoided in those with personality problems and those with history of substance abuse .

Hypnotics Effect :

- Benzodiazepine inhibit REM sleep and a rebound increase REM is seen when they are discontinued
- Care must be taken not to be used regularly or long time
- Avoid prescribing on discharge from hospital .

Side Effects :

- Headache
- Confusion
- Ataxia
- Dysarthria
- Blurred vision
- GI symptoms
- Jaundice
- paradoxical excitement
- Loss of memory
- Depression
- can cause antero-grade amnesia
- Affecting driving performance
- In I.V may cause respiratory depression

Good Practice In Using Benzodiazepine:

- Short term use
- Restrict to severe anxiety
- To deal with a specific problem or event
- Intermittent dosing
- Lowest effective dose

Thank You

The image features the words 'Thank You' in a bold, purple, 3D sans-serif font. The text is positioned in the upper half of the frame. Directly beneath the text is a soft, out-of-focus reflection of the same words in a lighter purple shade, creating a sense of depth and a clean, modern aesthetic.