

DRUGS IN PSYCHIATRY

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Various methods, techniques and drugs are used for the treatment of anxiety and psychiatric disorders. These include psychotherapy, group therapy, psychoanalysis, (ECT) electroconvulsive therapy, Milieu therapy, environmental therapy, occupational therapy, recreational therapy, brain surgery, minor tranquilizers, neuroleptic drugs, major tranquilisers, and antidepressants. Use of drugs for the treatment of mental disorders has become widespread only since the mid-1950's.

Ideally drugs should be prescribed only when their use is indicated, and when prescribed, the drugs should be given for an optimum length of time in appropriate doses to obtain maximum therapeutic response with minimum side effects and complications.

The drugs used in the practice of psychiatry have been classified in many ways for example, on the basis of chemical structure, biochemical reactions and the presumed major clinical beneficial effects on the patients. For practical purposes, the following groups may be classified according to their present clinical use.

- (a) Drugs for anxiety states and neuroses
- (b) Drugs for psychoses
- (c) Drugs for Affective Disorders—Endogenous, reactive and involuntal depression, Hypomania (mania-if severe)
- (d) Psychotogenic drugs.

A. *Drugs for Anxiety States and Neuroses: anxiolytic drugs or minor tranquilisers*

(i) PLACEBO:

(ii) MEPABROMATE—pharmacological and side effects are very similar to those of barbiturates and causes allergic and haematological disorders, hypotensive effect in the elderly—physical dependence (and therefore addictive). Mepabromate is no longer prescribed usually.

(iii) BENZODIAZEPINE COMPOUNDS: Minor Tranquilisers.

Generic Name	Trade Name	Oral Dose (3-4 times a day)
1. Chlordiazepoxide	Librium	10-25 mgm
2. Diazepam	Valium	5-10 mgm
3. Medazepam	Nobrium	5-10 mgm
4. Oxazepam	Sezap/Serax	10-15 mgm
5. Lorazepam	Ativan	1- 2 mgm
6. Nitrazepam	Mogadon	
7. Flurazepam	Dalmadorm	5
8. Clonazepam	Rivotril	Antiepileptic
9. Bromazepam	Lexotan	Same use as
10. Flunitrazepam	Rohypnol	1 to 5

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The drugs (1 to 5 and 9) of the Benzodiazepine group are currently widely used for anxiety. 6, 7 and 10 have greater sedative action. No. 10 viz Flunitrazepam is being taken by those who cannot get heroin. It is a serious punishable offence having this drug Rohypnol without an appropriate prescription in Singapore.

The drugs of the Benzodiazepine group may show a cumulative side effect and the appearance of withdrawal symptom effects may be delayed for a week or more.

Therapeutic uses: (a) Anxiety—all neuroses and psychosomatic disorders. (b) Muscle relaxant (c) Alcoholism (d) Anticonvulsant and (e) Hypnotic.

Toxicity: (a) Anticholinergic actions (b) CNS depression-drowsiness and lethargy and (c) Physical dependence.

B. Drugs for Psychoses: Major tranquilisers or neuroleptic drugs and antipsychotic tranquilizers. These drugs control abnormal behaviour and relieve emotional stress and distress without significantly interfering with clarity of consciousness.

Neuroleptics can be classified according to their chemical structure:-(a) Phenothiazines (b) Rauwolfia Alkaloids (c) Thioxanthine derivatives (d) Butyrophenones (e) Diphenyl Butylpiperidine (f) Miscellaneous including diabenzothiazepines and Benzamide.

(a) Phenothiazine derivatives: All drugs in this class have in common phenothiazine nucleus. There are three main side chain substitutions-(i) the aliphatic series-including chlorpromazine (Largactil), flupromazine and methotrimeprazine (Adazine, Vesprin/Sinogan, Veractil etc.). (ii) the piperidine series-including thioridazine (Melleril) and pericyazine (Neulactil) and (iii) the piperazine series including prochlorperazine (Stemetil) perphenazine (Trilofon), thiopropazate (Dartalan, Dartal) flupenazine (Anatensol) and trifluoperazine (Stelazine). The aliphatic and piperidine series have a greater sedative action than the

piperazine series.

The piperazine series are more potent weight for weight, have more antiemetic properties and greater tendency to produce extrapyramidal side effects.

(b) Rauwolfia alkaloids and related drugs-include reserpine and rescinnamine. Their use is no longer favoured due to unpleasant side effects.

(c) Thioxanthine derivatives include Taractan and Navane-parallel series of psychotic drugs to phenothiazines.

(d) Butyrophenones include Haloperidol, Serenace, Triperidol, Methylperidol, Fluropipamide, Droperidol, Benepidol, Spiroperidol and Fluanisone. These drugs have similar side effect as piperazine phenothiazines.

(e) Diphenyl butyl piperidines-These are a new series of neuroleptics. Pimozide is one of these and has less extra pyramidal and autonomic side effects.

(f) Miscellaneous group-reported to be effective in Schizophrenia with less extrapyramidal side effects.

Generic Name	Trade Name	Dosage	Remarks
Chlorpromazine	Largactil	100 mgm tid or qid	Drug of this category cause more sedation.
Promazine	Thorazine	200 mgm tid or qid	Useful for over active, agitation, mania good for drug/alcohol withdrawal.
Thioridazine	Sparine	100 mgm tid or qid	
Thioxanthine:			
(a) Chlorpsothixene	Taractan	20 mgm tid or qid	—Drugs in this group cause less sedation but more likely to produce extra- pyramidal side-effects. More effective in controlling hallucinations and delusions.
(b) Thiothixene	Navane		
Pericyazine	Neulactil	10 mgm tid or qid	
Trifluoperazine	+Stelazine	5/15 mgm tid or qid	
Perphenazine	+Trilafon	2/8 mgm tid or qid	
Fluphenazine	+Anatensol enantate	25 mgm per c.c. No longer used	
	+Anatensol deconate	Long acting parentral form.	
	MODECATE	25 mgm per c.c. I.M. may last 2 to 4 weeks.	
	+FLUANXOL	As Modecate.	
Butyrophenones	Haliperidol	1 to 2 mgm tid or qid.	
(A) Pimozide	Serenace		
Prometharine	Orap		
Triflupromazine	Phenergan		
Prochlorperazine	Vesperin		
	Stemetil		
	Compazine		
Antophenazine	Tindal		
Carphenazine	Proketazine		
Thioropozate	Dartal/ Dartalan		
Clozapine	Leponex	See literature for dosage etc.	
(B) Oxypertine	Integrin	—do—	
(C) Dibenzothizephine	Clothiapine	—do—	
	Eumine		

Major Tranquilisers:

The above table shows the commoner drugs used for the treatment of psychoses. The majority of them are phenothiazine derivatives and other drugs which appear to have similar therapeutic effects and side effects similar to phenothiazine group.

Tharepeutic uses of the above properties:

(i) Psychoses (ii) Neurotic disorders-in lower doses as minor tranquilisers, (iii) Behavioural disorders in children and the aged, (iv) alcoholism and narcotic addiction and (v) nausea and vomiting (particularly chlorpromazine and prochlorperazine. For correct dosage manufacturers' literature should be consulted.

Drugs Considered Most Appropriate for following Disorders:

<i>The Disorders</i>	<i>The Drug</i>
Schizophrenia	Phenothiazines, Butyrophenones, Thioxan- thines, Pimozide (ORAP), Oxypertine (INTEGRIN), Diben- zothipines (Clothi- apine) ETUMINE. Dibenze- pine (CLORZAPIN or LEPONEX)
Hypomania and mania	Haloperidol Sedative Phenothiaz- ines.
Acute toxic confusional states	Sedative phenothiaz- ines Sedative thioxanthines
Dementia associated with behaviour problems	Phenothiazines. Thiozanthines, Buty- rophenones.
Behaviour disorders in mentally subnormal pati- ents.	Phenothiazines Butyrophenones
Personality disorders	Pericyazine (NEUL- ACTIL)
Excessive sex drives	Benperidol (FRENA- CTIL)
Anxiety states	Oxypertine Piperazine phenothia- zines in low doses Thioxanthines Butyrophenones in low dose.

Side effects: (reasonably easily controlled with appropriate drugs)

- (i) a parkinsonian syndrome with motor retarda- tion depression, mask like facies, tremour at rest, "pill rolling" like movement of the fingers, rigidity, salivation and shuffling

gaits.

- (ii) Dystonia and dyskinesia including torti- collis, tics, facial grimacing, abnormal eye movements and various involuntary muscle movements.
- (iii) Akathisia-evidenced by motor restlessness, difficulty in sitting still and a strong urge to move about.
- (iv) Pseudopregnancy-delayed ovulation, suppres- sion of menstruation and production of lactation.
- (v) Orthostatic hypertension, faintness, palpita- tion.
- (vi) Prolonged use may cause depression and epileptic fits.
- (vii) drowsiness, nasal stuffiness, dry mouth, slight constipation, lower convulsive thresh- old (hence epileptic fits).
- (viii) Blood dyscrasias-leukocytosis, lencopaenia, eosinophilia, jaundice.
- (ix) Skin reaction-hypersensitivity, contact der- matitis, photosensitivity.
- (x) Abnormal pigmentation-skin, cornea, lens, retina.

C. Depression:

For depressive conditions psychotherapy and antidepressants are more helpful than just drugs.

Antidepressants are indicated for (1) depres- sive illness-which in its milder forms is often marked. Depression may be secondary to the treatment of some condition such as hyperten- sion or use of steroids, barbiturates, (2) Chronic organic conditions-the antidepressants may be required to increase a patient's tolerance to pain and discomfort, (3) Nocturnal enuresis (4) Pro- phylaxis-for instance to prevent ante and post- partum depression in predisposed patients.

Mono Amine Oxidase Inhibitors (MAOIs) usually combined with a tranquiliser, are very good for treating a typical depressive state particularly when public anxiety is present, but MAOIs as such are no longer widely used treatment of depression.

Lithium is now known to control manic depressive psychotic symptoms and particularly relapses. Manic depressive patients can be well stabilised with Lithium. Lithium has to be used with caution under medical supervision, with routine tests for blood lithium contents.

The general action of antidepressant drugs is to lift the mood of pessimism, restore energy and drive and to reduce autonomic over-activity.

Antidepressants:

stimulants like Benzedrine, Dexedrine, Methedrine, are used for mild depressions, hyperkinetic (hyperactive, destructive) state in children and Narcolepsy.

Therapeutic uses of the above preparations:

Generic Name	Trade Name	Dosage	Remarks
Imipramine	Tofranil	25 mgm x tid or qid	There will be an unavoidable waiting period of 1-3 weeks before the drug can be expected to have a favourable antidepressant effects.
Trimiparimine	Surmontil	25 mgm x tid or qid	
Amitriptyline	Larozyl/Tryptanol	25 mgm x tid or qid	*See literature for dosage.
Nortrypline HCl	Aventyle	10 mgm x tid or qid	
Protriptyline	Concordin	10/15 mgm x tid qid	—do—
Doxepin	Sineguan-Istonil	25	
Lithium Carbonate	* (i) By Portea Co.	250 mgm tabs.	*See literature for dosage.
	*ii) Priadel	400 mgm tabs.	
	Seroten Retard	—do—	

Toxicity: Atropine like effects, dry mouth, constipation, dizziness, tachycardia, palpitations, blurred vision and urinary retention. Glaucoma, benign prostatic hypertrophy, excessive sweating, weakness and fatigue, headache, muscle tremors and epigastric distress, hypomanic excitement or psychotic manifestations.

Amphetamine and related sympathomimetic

(D) Psychotogenic Drugs (Hallucinogenic Drugs, Psychotomimetic drugs or Psychodelics) viz: (1) Mescaline (2) Lysergic Acid Diethylamide (LSD).

These produce behavioural aberrations, hallucinations, delusions, disturbances in thinking and changes in mood. At present these agents have few recognised therapeutic uses. They are used only as tools for investigating the relationship between mind, brain and biochemistry.

The incidence of infectious hepatitis is on the increase. After regression of the acute inflammation it is important in every case

- to prevent transition to chronic hepatitis,
- to speed up complete recovery of the liver and
- to improve overall hepatic status.

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