**ANTIPSYCHOTIC DRUGS (NEUROLEPTICS)**

These are drugs that are used in the treatment of mental illness. They represent several chemically distinct groups of compounds that are capable of improving the mood and calming the disturbed behaviour of the psychotic patient without causing marked sedation.

**Classification**

**1. Typical neuroleptics**

a). Phenothiazines e.g. chlorpromazine, triflupromazine, thioridazine, mesoridazine, triflouperazine and fluphenazine.

b). Butyrophenones e.g. haloperidol, droperidol, trifluperidol and penfluperidol.

c). Thioxanthenes e.g. thiothixene, chlorprothixene and flupenthixol.

**2. Atypical neuroleptics** e.g. clozapine, olanzapine, risperidone e.t.c.

**CHLORPROMAZINE (LARGACTILE)**

It is a drug used in the treatment of mental illness, available for oral and parenteral administration. Legally class B controlled.

**Mode of action**

It blocks post synaptic dopamine receptors in the brain and has other pharmacological properties.

As an antiemetic, it inhibits the medullary chemoreceptor trigger zone.

**Pharmacokinetics**

It is rapidly absorbed following oral administration but bioavailability is low (about 30%) due to extensive first pass metabolism in the liver and gut walls. It is widely distributed to body tissues and found in high concentrations in the brain, metabolized in the liver and excreted in the urine

**Indications**

* Acute and chronic schizophrenia
* Psychomotor agitation
* Intractable hiccups
* Nausea and vomiting
* In tetanus to sedate patient
* Acute mania
* Violent behaviour
* Severe anxiety

**Contra-indications**

* Hypersensitivity
* CNS depression
* Bone marrow depression
* Severe hepatic impairment
* Glaucoma

**Dose**

The dose vary according to the indication, but on average may range from 25-300mg 6-8hrly daily

Children; 0.25mg/kg 6-8hrly daily

**Side effects**

* Drowsiness
* Dizziness
* Weakness
* Dry mouth
* Weight gain
* Blurred vision
* Constipation
* Apathy
* Sedation
* Hypotension
* Tardive dyskinesia
* Protrusion of the tongue
* Menstrual disturbance
* Tremors
* Impotence

**FLUPHENAZINE**

It is available for parenteral administration and legally class B controlled.

**Pharmacokinetics**

It is rapidly absorbed following oral administration, widely distributed to body tissues including breast milk, metabolized in the liver and excreted in urine

**Indications**

* Schizophrenia
* Severe anxiety
* Mania
* Behavioural disturbances

**Contra-indications**

* Severely depressed patients
* Blood dyscrasias
* Renal/hepatic disease
* Patients in coma

**Dose**

IM 12.5mg given at intervals of 4-7days

**Side effects**; As for chlorpromazine.

**HELOPERIDOL (HALDOL)**

It is available for both oral and parenteral administration, legally class B controlled

**Pharmacokinetics**

It is relatively absorbed when taken orally. Distributed widely to body tissues, metabolized by the liver and excreted in urine and small amount in faeces

**Indications**

* Schizophrenia
* Behavioural disturbance
* Nausea and vomiting
* Mania
* Severe anxiety
* Intractable hiccups

**Contra-indications**

* CNS depression
* Comatose patients
* Hypersensitivity
* Bone marrow depression
* Severe hepatic disease

**Dose**

Initially 0.5-5mg 2-3times daily; increased as needed up to 20mg/kg, maintenance usually 2-10mg/day

**Side effects**

* Dry mouth
* Blurred vision
* Sedation
* Increased appetite
* Weight gain
* Decreased libido
* Hypotension
* Constipation
* Peripheral oedema
* Swelling of female breasts
* Lethargy
* Depression

**Nursing concerns**

1. When used in manic episode, be alert for reversal severe depression which may result into suicidal attempts

2. The drug is not recommended for children under 3yrs because they are prone to extra pyramidal reactions

3. Protect the drug from light

4. Avoid alcohol and other medications that cause sedation

**Extra-pyramidal side effectsof antipstchotic drugs**

1. **Dystonia.** Involuntary movements characterized by restlessness, muscle spasms, protruding tongue and fixed upward gaze
2. **Tardive dyskinesia.** Refers to involuntary movements that develop later following treatment with antipsychotic drug. Involves muscles of the face and limbs.
3. **False parkinsonism.** Refers to neurological impairment characterized by tremors, hypokinesia, rigidity and postural instability
4. **Akathisia.** A sensation of restlessness characterized by an inability to sit still/down or remain motionless/seated, arising from a subjective need or desire to move, often coinciding with the sensation of twitching of muscles.

**Note:** Read more about the above side effects

**ANTIDEPRESSANTS**

Depression is a mental state characterized by diverse psychological symptoms such as low mood, loss of interest and enjoyment of activities and reduced energy.

Drugs used in the treatment of depression include;

1. Tricyclic antidepressants e.g. amitriptyline, imipramine and clompramine

2. Selective serotonin reuptake inhibitors (SSRIs) e.g. flouxetin, flouxamine, sertraline, paroxetine and citalopram

3. Monoamine oxidase inhibitors (MAOIs) e.g. phenelzine, isocarboxazid and moclobemide

4. Other antidepressant drugs (atypical antidepressants) e.g. trazodone, nefazodone, bupropion e.t.c.

**AMITRIPTYLINE**

It is used in the treatment of most depressive states, legally class B controlled and available in tablets of 25mg

**Mode of action**

Tricyclic antidepressants act by blocking the reuptake of the amines (e.g. noradrenaline and serotonin) into the pre-synaptic terminal thereby prolonging their action on the receptors.

**Pharmacokinetics**

Amitriptyline is rapidly absorbed from the GIT, widely distributed into the body including CNS, metabolized in the liver to active metabolite and excreted in urine

**Indications**

* Depression
* Nocturnal enuresis
* Peripheral neuropathy
* Migraine prophylaxis
* Tension headache
* Adjuvant in pain management

**Contra-indications**

* Known hypersensitivity
* Recent myocardial infarction
* Manic phase
* Coma
* Severe liver disease

**Dose**

Adult; initially 75mg daily in divided doses or as a single dose at bed time, increased gradually according to response tom150mg.

Children; 10-50mg at night.

**Side effects**

* Dry mouth
* Sedation
* Blurred vision
* Constipation
* Headache
* Interference with sexual function
* Weight gain
* Urticaria
* Skin rash
* Nausea
* Sweating
* Increased appetite
* Cardiac arrhythmias

**Nursing concerns**

1. Do not withdraw the drug abruptly

2. Take the drug after a meal to minimize on the GI upset

3. Avoid alcohol during treatment

4. Advise the patient to avoid activities that require mental alertness

**FLUOXETINE**

It is available for oral administration in capsule form of 20mg, legally class B controlled

**Mode of action**

It acts by inhibiting reuptake of the neurotransmitter, serotonin.

**Pharmacokinetics**

It’s well absorbed after oral administration, metabolized in the liver to active metabolites and excreted in urine

**Indications**

* Major depression
* Obsessive compulsive therapy
* Bulimia nervosa
* Panic disorders
* Post traumatic stress disorder

**Contra-indications**

* Hypersensitivity
* Severe renal failure
* Manic phase
* Unstable epilepsy

**Dose**; 20mg once daily, increased after 3-4wks if necessary; max. 60mg once daily

**Side effects**

* Headache
* Insomnia
* Constipation
* Sedation
* Dizziness
* Abdominal discomfort
* Sweating
* Tremor
* Euphoria
* Drowsiness

**Nursing concerns**

1. Full antidepressant effect may be delayed till four wks of treatment

2. Give a lower dose in patients with hepatic/renal impairment

3. Avoid alcohol during therapy

**DRUGS USED IN THE TREATMENT OF MANIA**

Mania is a state of mind characterized by cheerfulness and increased activity

Drugs used in the treatment of mania include;

* Lithium carbonate
* Sodium valproate
* Carbamazepine
* Lamotrigine

**LITHIUM CARBONATE**

It is available in tablet form of 300mg and legally class B controlled.

**Mode of action**

It promotes neuronal uptake of noradrenaline and serotonin thereby causing their more rapid inactivation

**Pharmacokinetics**

It is completely absorbed from the GIT when taken orally, distributed widely into the body. It is not metabolized and is excreted unchanged in urine.

**Indications**

* Prophylaxis of mania
* Treatment of mania
* Manic phase of bipolar disorder
* Recurrent depression
* Aggressive or self mutilating behaviour

**Contra-indications**

* Pregnancy
* Severe renal impairment
* Cardiac disease
* Lactation
* Hypersensitivity to the drug

**Dose**; 300-600mg 3-4times daily, maintenance dose 2.4g/day

**Side effects**

* Diarrhea
* Nausea
* Muscle weakness
* Polyuria
* Vertigo
* Tremors
* Sexual dysfunction
* Fatigue
* Thirsty
* Dizziness
* Drowsiness
* Impaired renal function

**Nursing concerns**

1. Take the drug with food/milk to reduce on the GI upset

2. Tell patient to maintain adequate water uptake

3. The drug should not be stopped abruptly