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Psychotropic Medications

Treatment of mental disorders

The treatment for psychiatric disorders can be divided into two types:

- 1-Physical methods include: drug treatment and (electro convulsive therapy) ECT.
- 2-Psychological methods include: cognitive therapy, behavior therapy, relaxation therapy and psychotherapy (individual therapy, group therapy, family therapy and psychoanalytic psychotherapy).

Psychotropic medication

Medication that affects psychic function, behavior. Most of the medications have their effects at the neuronal synapse, producing changes in neurotransmitter.

Nursing Role (Some important points in giving medication):

- 1-No drug should be given to patient without written order.
- 2-Don't leave patient until the drug is swallowed.
- 3-Don't allow patient to carry drug for other patient.
- 4-Always address patients by name.
- 5-Give fresh water after all medications.
- 6-Don't force oral medication, because of aspiration.
- 7- Use caution when driving or operating dangerous machinery.
- 8-Not stop taking the drug abruptly.
- 9- Nursing report about side effect of drugs to the physician immediately.

Classification of Psychiatric Drugs:

- 1-Anti-psychotics
- 2-Anti-anxiety drugs
- 3-Anti-depressants drugs
- 4-Mood-Stabilizing Agents
- 5- Anti-cholinergic agents

Anti-psychotics drugs:

Antipsychotic drugs are also called major tranquilizers, neuroleptics or anti-dopamine, are used in treatment of psychotic disorders

Mechanism of action:

All anti-psychotic drugs act by blocking dopamine receptors in the brain especially in limbic system.

Indications of anti-psychotic drugs:

Schizophrenia, Mania, Organic psychosis, Anorexia nervosa, Agitated depression, Attention deficit hyperactivity and Autism in children, Mental retardation with behavioral problem.

Commonly used antipsychotic drugs:

1-Typical:

Chlorpromazine, Thioridazine, Trifluoperazine, Fluphenazine, Haloperidol, phenobarbiton and Prochlorperazine.

2-Atypical

Olanzapine, Risperidone, Quetiapine, Ziprasidone, Flupenthixol, Pimozide, Clozapine, Loxapine,.

Side effects of anti-psychotic drugs and nursing management:

A- General side effects

1-Anti-cholinergic effect

- a. Dry mouth:** sugarless candy gum, ice and sips of water.
- b. Blurred vision:** not drive a car, subside after few weeks.
- c. Constipation:** exercise, fluid, high fiber diet.
- d. Urinary retention:** monitor intake and output.

2-Nausea; GI upset: Tablets or capsules may be administered with food.

3- Orthostatic hypotension *Instruct the client to rise slowly from a lying or sitting position

*Monitor blood pressure each shift; document and report significant changes

4-Skin rash *Report appearance of any rash on skin to physician.*Avoid spilling any of the liquid concentrate on skin contact dermatitis can occur with some medications

5-Hormonal effects (amenorrhea and lactation in women and gynecomastia, decreased libido in men, are reversible).

6-Sedation: Administering the drug at bedtime, decrease in dosage, instruct client not to drive car.

7-Weight gain.

8-ECG Changes: ECG done early

9-Photosensitivity.

10-WBC change: Lab. investigations needed.

B-Extra pyramidal side-effects

1-Parkinsonism (tremor, rigidity, and shuffling gait) Treated by: anti-parkinsonian drugs.

2-Tardive dyskinesia (bizarre facial and tongue movements, stiff neck and difficulty in swallowing).

3-Akinesia (muscular weakness)

4-Akathisia (continuous restlessness)

5-Dystonia (involuntary muscular movements [spasms] of face, arms, legs, and neck) Treated by: injection of Promethazine or diazepam.

6-Neuroleptic malignant syndrome (NMS)

*Symptoms include severe; tremor, muscle rigidity, fever, vital signs change, tachycardia, diaphoresis (sweating), fluid imbalance, and rapid deterioration of mental status to stupor, Coma and death may occur rarely.

Nursing care for (NMS):

- 1- Stop the drug.
- 2- Cannulation and IV fluid administration.
- 3-Reduce the fever.
- 4- Send investigation to laboratory.
- 5-Call the psychiatrist.
- 6- Take the drug such as Dantrolene, Volume and Bromocriptine.

Anti-anxiety drugs

are known as minor tranquilizers or anxiolytics or Sedative-Hypnotics

-Uses for anxiety, they facilitate sleep, Are effective for relief of neurotic conditions and spasm. Relief symptoms of anxiety like: tremor, palpitation, tachycardia and sweating.

Mechanism of action: depression of central nervous system.

Classification of anti-anxiety drugs:

- 1- Benzodiazepines (chlordiazepoxide, diazepam, oxazepam, alprazolam, nitrazepam, clonazepam).
- 2-Buspirone
- 3-beta- blocker (Inderal)

Indication of anti-anxiety:

For panic attack and phobia: diazepam and alprazolam

For anxiety disorder: diazepam and chlordiazepoxide

For sedation and hypnotics (sleep): chloral hydrate, diazepam, clonazepam.

For convulsion and muscle spasm: diazepam, clonazepam

Side effects of anti-anxiety drugs and nursing management:

1-Drowsiness, confusion, lethargy; Not driving and operating while on medication.

2-Addiction (instruct patient to not increase the dose of drug).

3-Potentates the effects of other CNS depressant (patient should not take other tranquilizers and not drink the alcohol).

4-Aggravate symptoms in depressed persons (assess for suicidal idea)

5-Orthostatic hypotension (rise slowly from a lying or sitting position)

6- Nausea (take drug with milk or food).

Contraindication:

pregnancy, lactation, glaucoma and hypersensitivity

Antidepressants:

1-Tricyclic anti-depressants for example:

imipramine, clomipramine, amitriptyline, doxepin, trimipramine, Nortriptyline and Desipramine).

2-SSRI s (serotonin selective reuptake inhibitors):

newer anti-depressants, less toxic and minimal side effects for example:

(Fluoxetine, Citalopram, Escitalopram, amoxapine, Paroxetine, Sertraline and Fluvoxamine).

Mechanism of action:

These drugs increase the concentration of norepinephrine and serotonin in the brain by blocking reuptake of these chemicals by the neurons.

Indications of antidepressant drugs:

Major depression, bipolar depression, prophylaxis of depression, panic disorder, obsessive compulsive disorder, atypical depression and bulimia and psychotic symptoms.

Side effects of antidepressant and nursing care:

1-Anti-cholinergic effect

a. Dry mouth: sugarless candy gum, ice and sips of water.

b. Blurred vision: not drive a car, subside after few weeks.

c. Constipation: exercise, fluid, high fiber diet.

d. Urinary retention: monitor intake and output.

2-Sedation Administering the drug at bedtime, decrease in dosage, instruct client not to drive.

3-Nausea; GI upset: Tablets or capsules may be administered with food.

4-Tachycardia (check pulse rate, call doctor)

5- Orthostatic hypotension *Instruct the client to rise slowly from a lying or sitting position

*Monitor blood pressure each shift; document and report significant changes

Overdose or poisoning of anti-depressants:

Tricyclic anti-depressants are a major problem in overdose. Any dose above 600 mg is likely to produce serious effects in adults. Management includes stomach wash within 12 hours. Activated charcoal should be given to reduce absorption.

Bicarbonate IV will reduce the cardiac abnormalities.

Contraindications/Precautions

1-Hypersensitivity (allergy) 2-Recent myocardial infarction 3-glaucoma.

Mood-Stabilizing Agents

General indications of mood stabilizers are:

Mania, bipolar disorder, depression, alcohol withdrawal and minimizes aggressive behaviors in schizophrenia, seizures and panic disorder.

Classification of Mood-Stabilizing Agents:

1- Antimanic: Lithium carbonate

Is effective in treating mania, before starting lithium, the patient must be investigated for cardiac, renal and thyroid function.

The therapeutic effective serum lithium level is 0.8-1.2 mEq/L.

Contraindication:

Pregnancy, children below 12 years, dehydration, cardiovascular, renal and thyroid disorders.

Side effects:

Dry mouth, GI upset nausea, fine hand tremor, pulse irregularities and frequent urination.

Toxic effects of lithium:

Serum level beyond 2.0 m/l manifests in the form of abdominal discomforts, nausea, vomiting, diarrhea, hand tremor and drowsiness.

Treatment includes immediate stopping of drug, diet adequate in sodium and 2500-3000 ml of fluid per day.

Mood-Stabilizing Agents.....continue...

2-Anti-convulsants (Mood-Stabilizer)

Carbamazepine, Sodium Valproate (valproic acid), clonazepam, Lamotrigine, Gabapentin and Topiramate.

Anti-Cholinergic agents (Also called anti-parkinsonism drugs):

These drugs are effective in treatment of anti-psychotic induced extra-pyramidal side effects. They block acetylcholine and include:

Trihexyphenidyl, Procyclidine, Diphenhydramine and Amantadine.

Side effect: anticholinergic effects (dry mouth, constipation, blurred vision and urinary retention).

Electro-convulsive therapy (ECT):

Most effective available treatment in psychiatry. Consists of passing an electric current of 110 volts across the temporal region of the head for about 0.5-1 second. It produces convulsion which is essential component of the treatment.

E.C. T is indicated when

A- patient refuse to eat or drink

B- suicidal behavior

C- severe retardation

D- refuse to take medication

E- un response to medication

F-Major depression, catatonic stupor, severe schizophrenia, acute psychosis, acute mania

Contraindication for ECT

Recent myocardial infarction, brain tumors and aneurysm, raised intraocular pressure, fractures, cardiac or respiratory failure, permanent pace maker.

Complications of ECT: Fractures, dislocation (jaw, shoulder), cardiac arrhythmia, myocardial infarction, cerebral hemorrhage, aspiration pneumonia

Side effects of ECT

Confusion recovers within a day. Muscle ach, headache- recovers after few days. Memory impairment recovers in 3-6 weeks.

Preparation for ECT:

- Giving explanation to patient and relatives and informed consent should be obtained.
- Chest X-ray and ECG should be done.
- starvation for 6 hours
- all dentures , jewelry, eye glasses, contact lenses, hair pins, should be removed
- bladder should be emptied
- vital signs should be checked
- Oxygen supply is kept ready.
- Atropine 0.1-1.2 mg should be given 15-30 minutes before procedure to reduce secretion.

Nursing care during ECT:

- Patient is placed on a specially prepared table, with a hard pillow under the neck.
- Four persons are used to hold shoulders, arms and legs firmly to prevent fracture and dislocation.
- A mouth gag is inserted between teeth to prevent tongue bite.
 - Jaw is supported by upward pressure to avoid jaw dislocation.
- Airway is to be maintained.
- At the end of ECT the patient's head is turned to one side.

Nursing care after ECT:

- Some patient will sleep and some will confuse or restless at this time injection of diazepam may be necessary.
- Side rails should be put up.
- Vital signs should be checked
- Nurse should stay with patient until he/she can respond to questions.
- Orient patient to time, place and person
- Patient can drink after 20-30 minutes after treatment.

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