

Antidepressants

Psychopharmacology

Ruqayah al Hajji

Objectives:

At the end of this lecture the student be able to:

1. Describe the antidepressants and their mechanisms of action, side effects, and special nursing considerations
2. Identify nursing intervention and pertinent teaching for clients taking antidepressants agents

Outlines:

- Definition of Antipsychotic
- Clinical Indications
- Mechanism of action
- Complications
- Contraindications
- Nursing intervention

Definition:

Antidepressant drugs are primarily used in the treatment of mood disorders except (mania or hypomania)

The target **Symptom** this drugs used for are:

- Moderate or severe symptoms of depression
- Significant impairments in social or occupational as results of depression
- Suicidal ideation

Clinical Indication:

Major Depressive Disorder, anxiety disorders, the depressed phase of bipolar disorder, and psychotic depression

Mechanism of action

Is not completely understood, antidepressants in some way interact with the two neurotransmitters, norepinephrine and serotonin, that regulate mood, arousal, attention, sensory processing, and appetite. Clinical effects of reducing depressive symptoms usually take between 2 to 6 weeks depending on medication used.

Classification

- Tricyclic and the related cyclic antidepressants
- Selective serotonin reuptake inhibitors (SSRIs)
- Monoamine oxidase inhibitors (MAOIs)

- (Noval) Atypical Antidepressants

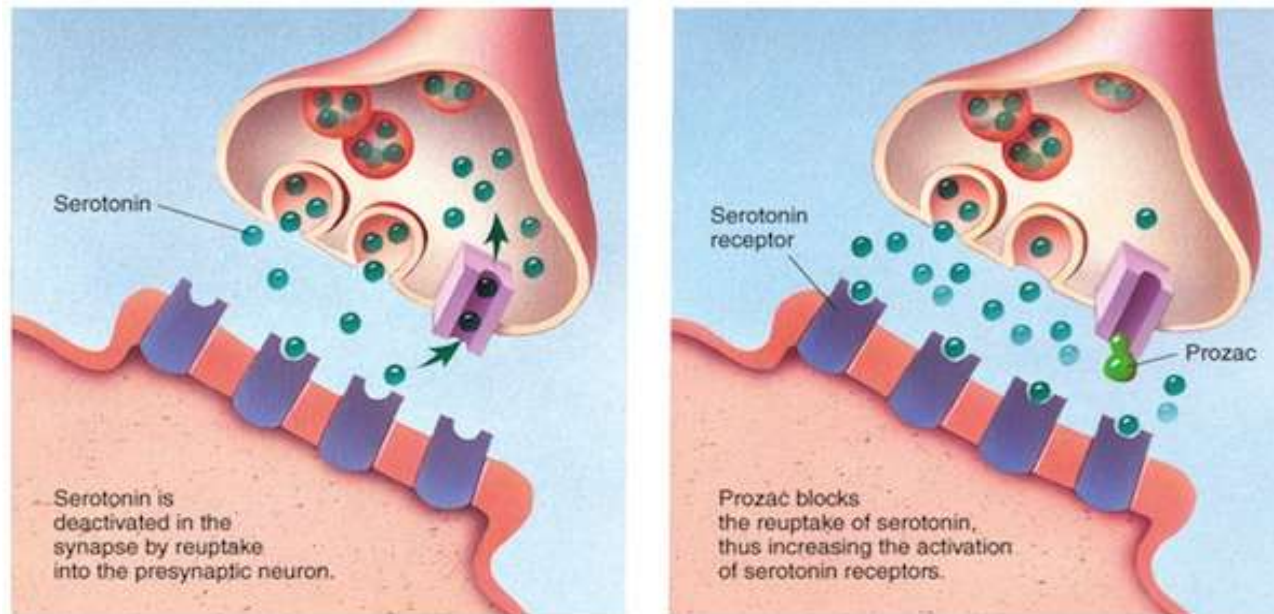
Selective serotonin reuptake inhibitors (SSRIs)

Considered first line choices of treatment because of:

- Decreased and tolerable side effects
- No risk for lethal overdoses
- Effective in 70% of cases

Mechanism of action:

This drug immediately block reuptake of 5-HT (serotonin) into neuron by blocking the HT-5 pump , therefore this increase the HT-5 in Synapse and activate serotonin receptor



Side effects:

- Gastrointestinal system: nausea, vomiting , diarrhea
- CNS: headache, anxiety, nervousness
- Loss of libido

Serotonin syndrome:

It is accumulation of serotonin as result of combination of other antidepressants medication or use of St. John's Wort (herbal) characterized by :

- Confusion
- Agitation or restlessness
- Dilated pupils
- Headache
- Hypotension or hypertension
- Nausea and/or vomiting
- Diarrhea
- Tachycardia
- Loss of muscle coordination
- Shivering
- Heavy sweating

Nurse Role:

The nurse instruct the clients to do the following:

- Take SSRIs in the morning unless sedation is a problem
- Take medication as prescribed, never, alter dose and take another type of medication or herbal without contact the physician
- Avoid taking grapefruit with some SSRI such as Fluvoxamine (luvox) , sertaline (Zoloft)
- Avoid use of alcohol , tryptophan and diazepam

Example :

fluoxetine (Prozac) , citalopram (Clexa), sertraline (Zoloft)

Tricyclic Antidepressants:

- Client receiving TAcS usually shows increase mental alertness and physical activity and mood elevation within 2 to 3 weeks after initial dose.

Mechanism of action:

Blocking reuptake of Dopamine and Nor-epinephrine at noradrenergic neuron .

Side effects:

- Anticholinergic Side Effects.

Include orthostatic hypotension, dry mouth, constipation, urinary hesitance or retention, blurred vision and dry mouth

- Orthostatic hypotension
- Sedation, weight gain
- Sexual dysfunction similar to problems experienced with SSRIs.
- Both weight gain and sexual dysfunction are cited as common reasons for noncompliance
- Should not be used for client at risk for suicide

Nursing Role:

- Assess presence of Suicidal ideation in client taking TCAs even after treatment with antidepressants is initiated.
The client may feel more energized but still have suicidal thoughts, which increases the likelihood of a suicide attempt

- Take medication as prescribed, never, alter dose and take another type of medication or herbal without contact the physician
- Avoid taking over counter medication without physician consultation some drugs like antihistamine , narcotic analgesic and alcohol can decrease the effects of TCAs
- Monitor client receiving high doses for signs of seizure activity

Example: amitriptyline (Elavil) , desipramine (Norpramin ,Petrofrance) , doxepin(Sinequan)

Monoamine Oxide inhibitors:

- Prescribed for client who fail to response TCAs or cannot tolerate SSRI

Mechanism of action:

Block activity of MAO an enzyme that break down the nor-epinephrine within the neuron itself, therefore increase level of tyramine which lead to accumulate the nor-epinephrine .

Side effect

- Hypertension crises a critical medical condition that need immediate medical interaction characterized by : Headache, tachycardia, diaphoresis, , and cardiac dysrhythmia ,dilation of pupils and intracerebral hemorrhage
- It is results of overdoes of MAOIs , MAOIs -drug interaction , food-drug interaction (food rich of tyramine)

- other side effects of MAOIs include :

Day- time sedation, insomnia weight gain, dry mouth, orthostatic hypotension, and sexual dysfunction.

- The sedation and insomnia are difficult to treat and may necessitate a change in medication.

Nurse Role:

- Observe the client for signs of adverse effect and food or drug interaction

Instruct client the following:

- Take medication as prescribed, never, alter dose and take another type of medication or herbal without contact the physician
- Avoid intake food containing tyramine such as
 - Mature or aged cheeses or dishes made with cheese, such as lasagna or pizza. All cheese is considered aged except cottage cheese, cream cheese, ricotta cheese, and processed cheese slices.
 - Aged meats such as pepperoni, salami, mortadella, summer sausage, beef logs, and similar products. Make sure meat and chicken are fresh and have been properly refrigerated.

- Italian broad beans (fava) pods or banana peel. Banana pulp and all other fruits and vegetables are permitted.
 - All tap beers, Drink no more than two cans or bottles of beer (including non-alcoholic beer)
 - Sauerkraut, soy sauce or soybean condiments, or (concentrated yeast)
 - Also, Caffeine, avocado, chocolate ,chicken liver, yogurt , sour cream and raisins
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- Have a vision checked periodically because optic toxicity may occur if therapy administered over an extended period .
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- Carry a Medical Alert card to inform emergency room staff about therapy with MOAIS

Example : phenelzine (Nardil) , tranylcypromine (Parnate)