Psychiatric Agents

Antipsychotics and Anxiolytics

Psychosis
- A mental and behavioral disorder
- Causes gross distortion of mental capacity, inability to recognize reality, and inability to effectively relate to others
- Interferes with a person’s capacity to cope with ordinary demands of everyday life
- Symptoms
  - Delusions
  - Incoherence
  - Hallucinations
  - Catatonia
  - Difficulty in processing information
  - Aggressive or violent behaviors
- Theory
  - Dopamine imbalance in brain

Antipsychotic Agents (Neuroleptics, Psychotropics)
- Action
  - Block action of dopamine
- Two major categories
  - Typical or first generation
    - Phenothiazines and nonphenothiazines
  - Atypical or second generation
    - Used when intolerance or not responsive to typical antipsychotics

Antipsychotics
Typical Antipsychotics (Phenothiazines)

- **Indication**
  - Management of Schizophrenia
- **Common Medications**
  - Chlorpromazine (Thorazine)
  - Fluphenazine (Prolixin)
- **Alternative Uses:**
  - Antiemetic effect (example = Compazine)
  - Thorazine = Treat uncontrolled hiccups
- **Adverse Effects**
  - Sedation, orthostatic hypotension
  - Development of extra pyramidal symptoms (EPS)
  - Anticholinergic Effects

Typical Antipsychotics (Nonphenothiazines)

- **Common Drug = Haloperidol (Haldol)**
  - **Action**
    - Blocks dopamine receptors
  - **Administration**
    - Oral – absorbed well
    - IM – Z-track
  - **Side effects**
    - Sedation, orthostatic hypotension
    - Development of extra pyramidal symptoms (EPS)
    - Anticholinergic Effects
  - **Use**
    - Treat acute and chronic psychoses
    - Treat schizophrenia, Tourette’s syndrome, dementia

Extrapyramidal Syndrome (EPS)

- **Pseudoparkinsonism symptoms**
  - Stooped posture
  - Masklike features
  - Rigidity
  - Tremors at rest
  - Shuffling gait
  - Bradykinesia
  - Pill-rolling motion of the hand

*The anticholinergic drug benztropin (Cogentin) is commonly prescribed to reduce symptoms of EPS*

- **Acute dystonia**
  - Muscle spasms of face, tongue, neck, and back
Facial grimacing
- Involuntary upward eye movements
- Laryngeal spasms
- Akathisia
  - Constant motion (pacing)
- Tardive dyskinesia – Late Phases of therapy
  - Protrusion and rolling of tongue, chewing action

Phenothiazine Overdose
- Symptoms
  - Unable to arouse
  - Tachycardia, fluctuating blood pressure
  - Agitation, delirium, + S/S of EPS
  - Seizures, dysrhythmias
  - Cardiopulmonary failure
- Treatment
  - Cardiopulmonary Life Support
  - Gastric Lavage
  - Activated charcoal

Neuroleptic Malignant Syndrome
- Rare, potentially fatal condition
- Symptoms
  - Muscle rigidity, sudden high fever, altered mental status, BP fluctuations, tachycardia, dysrhythmias, seizures, rhabdomyolysis, acute renal failure, respiratory failure, coma
- Treatment
  - Immediate withdrawal of antipsychotics
  - Symptomatic
    - Hydration, hypothermic blankets, antipyretics, benzodiazepines, muscle relaxants

Atypical Antipsychotics
- Action
  - Block serotonin and dopaminergic receptors
- Advantage
  - Effective in treating both positive and negative symptoms of schizophrenia
  - Less likely to cause EPS
- Common Medications
  - Clozapine (Clozaril)
  - Risperidone (Risperdal)
  - Ziprasidone (Geodon)
  - Olanzapine (Zyprexa)
- Aripiprazole (Abilify)
- Quetiapine (Seroquel)

### Adverse Effects
- Weight Gain
- Dizziness, agitation, insomnia or sedation
- Prolonged Q-T with Geodon
  - Contraindicated if history of dysrhythmia
- Agranulocytosis with Clozaril
  - Monitor weekly WBC counts

### Schizophrenia
- Positive symptoms
  - Delusions
  - Paranoia
  - Hallucinations
  - Incoherent speech
- Negative symptoms
  - Poor self-care
  - Poverty of speech
  - Social withdrawal

### Nursing Interventions Antipsychotics
- Monitor vital signs
  - Orthostatic hypotension likely
  - Encourage client to change position slowly
- Administer with food – decreases GI distress
- Liquid meds must be protected from light
- No SQ meds
- Give IM route deep into muscle
- Observe for EPS
- Monitor client for “cheeking” medication
- Monitor for neuroleptic malignant syndrome
- Stress importance of taking drug as scheduled
- Warn client therapeutic response may take 6 weeks
- Caution client to avoid alcohol and other CNS meds
- Guide client to maintain good oral hygiene
- Warn client against abrupt discontinuation
- Recommend wearing an ID bracelet indicating what med is taken
Anxiety

**Benzodiazepines**
- Indication
  - Anxiety
    - Relief of acute symptoms – Not a cure!
  - Anxiety with Depression
  - Insomnia
    - Short-term use
  - Seizures / Status Epilepticus
  - Alcohol withdrawal
  - Skeletal Muscle Spasms
  - Preoperative Medications

**Anxiolytics**
- Common Medications = Benzodiazepines
  - Alprazolam (Xanax)
  - Lorazepam (Ativan)
  - Chlordiazepoxide HCL (Librium)
  - Diazepam (Valium)
- Benzodiazepine Antagonist
  - Flumazenil (Romazicon)
- Misc Anxiolytic
  - Buspirone (BuSpar)
- Side Effects
  - Drowsiness, dizziness, weakness, confusion, blurred vision, GI distress, sleep disturbance, restlessness, hallucinations
- Withdrawal
  - Develops slowly – 2-10 days, and may last several weeks
  - Withdrawal symptoms
    - Tremor, agitation, nervousness
    - Sweating, insomnia
    - Anorexia, muscle cramps

**Nursing Interventions Anxiolytics**
- Monitor vital signs
- Encourage client to change position slowly
- Warn client therapeutic response may take 1-2 weeks
- Advise not to drive a motor vehicle or operate dangerous equipment with anxiolytics
- Monitor for signs of drug tolerance and decreased effectiveness; particularly when taken longer than recommended 2-4 month period
- Warn client against abrupt discontinuation
Antidepressants and Mood Stabilizers

Depression
- Mood disorder
  - Characterized primarily by mood changes, and loss of interest in normal activities
- Pathophysiology
  - Insufficient amount of neurotransmitters (norepinephrine, serotonin, dopamine)
- Other etiology
  - Genetic predisposition
  - Social and environmental factors
- Three Types
  - Reactive
    - Usually sudden onset resulting from precipitating event
  - Major
    - Characterized by sustained loss of interest in work, home, inability to complete tasks
  - Bipolar
    - Mood swings between manic (euphoric) and depressive (dysphoria)

Four Groups of Antidepressant Agents
- Tricyclic antidepressants (TCAs)
  - Amitriptyline (Elavil), imipramine (Tofranil)
- Selective serotonin reuptake inhibitors (SSRIs)
  - Fluoxetine (Prozac), sertraline (Zoloft)
  - Paroxetine (Paxil), escitalopram (Lexapro)
- Atypical antidepressants
  - Bupropion (Wellbutrin), Venlafaxine (Effexor)
- Monoamine oxidase inhibitors (MAOIs)
  - Phenelzine sulfate (Nardil), tranylcypromine sulfate (Parnate), isocarboxazid (Marplan)
Antidepressants

Tricyclic Antidepressants
- Action
  - Block uptake of neurotransmitters norepinephrine and serotonin in brain
  - Elevates mood, increases interest in ADLs, decreases insomnia
- Use
  - Major depression and agitated depression
- Effectiveness
  - Well documented
- Administration – Oral
  - Given at HS to avoid sedation
  - Clinical response 2-4 weeks
  - Taper when discontinuing drug
- Interactions
  - Increased CNS effects with alcohol and other CNS depressants
  - Increased sedation and anticholinergic effects with phenothiazines
- Common side effects
  - Sedation, weight gain, sexual dysfunction
  - Anticholinergic effects
  - Orthostatic hypotension
  - + EPS

Selective Serotonin Reuptake Inhibitors
- Action
  - Block uptake of neurotransmitter serotonin
  - Elevates mood, increases interest in ADLs
• Use
  o Major depression and anxiety disorders
  o Prevention of migraine headaches
• Effectiveness
  o Treat wide array of mental disorders
    ▪ Depression, obsessive/compulsive, panic, phobias, post-traumatic stress disorder, and general anxiety
  o Common, costly, preferred
• Administration – Oral
  o Given in am to avoid insomnia
  o Clinical Response 2-4 weeks
  o Taper when discontinuing drug
• Interactions
  o Increased CNS effects with alcohol and other CNS depressants
  o Grapefruit juice increases drug levels
• Side effects/adverse reactions
  o Nervousness, restlessness, insomnia, tremors
  o GI distress, sexual dysfunction
  o Serotonin Syndrome = agitation, confusion, disorientation, hallucinations

Monoamine Oxidase Inhibitors (MAOI's)
• Action
  o Monamine oxidase enzyme inactivates norepinephrine, dopamine, epinephrine, and serotonin
• Use
  o Depression not responsive to TCA's or SSRI's
• Effectiveness
  o Not antidepressant of choice
• Administration – Oral
  o Clinical Response 2-4 weeks
  o Taper when discontinuing drug
• Interactions
  o Increased CNS effects with alcohol and other CNS depressants
• Side effects/adverse effects
  o Tremors, agitation, restlessness, insomnia
  o Orthostatic hypotension
  o Hypertensive crisis from fatal tyramine interaction (cheese, coffee, cream, yogurt, bananas, yeast, chocolate, beer, red wine)

Atypical antidepressants
• Action
  o Affect 1-2 of the neurotransmitters norepinephrine, dopamine, or serotonin
Use of Depression

Effectiveness, Administration & Interactions
- Work similar to TCA’s

Side Effects
- Review individual drug considerations in nursing drug book

WARNING – Anti-depressants can increase suicidal tendencies in children and young adults

Mood Stabilizer: Lithium

Action
- Increased receptor sensitivity to serotonin

Use
- Treatment of bipolar affective disorder

Effectiveness
- Calming effect without impairing intellectual activity
- Controls flight of ideas and hyperactivity

Special note for lab monitoring
- Narrow therapeutic range 0.5-1.5 mEq/L
- Monitor Na levels causes hyponatremia
- Monitor tsh with prolonged use

Interactions
- Increase lithium level with thiazides, phenothiazines, NSAIDs, antidepressants, theophylline

Side effects (multiple)
- Increased urination, dry mouth, thirst
- Metallic taste, bloated feeling, weight gain
- Dysrhythmias, blood dyscrasias, nephrotoxicity

Nursing Interventions
- Encourage client to increase fluid intake (2 liters/day) and maintain adequate sodium intake
- Encourage client to take with meals to reduce GI irritation
- Ensure lithium levels are immediately before next dose
- Encourage client to keep medical appointments
- Instruct to take lithium as prescribed
- Inform client therapeutic level isn’t achieved for approximately 2 weeks