1. **Unit 14**
   Psychotherapeutic and Anti-Parkinson Drugs

2. **Drugs for Psychoses**
   Most psychoses have no identifiable cause and require long-term drug therapy

3. **Signs and Symptoms**
   - **Delusions** (strong beliefs in something that is false or not based on reality)
     - Example: the patient may believe that someone is planting thoughts in his or her head

4. **Signs and Symptoms**
   - **Hallucinations** (seeing, hearing, or feeling something that is not there)
     - Example: the patient may hear voices or see spiders crawling on walls that others around the patient do not see or hear

5. **Signs and Symptoms**
   - **Illusions** (distorted or misleading perceptions of something that is actually real)
     - Example: the patient may see a shadow and believe it is really a person

6. **Signs and Symptoms**
   - **Disorganized behavior**
     - Example: the patient may wear clothes in an entirely inappropriate manner and for no apparent reason, such as dressing up with layers of clothes including a hat, sunglasses, and several pairs of socks over the hands and feet

7. **Signs and Symptoms**
   - **Difficulty relating to others**
     - Example: the patient may become withdrawn from other people in the room, showing signs of distress, maybe even turning combative if confronted or questioned. Behavior may range from total inactivity to extreme agitation.

8. **Signs and Symptoms**
   - **Paranoia**
     - Example: the patient may have an extreme suspicion that he or she is being followed, or that someone is trying to kill him or her

9. **Schizophrenic patients experience many different symptoms that may change over time.**

10. **Schizophrenia**
    - A type of psychosis
      - abnormal thoughts and thought processes, disordered communication, withdrawal from other people and the outside environment, and a high risk for suicide.
Several subtypes of schizophrenic disorders are based on clinical presentation.

11 Positive Symptoms

**Add on to Normal behavior**
- Hallucinations, delusions, or paranoia
- Strange behavior, such as talking in rambling statements or making up words
- Strange or irrational actions
- Changes from stupor to extreme hyperactivity

12 Negative Symptoms

**Subtract from normal behavior**
- Attitude of indifference toward or detachment from life activities
- Neglect of personal hygiene, job, and school
- Noticeable withdrawal from social activities and relationships
- Changes from extreme hyperactivity to stupor

The experience and skills of the healthcare provider are critical to the pharmacological management of psychoses.

14 Disease Management

- The primary goal of pharmacotherapy for schizophrenic patients is to reduce psychotic symptoms to a level that allows the patient to maintain normal social relationships, including self-care and keeping a job

15 Conventional antipsychotic drugs include the phenothiazines, phenothiazine-like drugs, and nonphenothiazines

16 Prototype Drug

- Thorazine (chlorpromazine)
  - Phenothiazine
  - Block excitement of positive symptoms
  - Diminish hallucinations and delusions within days
  - Other symptoms may take weeks of therapy to improve
  - Acts by preventing dopamine & serotonin from receptor sites
  - Usually long term therapy, often life
  - Adverse effects significant
  - Avoid using sedatives
  - Tricyclic antidepressants can elevate blood pressure
  - Using with antiseizure meds can lower seizure threshold

19 Prototype

- Haldol (haloperidol)
– Nonphenothiazide
– Causes less sedation and fewer anticholinergic effects than phenothiazides
– Extrapyramidal symptoms significant

21 Extrapyramidal Adverse Effects

- Serious set of adverse reactions to antipsychotic drugs
- Symptoms include:
  - Acute dystonia - Severe muscle spasms, particularly of the back, neck, tongue, and face, usually occur early in the course of pharmacotherapy
  - Akathisia, most common EPS, is an inability to rest or relax
  - Parkinsonism include tremor, muscle rigidity, stooped posture, and a shuffling gait
  - Tardive dyskinesia, unusual tongue and face movements such as lip smacking and wormlike motions of the tongue

22 Extrapyramidal Adverse Effects

- If extrapyramidal effects are reported early and the drug is withdrawn or the dosage is reduced, the adverse effects can be reversible
- With higher doses given for prolonged periods, the extrapyramidal symptoms may become permanent

23 Atypical antipsychotic drugs and a newer drug class have been developed to better meet the needs of patients with psychoses

25 Prototype

- Clozaril (clozapine)
  - First atypical antipsychotic
  - Second generation drug, broader spectrum than original antipsychotic (Thorazine) controlling both positive and negative symptoms of schizophrenia
  - Act by blocking receptor in brain
  - Less extrapyramidal effects
  - Newer drugs in class can lead to menstrual and sexual difficulties and altered glucose metabolism leading to type II diabetes

26 Nursing Observations

- Monitor for decreased psychotic symptoms
  - If not, patient may not be taking meds
  - Inadequate dose
- Monitor for adverse effects
  - Drowsiness, menstrual irregularities, depression
- Monitor anticholinergic effects
  - Orthostatic hypotension, urinary problems, visual disturbances
- Monitor extrapyramidal effects
  - Tremors, repetitive movements, restlessness, decreased muscle tone
Monitor for Neuroleptic Malignant Syndrome

27 Nursing Observations (con’t)

- Monitor for seizures
  - Drugs may lower seizure threshold
- Monitor alcohol and illegal drug use
  - Can lead to increased CNS depressant effect
- Monitor caffeine use
  - Can negate effect of antipsychotics
- Monitor heavy tobacco use
  - May lead to decreased effectiveness of antipsychotic drugs

28 Concept Review

- What are the major types of psychoses and how are they differentiated?
- How are the symptoms of schizophrenia reduced?

29 Concept Review

- What are the signs characteristic of schizophrenia?
- What distinguishes a positive symptom from a negative symptom?

30 Concept Review

- What are the two general classes of drugs used to treat psychoses?
- How does each drug category generally affect positive and/or negative symptoms of schizophrenia?

31 Neurodegenerative Disease

- Generally cause unknown
- Progress from hardly noticeable signs and symptoms early in the disease to serious neurologic and cognitive deficits
- Difficult to diagnose in early stages
- Pharmacotherapy provides only minimal benefit except for Parkinson’s disease
- Currently, medication is unable to cure any of the major neurodegenerative diseases

33 Parkinson’s Disease

- Progressive, with the occurrence of full symptoms taking many years

34 Symptoms

- Tremors
  - Hands and head develop a palsy-like motion or shakiness when at rest
  - pill-rolling
- Postural instability
  - Stooped posture
- Frequent falls

35 **Symptoms**
- **Muscle rigidity**
  - Stiffness resemble arthritis
  - Difficulty bending over or moving limbs
  - Masked face
- **Bradykinesia**
  - Most noticeable symptom
  - Difficulty chewing, swallowing, or speaking
  - Difficulty initiating movement and controlling fine muscle movements
  - Walking often becomes difficult, shuffling gait

36 **Goal of Pharmacotherapy**
- Increase the ability of the patient to perform normal daily activities such as eating, walking, dressing, and bathing
- Restore the balance of dopamine and acetylcholine within the brain
- Drugs include dopaminergic agents and anticholinergics (cholinergic blockers)

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39 **Dopaminergic Drugs Used for Parkinsonism**

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41 **Prototype**
- **Larodopa (levodopa)**
  - Drug of choice for Parkinsonism
  - Dopaminergic drug
  - Stimulates dopamine synthesis within nerve terminal
  - Can cross blood brain barrier
  - More effective if given with carbidopa (Sinemet)

42 **Prototype**
- **Cogentin (benztropine)**
  - Anticholinergic drug (cholinergic blocker)
  - By blocking acetylcholine the drug inhibits over activity of neurotransmitter within brain
  - Acts within CNS causing ANS effects such as dry mouth, blurred vision, tachycardia, urinary retention and constipation
  - Often used in early treatment when symptoms are not as severe
  - Not as effective as levodopa

43 **Concept Review**
- Parkinson’s disease primarily affects which body functions?
• What are the four major symptoms of this disorder?

44 Concept Review
• Anti-Parkinson’s drugs attempt to restore the balance of which two major central neurotransmitters?

45 Concept Review
• What are the types of drugs used to treat Parkinson’s Disease and the adverse effects of such drugs?

• What are the nursing implications for patients taking such drugs?