Antipsychotics & Anxiolytics

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Antipsychotics

- Psychosis
  - Positive Symptoms
  - Negative Symptoms
- Dopamine
  - D1 to D5

Antipsychotic Agents

- First Generation Antipsychotic (FGA)
  - Typical
  - Dopamine D2
- Second Generation Antipsychotics (SGA)
  - Atypical
  - Dopamine D4 & Serotonin (5HT2c)

Antipsychotic Agents

- Typical antipsychotics (FGA)
  - Dopamine D2

- Highly protein-bound
- Excretion is slow
- Metabolized by liver
- Sedative effect
- Observable therapeutic response 7-10 day
- Full therapeutic effects in 3 to 6 weeks

Extrapyramidal Syndrome

- Dystonia
  - Early
  - Rx – maintain airway, Benztropine (Cogentin), Benzodiazepine
- Akathisia
  - Early
  - Rx – Benzodiazepine, Beta-blocker

- Pseudoparkinsonism
  - Rx -

- Tardive dyskinesia
  - Late – but can be in 5 to 30 days
  - ↑ risk in older adults
  - Rx – Stop drug, Helpful medications – benzodiazepines, calcium channel blockers, beta-blockers, clozapine, vitamin E

Neuroleptic Malignant Syndrome (NMS)

- Rare but potentially fatal
- Symptoms
- Rx
  - Stop medication, hydration, cooling measures, antipyretics, benzodiazepine, muscle relaxants

Blood Dyscrasias

- Agranulocytosis
  - WBC
    - 3000 – discontinue medication
  - Symptoms of infection

Common Side - Effects

- Most common – drowsiness
- Anticholinergic effects
  - Dry mouth
  - Increased HR
  - Urinary retention
  - Constipation

- Dermatologic effects
  - Pruritus
  - Photosensitivity

Typical Antipsychotic Classifications

- Phenothiazines
  - Chlorpromazine (Thorazine)
    - urine might turn pink or red-brown
  - Fluphenazine (Prolixin)
  - Thioridazine (Mellaril)

- Overdose of Phenothiazines
  - Symptoms
    - Unarouseable, BP fluctuations, tachycardia, dysrhythmias, altered LOC, organ failure, EPS, NMS.
  - Rx
    - Airway, gastric lavage, activated charcoal, anticholinergics, hydration, norepinephrine.

- Nonphenothiazines
  - Butyrophenone
    - Haloperidol (Haldol)
  - Thioxanthenes
    - Thiothixene (Navane)

Atypical Antipsychotic

- Advantages
  - Effective for positive and some improvement in negative symptoms
  - Not likely to cause EPS
- Neurotransmitter
  - Serotonin 5HT2c & dopaminergic D4, less effect on D2

Atypical Antipsychotics & Metabolic Syndrome

- Metabolic syndrome
  - Constellation of metabolic abnormalities → ↑ risk of CVD and DM2
  - Abdominal obesity - ↑40" male, ↑35" female
  - Hypertriglyceridemia - ↑ 150mg/dL
  - ↓ HDL - ↓ 40mg/dL
  - HTN – 130/85
  - ↑ Fasting blood glucose - ↑ 100mg/dL

- Clozapine (Clozaril)
  - No acute EPS
  - Seizures
  - Agranulocytosis
  - Weight gain, dizziness, sedation, ↑ HR, orthostatic hypotension, constipation, hyperglycemia
  - Metabolic Syndrome – High risk
  - √ WBC
    - ↓ 3000 – discontinue medication

- Risperidone (Risperdal)
  - Side-effects
    - Low rates of EPS
    - Weight gain, dizziness, sedation, ↑ HR, orthostatic hypotension, constipation, hyperglycemia, rash,
  - Metabolic Syndrome

- Olanzapine (Zyprexa)
  - Side-effects
    - Agranulocytosis
    - NMS
    - SZ
    - Weight gain, dizziness, sedation, ↑ HR, orthostatic hypotension, constipation, hyperglycemia
  - Metabolic Syndrome – High risk

- Ziprasidone (Geodon)
  - Side-effect
    - Prolonged Q-T interval, √ EKG
    - NMS
    - Agranulocytosis
    - Weight gain, dizziness, sedation, ↑ HR, orthostatic hypotension, constipation, hyperglycemia
  - Metabolic Syndrome – Lowest risk

- Quetiapine (Seroquel)
  - Side-effect
    - ↓ risk of EPS
    - NMS
    - SZ
    - Weight gain, dizziness, sedation, ↑ HR, orthostatic hypotension, constipation, hyperglycemia
  - Metabolic Syndrome

- Aripiprazole (Abilify)
  - Use in addition to other antidepressants.
  - Side effects
    - EPS
    - Agranulocytosis
    - Neuroleptic malignant syndrome
    - CVA
    - Wt. gain, constipation, EPS, insomnia, fatigue, orthostatic, hyperglycemia
  - Metabolic Syndrome – Low risk

Long-Acting Preparations

- Haloperidol decanoate (Haldol)
- Fluphenazine decanoate (Prolixin)

- Injection
  - given every 2 to 4 weeks
  - Viscous liquid, large-gauge needle
  - Z-track, do not massage
  - No more then 15 minutes in plastic syringe
  - No SubQ

- Risperdal consta
  - Bipolar I
  - Injection
    - Every 2 weeks to start
    - Every 4 weeks for maintenance
    - No SubQ

Cocktail - Injection

- IM Injection
  - Haldol - 5mg
  - Ativan – 2mg or 1mg
  - Benadryl – 50mg or 25mg

Drug Interaction

- Alcohol, sedatives, narcotics, benzodiazepine – increase sedative effects
- Smoking can increase metabolism
- Kava Kava – increase risk of dystonia with phenothiazines and fluphenazine

Antipsychotic for Older Adults

- Increased risk of severe side effects
- Dosage should be 25% to 50% less
- Dosage needs to be individualized
- Dementia-related psychosis - ↑ death

Other

- Needs family planning
  - Teratogenic effects
  - Passes into breast milk
- Only one antipsychotic at a time
- Taper off medication

Nursing Process

- Assessment
  - Base line
  - VS
  - EPS
  - NMS
  - S/S – infection
  - Urine output
  - Glucose
  - Wt. Gain
  - Other

Intervention/Teaching

- Medications do not cure mental illness but alleviate symptoms
- Compliance is extremely important
- Do not abruptly discontinue
- Smoking cessation

- Good oral hygiene
- Family planning
- Routine follow-up
- Follow-up labs

- EPS
- Sunglasses, sun exposure, extreme temp
- Orthostatic hypotension
- Wt. gain – diet & exercise

Anxlolytics

Benzodiazepines (BZD)

- CNS depressant
  - Minor tranquilizer group
- RX – Anxiety, insomnia, anticonvulsant
- Enhance the action of GABA
- Highly protein-bound, metabolized by the liver

Side-effects

- Sedation
- Dizziness
- Blurred vision
- Leukopenia - ↓ WBC

Drug interactions

- Cross tolerance with other CNS depressants
  - Alcohol, other benzodiazepines
- Do not take with other CNS depressants
  - Respiratory depression
- Kava Kava & Valerian root, ↑ sedative effect

- Tobacco, caffeine, sympathomimetics ↓ effects
- Benzodiazepines have possible Teratogenic effects

Physical dependency

- Short term treatment of acute anxiety
- Tolerance – weeks to months
- Do not abruptly discontinue
  - W/D – agitation, insomnia, tremor, muscular cramps, sweating, etc.

- Withdrawal from long-term, high-dose benzodiazepine similar to Alcohol withdrawal
  - Life threatening
  - Paranoia, delirium hypertension, status epilepticus, ↑ temp.

Overdose

- Rx
  - Emetic followed with activated charcoal
  - Antidote – Flumazenil
  - Maintain airway
  - IV vasopressors if severe hypotension

Miscellaneous Anxiolytics

- Azapirone (BuSpar)
  - Rx – anxiety and depression related anxiety
  - 1 to 2 week to become effective
  - Fewer sedative effects
- Interacts with grapefruit
  - Leads to toxicity

- Antihistamines
  - Diphenhydramine (Benadryl)
    - Rx – insomnia related to anxiety
    - S/S - Sedation, dizziness
    - Avoid alcohol and other CNS depressant as well as OTC drugs.

- Propanediol (Inderal)
  - Beta-Blocker
    - Rx – performance anxiety and social phobia
    - ↓ Peripheral sympathetic nervous symptom response
    - S/S – Hypotension, Bradycardia
    - Contraindicated for patients with asthma and COPD

Nursing Interventions

- Assessment
  - Base-line
  - Target symptoms
  - Observe for S/S
  - Withdrawal
  - V/S
  - Dependency

- Teaching
  - Not to drive motor vehicle or heavy equipment
  - No alcohol or other CNS depressants
  - Teach non-pharmacological techniques to control stress/anxiety
  - Do not stop drug abruptly