ECHO Idaho: Behavioral Health in Primary Care

Common Interactions and Dosage Considerations in Psychiatry

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Disclosures

• Dr. Carlson in the past has provided consulting services for Alkermes.

• Dr. Carlson has no other financial relationships with commercial interests to disclose.
Learning Objectives

• Describe factors that must be considered in managing medication interactions

• Describe what an expectation conversation regarding risk vs. benefit of medication looks like

• General review of common behavioral health medication interactions
Factors in Medication Interactions

- Absorption (age)
- Adherence (attitude)
- Scheduled vs PRN (potential vs result)
- Level of severity
- Documentation (level of evidence)
- Onset of effect (rapid or delayed)
- Alert fatigue (serotonin syndrome, QTc & seizure threshold)
- Class affects (extrapolations of information)
Expectations Conversations

• Not all interactions are a bad thing - some are synergistic
• Hepatic enzyme metabolisms definitive results are more theoretic then what is seen in practice
• Right medication and the right dose is an experimental quest that requires feedback, adherence, and understanding
• Medication adverse effect profile
• Past history of patient’s medication experience
  – Review allergies and clarify reactions
  – Hospital admissions and/or suicidal ideations
Medication Class Interactions
Abbreviations

- Central Nervous System (CNS)
- Tricyclic Antidepressants (TCA)
- Monoamine Oxidase Inhibitors (MAOI)
- Selective Serotonin Reuptake Inhibitors (SSRI)
- Serotonin and Norepinephrine Reuptake Inhibitors (SNRI)
- First Generation Antipsychotics – Typical (FGA)
- Second Generation Antipsychotics – Atypical (SGA)
Medication Class Interactions

Abbreviations

- Beta-Adrenergic Blockers (BB)
- Proton Pump Inhibitors (PPI)
- Azole Antifungal Agents (azoles)
- Macrolide Antibiotics (omycins)
- Protease Inhibitors (avirs)
Medication Interactions Terms

- Cytochrome P450 enzymes: These hepatic enzymes are involved in the metabolism of many endogenous and exogenous substrates, including drugs, toxins, hormones, and natural plant products.

- Hepatic enzyme inducers: Increase rate of metabolism causing a decrease in drug plasma concentration and reduced bioavailability.

- Hepatic enzyme inhibitors: Decrease rate of metabolism causing an increase in drug plasma concentration and increasing potential for medication induced toxicity.
Medication Interactions Terms

• Anticholinergic effects: Some medications cause dry mouth, blurred vision, tendency toward overheating, and, in some cases, dementia-like symptoms.

• QTc risk: Certain medications put patients at risk for prolonging the QTc interval which can result in Torsade de Pointes, a ventricular arrhythmia.
Medication Interactions Terms

• Serotonin syndrome: A potentially life-threatening condition associated with increased serotonergic activity in the central nervous system (CNS). It is seen with therapeutic medication use, inadvertent interactions between drugs, and intentional self-poisoning.

• Seizure threshold: The level of neurological stimulation capable of precipitating a seizure.
Medication Interactions of TCA

- Serotonin modulators (FGA, SGA, SSRI, SNRI)
- MAOI (not within 14 days) serotonin syndrome
- Medications have anticholinergic actions
- CNS depressants (alcohol, barbiturates, opioids)
Medication Interactions of TCA

• Hepatic enzyme inhibitors (SSRI, QTc)

• Hepatic enzyme inducers (carbamazepine)

• Herbals (cannabis, yohimbine, grapefruit juice)

• Approved doses

• Risk of ingestion
  – History of Suicide
Medication Interactions of SSRI/SNRI

- Hepatic enzyme inhibitors (Abilify, BB, PPI, QTc & TCA)
- Hepatic enzyme inducers (carbamazepine)
- Herbals (yohimbine)
- Less anticholinergic actions
- Less interactions
- Less toxic in overdose than TCAs
Medication Interactions of Antipsychotics

- Hepatic enzyme inhibitors
  - CYP3A4 Inhibitors (azoles, avirs & omycins)
  - CYP 2D6 Inhibitors (SSRI, TCA, SNRI, Diphenhydramine)
- Hepatic enzyme inducers - Smoking
  - CYP1A2 & 2B6 Inducers (Olanzapine, Clozapine)
- Hepatic enzyme inducers
  - CYP3A4 Inducers (carbamazepine)
- Tramadol (Dr. Desai slides)
- Mood stabilizers
- Phenytoin
Key Points

• Expectation conversation
  – Risk vs Benefit
  – Experiment with an N of 1
• Some interactions are acceptable (acute vs chronic)
• Take action with results not hypotheticals
  – Baseline labs (monitoring)
• Prevent prescribing cascades
  – Deprescribe
• TCAs as last resort and never for suicidal patients
Key Points

• Lithium level vs hydration level
  – Kidney function
  – Summer heat
  – PRN NSAID use
  – Swing in salty food consumption
• Citalopram / escitalopram & over the counter PPI
• Mood stabilizers & SGA
• Mood stabilizers & birth control
• Clozapine rapid restarts
• Lamotrigine rapid restarts
Resources

• Psychotropic Medication Dosage Range Limits
• Medication Interaction Guidance Example
References


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