

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 than 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 & omcins)
 - 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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