MiCMRC Educational Webinar

What is this Psych Med for and More

September 26, 2018
MiCMRC Educational Webinar
What is this Psych Med for and More

Expert Presenter:
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Behavioral Health Collaborative Care
Medical Director & Consulting Psychiatrist
IHA
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- Diabetes Prevention
  - Wednesday, April 26, 2017 - 2:00pm
  - Presented by Tamah Gustafson, MSH, CPH, CHES
  - Kim Lombard, MS, RD, CDE
  - Webinar Registration

- Pain Assessment in Ambulatory Care - Time to Repeal and Replace the Pain Score
  - Wednesday, May 24, 2017 - 2:00pm
  - Presented by Terri Voepel-Lewis, PhD RN
  - Webinar Registration
Housekeeping: Webinar Toolbar Features

- Collapse Toolbar
- Raise Your Hand
- Ask a Question
What is this psych med for and more
• I have worked to ensure that all of the information in these lectures is accurate and consistent with general psychiatric and medical standards. However in view of ongoing research and the proliferation of new information everyone is urged to keep abreast of changes in recommendations. Medication prescribing decisions are often complex and these recommendations should be implemented with consideration of each individual patient’s past and current clinical status.
PSYCHIATRIC MEDICATIONS HAVE BEEN NAMED BASED ON THEIR INDICATIONS

- Antidepressants
- Mood stabilizers
- ADD meds
- Antianxiety agents
- Antipsychotics
THE PROBLEM IS THEY ARE OFTEN USED FOR MORE THAN ONE DIAGNOSIS

• So people become confused
• e.g. Abilify is used for schizophrenia, bipolar dx and major depression
• Abilify is listed as an antipsychotic but is also a mood stabilizer and an augmenting agent to antidepressants for major depression
• On the horizon soon is a new neuroscience based nomenclature (NbN) naming psychiatric meds based on their mechanism of action
• **Medication categories**
  - Antidepressants
  - Antianxiety agents/sedative hypnotics
  - Antipsychotics
  - Mood Stabilizers
  - ADD meds

• **Discussion Points**
  - Mechanism of action
  - Indications
  - Side Effects/Drug Interactions
  - Clinical Pearls
NEURONAL SYNAPSE

**Neurotransmitters**
- Serotonin
- Norepinephrine
- Dopamine
- GABA

**Diagram:**
- Synaptic vesicle
- Neurotransmitters
- Neurotransmitter re-uptake pump
- Neurotransmitter receptors
- Voltage-gated Ca\(^{++}\) channel
- Post-synaptic density
- Axon terminal
- Synaptic cleft
- Dendritic spine
ANTIDEPRESSANTS

4 categories

- SSRIs
- SNRIs
- NRIs
- TCAs
### SSRI: Selective Serotonin Reuptake Inhibitors

**Generic Name**
- Fluoxetine
- Sertraline
- Citalopram
- Escitalopram
- Paroxetine
- Fluvoxamine
- Vilazodone
- Vortioxetine
- Buspirone (partial serotonin agonist)

**Brand Name**
- Prozac
- Zoloft
- Celexa
- Lexapro
- Paxil
- Luvox
- Viibryd
- Trintellix
- Buspar
COMMON USES

• Anxiety

  Generalized anxiety dx, panic dx, social anxiety dx, Obsessive compulsive dx, PTSD, Premenstrual dysphoric dx, menopausal hot flashes

• Can help with Major Depression

  But if significant problems with energy, motivation and little anxiety patients often do better with meds that work on norepinephrine
SIDE EFFECTS

• Watch for any initial worsening of mood

• **Mild and Usually Self Limiting:**
  - Nausea
  - Headache
  - Initial Jitteriness

• **Other Side Effects:**
  - Sexual Dysfunction/Occ. Improves Over Months
  - Weight Gain
  - Insomnia
  - Fatigue
  - Emotional Blunting
  - Teeth Grinding
  - Sweating
  - Prolonged Bleeding/ Increase in GI Bleeds/esp. if with ASA, NSAIDS or Anticoagulants
  - Hyponatremia esp. in elderly (watch for confusion and tiredness/often happens soon after starting med)
DRUG/DRUG INTERACTIONS

• More drug/drug interactions: Prozac, Paxil, Luvox, Viibryd

• Serotonin syndrome (autonomic instability, neuromuscular rigidity, confusion)
  SSRI plus other serotonergic agents for example: Ultram (tramadol), MAO-I,
  not much of a problem with antimigraine meds, the triptans

• QTc prolongation with Celexa and probably Lexapro so need to avoid other
  QTc prolongation agents
CLINICAL PEARLS

• Prozac often see less weight gain, long half life so good for compliance problems, no discontinuation symptoms

• Paxil many side effects, weight gain, sexual dysfunction, cannot stop abruptly or get discontinuation symptoms: nausea, tiredness, vertigo, electrical sensations in the brain, mood lability

• Zoloft and Trintellix have more GI distress

• Buspar is often added to antidepressants as an augmenting agent/can help with sexual dysfunction and anxiety symptoms/ helps with GAD not much with panic dx/does not work prn, has to be bid dose and takes weeks to work
## NRI  NOREPINEPHRINE REUPTAKE INHIBITOR

<table>
<thead>
<tr>
<th>Generic name</th>
<th>Brand Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bupropion</td>
<td>Wellbutrin IR has to be tid</td>
</tr>
<tr>
<td>Bupropion ER 12hrs</td>
<td>Wellbutrin SR has to be bid</td>
</tr>
<tr>
<td>Bupropion ER 24hrs</td>
<td>Wellbutrin XL once a day</td>
</tr>
<tr>
<td>Bupropion ER 450 mg only</td>
<td>Forfivo XL once a day</td>
</tr>
<tr>
<td>Bupropion Hydrobromide</td>
<td>Aplenzin</td>
</tr>
<tr>
<td>174mg, 348mg and 522 mg ( = 150, 300, 450)</td>
<td></td>
</tr>
</tbody>
</table>
COMMON USES

- Major Depressive disorder
- Seasonal Affective Disorder (SAD)
- Smoking Cessation (Zyban)
- ADHD
- SSRI induced sexual dysfunction
SIDE EFFECTS

• Watch for any initial worsening of mood

• **Mild and Usually Self Limiting:**
  - Nausea
  - Headache
  - Initial Jitteriness
  - Insomnia

• **Other Side Effects:**
  - Increased Anxiety
  - Weight loss
  - Tremor
  - Dry Mouth/Constipation
  - Increased BP
  - Increased Seizure Risk at higher doses/cannot go above 450 of XL or 400 of SR
DRUG/DRUG INTERACTIONS

• More drug/drug interactions
• Can show up in the urine as a stimulant
CLINICAL PEARLS

• Can help reverse some of the SSRI’s side effects of weight gain, sexual dysfunction
• Helps with decreased motivation, energy and concentration
• It can worsen anxiety so if patient has anxiety and depression often start with SSRI and then add in Wellbutrin if above symptoms remain
• Contraindications are head injury and bulimia as can increase seizure risk
• Cannot crush pills as increases seizure risk due to higher blood levels
SNRI  SEROTONIN NOREPINEPHRINE REUPTAKE INHIBITOR

Generic Name
- Venlafaxine (IR and XR)
- Desvenlafaxine
- Duloxetine
- Levomilnacipran

Brand Name
- Effexor (XR)
- Pristiq
- Cymbalta
- Fetzima
COMMON USES

• Major depressive disorder
• Generalized anxiety dx, social anxiety dx, panic dx
• Fibromyalgia, chronic musculoskeletal pain, diabetic neuropathy pain, interstitial cystitis, urinary incontinence, menopausal hot flashes
SIDE EFFECTS

• Watch for any initial worsening of mood

• **Initial and Usually Self Limiting:**
  - Nausea
  - Headache
  - Jitteriness

• **Other Side Effects:**
  - Sexual Dysfunction
  - Insomnia
  - Fatigue
  - Dry Mouth
  - Dizziness
  - Sweating
  - Constipation
  - Weight Gain
  - Hypertension esp. with higher doses
DRUG/ DRUG INTERACTIONS

• More drug/drug interaction: Cymbalta
• Cymbalta and heavy alcohol use discouraged as there are rare reports of hepatic toxicity
CLINICAL PEARLS

• Significant *discontinuation symptoms* with Effexor, Pristiq and Cymbalta
• Cymbalta has the most data for the chronic pain conditions
• They can help with chronic pain even if person is not depressed
• Levomilnacipran is an enantiomer of milnacipran which is Savella and has the indication for fibromyalgia
TCA  TRICYCLIC ANTIDEPRESSANTS
SEROTONIN AND NOREPINEPHRINE REUPTAKE INHIBITORS

• Nortriptyline, Pamelor

• Amitriptyline, Elavil

• Used in small doses often at night for chronic pain and sleep issues and for migraines

• Significant side effects: sedation, orthostasis, dry mouth, constipation, blurred vision, urinary retention, weight gain, sexual dysfunction, cardiac conduction problems, arrhythmias, QT prolongation, lethal in overdose
NOREPINEPHRINE-SEROTONIN MODULATOR

- Mirtazapine - Remeron
- Presynaptic alpha – 2 adrenergic antagonist (not a reuptake inhibitor)
- 5-HT2 and 5-HT3 post synaptic receptor blocker so decreases anxiety, relieves insomnia, increases appetite, decreases nausea
- Used frequently in cancer patients
- Side effects: significant weight gain, tiredness
- At lower doses it is more sedating and less so at higher doses (>15 mg)
- No sexual dysfunction/helps with GERD
SEROTONIN MODULATORS

• Trazodone, Desyrel

• Weak serotonin reuptake inhibitor, potent antagonist at 5-HT2A and 5-HT2C receptors

• Used mainly for insomnia as too sedating at antidepressant doses

• Side effects at low doses: mainly sedation, dizziness, orthostasis, nausea, headache, dry mouth, blurred vision, rare reports of priapism
### ANTI ANXIETY AGENTS

**BENZODIAZEPINE SITE ON GABA RECEPTOR**

<table>
<thead>
<tr>
<th>Generic Name</th>
<th>Brand Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alprazolam</td>
<td>Xanax</td>
</tr>
<tr>
<td>Clonazepam</td>
<td>Klonopin</td>
</tr>
<tr>
<td>Diazepam</td>
<td>Valium</td>
</tr>
<tr>
<td>Lorazepam</td>
<td>Ativan</td>
</tr>
</tbody>
</table>
GABA RECEPTOR/INHIBITORY NEUROTRANSMITTER
COMMON USES

• Short term situational anxiety, used on prn basis
• Treatment resistant anxiety disorders
• IV for agitation
• Alcohol withdrawal
• Muscle relaxation
• Acute seizures or status epilepticus
<table>
<thead>
<tr>
<th>GENERIC NAME</th>
<th>BRAND NAME</th>
<th>MECHANISM OF ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temazepam</td>
<td>Restoril</td>
<td>Benzodiazepine site</td>
</tr>
<tr>
<td>Triazolam</td>
<td>Halcion</td>
<td>Benzodiazepine site</td>
</tr>
<tr>
<td>Zolpidem</td>
<td>Ambien</td>
<td>Subunit of GABA receptor</td>
</tr>
<tr>
<td>Eszopiclone</td>
<td>Lunesta</td>
<td>Subunit of GABA receptor</td>
</tr>
<tr>
<td>Zaleplon</td>
<td>Sonata</td>
<td>Subunit of GABA receptor</td>
</tr>
<tr>
<td>Ramelteon</td>
<td>Rozerem</td>
<td>Melatonin agonist</td>
</tr>
<tr>
<td>Suvorexant</td>
<td>Belsomra</td>
<td>Orexin receptor antagonist</td>
</tr>
</tbody>
</table>
COMMON USES

• Insomnia
• Jet lag
• Shift work sleep disorder
• Don’t work very well
• Use short term
SIDE EFFECTS OF BENZO’S AND HYPNOTICS

• Daytime grogginess
• Anterograde amnesia
• CNS respiratory depression
• Develop tolerance/Addictive
• Withdrawal effects
• Falls in elderly
• Cognitive impairments (not clear if increases risk of dementia)
• Disinhibited behavior
CLINICAL PEARLS

• Try not to use them, esp. in patients with OSA, COPD or on opioids, as can cause respiratory depression

• Rozerem is the only one that is not addictive but usually works only for shift work sleep dx, jet lag and circadian rhythm problems

• Treat the underlying cause of the insomnia

• Cognitive Behavioral therapy for insomnia is the first line treatment recommended
TYPICAL ANTIPSYCHOTICS

• Typical antipsychotics or First generation antipsychotics/Dopamine D2 receptor antagonists

• Not used much now as causes potentially irreversible tardive dyskinesia (a movement disorder), Parkinsonian like symptoms and akathisia (an extreme restlessness)

• Haldol still used often in hospital IV
## ATYPICAL ANTIPSYCHOTICS

SECOND GENERATION/D2 RECEPTOR ANTAGONISTS/SEROTONIN RECEPTOR ANTAGONIST/PARTIAL AGONIST

<table>
<thead>
<tr>
<th>Generic name</th>
<th>Brand name</th>
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</thead>
<tbody>
<tr>
<td>Aripiprazole</td>
<td>Abilify</td>
</tr>
<tr>
<td>Brexpiprazole</td>
<td>Rexulti</td>
</tr>
<tr>
<td>Asenapine</td>
<td>Saphris</td>
</tr>
<tr>
<td>Cariprazine</td>
<td>Vraylar</td>
</tr>
<tr>
<td>Clozapine</td>
<td>Clozaril</td>
</tr>
<tr>
<td>Iloperidone</td>
<td>Fanapt</td>
</tr>
<tr>
<td>Lurasidone</td>
<td>Latuda</td>
</tr>
<tr>
<td>Olanzapine</td>
<td>Zyprexa</td>
</tr>
<tr>
<td>Paliperidone</td>
<td>Invega</td>
</tr>
<tr>
<td>Quetiapine</td>
<td>Seroquel</td>
</tr>
<tr>
<td>Risperidone</td>
<td>Risperdal</td>
</tr>
<tr>
<td>Ziprasidone</td>
<td>Geodon</td>
</tr>
</tbody>
</table>
COMMON USES

• Psychosis
• Schizophrenia/schizoaffective dx
• Bipolar disorder
• Major depressive dx as an adjunct
• Irritability in Autism
• Impulse Control Disorders
SIDE EFFECTS OF SECOND GENERATION AGENTS

• Many cause weight gain, hyperlipidemia, DM esp. Clozaril, Zyprexa, Seroquel, Risperdal
• QTc prolongation esp. with Geodon
• Increased mortality rate in geriatric patients with dementia related psychosis, due to cardiac related events or infections
• Neuroleptic malignant syndrome (rare)- fever, severe muscle rigidity and autonomic instability
• Tardive dyskinesia can also occur with these but is less frequent
• Sedation esp. Clozaril, Zyprexa, Seroquel
• Akathisia- Abilify, Rexulti
MOOD STABILIZERS

MAINLY USED FOR BIPOLAR DX BUT ALSO AS ADJUNCT FOR MAJOR DEPRESSION

• Lithium
• Lamotrigine
• Valproic Acid
LITHIUM/LITHOBID, ESKALITH

• Alters neuronal sodium transport
• Excreted by kidneys
• Therapeutic level is very close to toxic level
• Common side effects: nausea, diarrhea, tremor, weight gain, hypothyroidism, acne, worsening psoriasis
• Serious but rare side effects: bradycardia, cardiac arrhythmias, kidney dysfunction
• Drug interactions: NSAIDS, ACE inhibitors, diuretics can increase Li levels
• Dehydration and low salt diets can increase levels
LAMOTRIGINE/ LAMICTAL

• Sodium channel blocker

• Common side effects: dizziness, nausea, headache

• Serious but rare: Severe potentially life threatening skins rashes/Stevens-Johnson syndrome/ reduced risk if increase doses slowly

• Drug/drug interactions with other anticonvulsants can influence levels
VALPROIC ACID/DEPAKOTE

• Sodium channel blocker

• Common side effects: sedation, fatigue, nausea, dizziness, hair loss, tremor, decreased platelets

• Serious but rare: Hepatotoxicity, pancreatitis, PCOS
STIMULANTS

• Inhibits reuptake of dopamine and norepinephrine
• Two types: amphetamine- Adderall, Vyvanse
  methylphenidate- Ritalin, Concerta
• Numerous different release systems: short acting vs long acting
• Common Uses: ADD, Treatment resistant depression, Narcolepsy, Binge eating disorder
• Common side effects: decreased appetite, insomnia, increased anxiety, irritability, GI distress, tics, headache, hypertension, tachycardia, dry mouth
• Class warning: if known or suspected cardiac problems, consult cardiologist
THE END

ANY QUESTIONS?