

# **PSYCHOTROPIC MEDICATIONS**

A field guide for child welfare  
professionals

## **Disclaimer**

- The material in this presentation is informational only and is not intended to substitute for consultation with a physician or intended to diagnose, treat, cure, or prevent any medical or mental health condition.

## **WHAT ARE THEY?**

- Drugs that act on the central nervous system
- Anesthetics
- Pain control
- Allergy control
- For nausea/vomiting
- Psychiatric uses
- Recreational uses

## **HOW THEY WORK:**

- Neurotransmitter hypothesis
- The role of dopamine
- The role of norepinephrine
- The role of serotonin
- The role of GABA
- The role of histamine

## ANTI-HISTAMINE/ANTI ALLERGY

- **CENTRALLY ACTING;**
  - Chlorpheniramine (Atarax)
  - Diphenhydramine (Benadryl)
  - Hydroxyzine (Vistaril)
  - Cetirizine (Zyrtec)
  - Loratidine (Claritin)
  - Fexofnadine (Allegra)
- **LOCAL AGENTS;**

## ANTI-HISTAMINE/ANTI ALLERGY

### **SIDE EFFECTS:**

- Sedation
- Irritable mood
- Urinary retention
- Dry skin
- Insomnia
- Appetite/weight change

## STIMULANTS

- Used to treat hyperactivity, inattention, impulsivity etc. (ADHD)
- Also used for Narcolepsy.
- The two major drugs: Amphetamine and Methylphenidate
- Common formulations are:
  - Adderall, Vyvanse, Dextroamphetamine for Amphetamine derivatives.
  - Concerta, Ritalin, Metadate for Methylphenidate.

## STIMULANTS

- Mode of action; DA/NE transmission
- Treatment emergent effects; delay in sleep onset, initial mild wt loss, irritability, loss of appetite.
- Side effects;

Weight loss, mood change, anxiety, insomnia, irritability, dry mouth, GI irritation, worsening in preexisting anxiety, psychosis.

## NON-STIMULANTS FOR ADHD.

### ATOMOXETINE:

- Mode of action; NE transmission
- Side effects;

Mood change, anxiety, insomnia, irritability, dry mouth, GI irritation, worsening in preexisting anxiety, paranoia, psychosis, suicidal ideation.

## ANTIDEPRESSANTS

- Used to treat; depression, anxiety, eating disorders, ADHD, enuresis and chronic pain.
- Categorized according to chemical structure and the neurotransmitter that is being targeted.
- TCA: Developed in the 50's. Widely used for psychiatric and non psychiatric uses. In children they are used to treat anxiety, depression, bedwetting, ADHD, etc.

## TCA

- Amitriptyline (Elavil, Tryptizol, Laroxyl)
- Amitriptylinoxide (Amioxid, Ambivalon, Equilibrin)
- Butriptyline (Evadyne)
- Clomipramine (Anafranil)
- Demexiptiline (Deparon, Tinoran)
- Desipramine (Norpramin, Pertofrane)
- Dibenzepin (Noveril, Victoril)
- Dimetacrine (Istonil, Istonyl, Miroistonil)
- Dosulepin/Dothiepin (Prothiaden)
- Doxepin (Adapin, Sinequan)
- Imipramine (Tofranil)

## TCA: facts to remember

- Act on almost all neurotransmitter circuits.
- Response can take 8-12 weeks.
- Adverse effects can develop at any time.
- Common side effects include dry mouth, dry nose, blurry vision, lowered gastrointestinal motility or constipation, urinary retention, cognitive and/or memory impairment, and increased body temperature.

## TCA: facts to remember

- Drowsiness
- Anxiety
- Emotional blunting (apathy/anhedonia)
- Confusion
- Restlessness
- Dizziness
- Akathisia
- Hypersensitivity
- Changes in appetite and weight
- Sweating
- Sexual dysfunction
- Muscle twitches, weakness
- Nausea and vomiting
- Hypotension, tachycardia
- Irregular heart rhythms
- Rhabdomyolysis or muscle breakdown

## TCA: facts to remember

- Dangerous in overdose, accidental or otherwise.
- Worsening of existing symptoms and/or new onset symptoms especially in the early days of treatment should be noted and reported to the clinic.
- Risk of suicide.
- Discontinuation syndrome: This is not the same as a withdrawal syndrome. Discontinuation symptoms can be managed by a gradual reduction in dosage over a period of weeks or months to minimize symptoms.

## SSRIs

- Selective Serotonin reuptake Inhibitors.
- Work by increasing the level of serotonin in the brain.
- Serotonin is involved in regulating mood, anxiety, aggression, libido, appetite and sleep.
- SSRIs are therefore widely used.
- They constitute the first line treatment of anxiety and depression in adults.

## SSRIs

- Drugs in this class include (trade names in parentheses):
- Citalopram (Celexa)
- Escitalopram (Lexapro)
- Fluoxetine (Prozac)
- Fluvoxamine (Luvox)
- Paroxetine (Paxil)
- Sertraline (Zoloft)

## SSRIs

- Anhedonia
- Apathy
- Nausea/vomiting
- Drowsiness or somnolence
- Headache
- Bruxism (involuntarily clenching or grinding the teeth)
- Extremely vivid and strange dreams
- Dizziness
- Fatigue
- Mydriasis (pupil dilation)
- Urinary retention
- Changes in appetite

## SSRIs; FACTS TO REMEMBER

- May take up to 12 weeks to see response.
- May unmask mania and suicidal ideation.
- Abrupt discontinuation can lead to a “withdrawal syndrome”.

## SSRIs

- Changes in sleep.
- Weight loss/gain (measured by a change in bodyweight of 7 pounds)
- Changes in sexual behavior.
- Increased feelings of depression and anxiety (which may sometimes provoke panic attacks).
- Tremors (and other symptoms of Parkinsonism in vulnerable elderly patients and children.
- Autonomic dysfunction including orthostatic hypotension, increased or reduced sweating.
- Akathisia.
- Liver or renal impairment.
- Suicidal ideation (thoughts of suicide).
- Photosensitivity (increased risk of sunburn) (use protective clothing, such as long sleeves and hats, and sunscreen to decrease the risk of sunburn.).
- Paresthesia.

## SNRIs

- Target Serotonin and Norepinephrine.
- Venlafaxine (Effexor) - The first and most commonly used SNRI.
- Duloxetine (Cymbalta) approved for the treatment of depression and neuropathic pain.
- Side effects; similar to SSRIs.

## OTHER ANTI-DEPRESSANTS

- BUPROPION (Wellbutrin, Zybane)
  
- TRAZADONE (Deseryl)

## ANTI-PSYCHOTICS

- Antipsychotics are also referred to as neuroleptic drugs.
- Antipsychotics are broadly divided into two groups, the typical or first-generation antipsychotics and the atypical or second-generation antipsychotics. The typical antipsychotics are classified according to their chemical structure while the atypical antipsychotics are classified according to their pharmacological properties.

## ANTI-PSYCHOTICS

- These include serotonin-dopamine antagonist, multi-acting receptor-targeted antipsychotics (MARTA, those targeting several systems), and dopamine partial agonists, which are often categorized as atypicals.

## ANTI-PSYCHOTICS

- All antipsychotic drugs tend to block D<sub>2</sub> receptors in the dopamine pathways of the brain. This means that dopamine released in these pathways has less effect. Excess release of dopamine in the mesolimbic pathway has been linked to psychotic experiences. It is the blockade of dopamine receptors in this pathway that is thought to control psychotic experiences.

## ANTI-PSYCHOTICS

- Atypical antipsychotic drugs have a similar blocking effect on D2 receptors. Some also block or partially block serotonin receptors.
- Dopamine, Serotonin, Acetylcholine and Histamine are the neurotransmitters directly involved.
- Mesolimbic system, tubero-infundibular system and nigrostriatal pathway.

## ANTI-PSYCHOTICS

- Schizophrenia.
- Bipolar disorder.
- Delusional disorder.
- Tourette syndrome.
- Asperger syndrome.
- Multiple off-label uses, including in the treatment of mental-illness such as post-traumatic stress disorder, anxiety, insomnia, autism and obsessive-compulsive disorder, etc.
- Atypical antipsychotics can be a helpful adjunct to antidepressant treatment.

## ANTI-PSYCHOTICS

- **COMMON 1<sup>st</sup> generation anti-psychotics:**
- Haloperidol (Haldol, Serenace)
- Chlorpromazine (Thorazine, Largactil)
- Fluphenazine (Prolixin) - Available in decanoate (long-acting) form
- Perphenazine (Trilafon)
- Thioridazine (Mellaril)

## ANTI-PSYCHOTICS

- **COMMON 1<sup>st</sup> generation anti-psychotics:**
- Trifluoperazine (Stelazine)
- Promethazine (Phenergan)
- Pimozide (Orap)
- Thiothixene (Navane)

## ANTI-PSYCHOTICS

- **COMMON 2<sup>nd</sup> generation or Atypical anti-psychotics:**
- Clozapine (Clozaril)
- Olanzapine (Zyprexa)
- Risperidone (Risperdal)
- Quetiapine (Seroquel)
- Ziprasidone (Geodon)
- Paliperidone (Invega)

## ANTI-PSYCHOTICS

- **COMMON 3<sup>rd</sup> generation or Atypical anti-psychotics:**
- Aripiprazole (Abilify)

## ANTI-PSYCHOTICS

### **SIDE-EFFECTS:**

- **Central nervous system**  
*(seizures, apathy, amotivation etc).*
- **Metabolism.**
- **Urogenital system.**
- **Gastrointestinal tract.**
- **Tardive dyskinesia/ EPS.**

## ANTI-PSYCHOTICS

- **Vision/hearing.**
- **Mood.**
- **Cardiovascular system.**

## MOOD-STABILIZERS

- Psychiatric medication used to treat mood disorders.
- Lithium carbonate - Lithium is the 'classic' mood stabilizer.
- Anticonvulsants;
  - Valproic acid (Depakene), divalproex sodium (Depakote), and sodium valproate (Depacon, Epilem).
  - Lamotrigine (Lamictal).

## MOOD-STABILIZERS

- Anticonvulsants;
  - Lamotrigine (Lamictal).
  - Carbamazepine (Tegretol).
  - Gabapentin (Neurontin).
  - Oxcarbazepine (Trileptal).
  - Topiramate (Topamax).

## MOOD-STABILIZERS

- Anticonvulsants;
- Mode of action;
  - Anti-convulsants.
  - Lithium.
- Side effects;
  - Anti-convulsants.
  - Lithium.

## ANTI-ANXIETY

- An **anxiolytic**, **antipanic** or **antianxiety agent** is a drug used for the treatment of symptoms of anxiety.
- Symptomatic relief only except for few agents.
- Can be used to treat withdrawal symptoms, anxiety disorders, PTSD, mood, and sleep disorders.

## ANTI-ANXIETY

- **Benzodiazepines**
- Alprazolam (Xanax)
- Chlordiazepoxide (Librium)
- Clonazepam (Klonopin)
- Diazepam (Valium)
- Lorazepam (Ativan)

## ANTI-ANXIETY

- **Azapirones:**  
Buspirone (Buspar)
- **Barbiturates:**  
exert an anxiolytic effect linked to the sedation they cause. The risk of abuse and addiction is high.

## ANTI-ANXIETY

- Hydroxyzine (Atarax) is an old **antihistamine**. It possesses anxiolytic properties in addition to its antihistamine properties.

## SEDATIVES/HYPNOTICS

- Barbiturates
- Benzodiazepines
- Nonbenzodiazepine sedatives:
  - eszopiclone (Lunesta)
  - zaleplon (Sonata)
  - zolpidem (Ambien)

## SEDATIVES/HYPNOTICS

### SIDE-EFFECTS:

- Short term vs. long term use.
- Immediate vs. delayed.
- Controlled substances.
- Dependence and abuse potential.

## POLYPHARMACY

- What is it?
- Prescribing cascade:  
[Andrew's Treatment clip](#)
- Adverse Drug reactions (ADR).

## ADVERSE DRUG REACTIONS.

- Addiction to many sedatives and analgesics such as diazepam, morphine, etc.
- Birth defects associated with Thalidomide and Accutane.
- Bleeding of the intestine associated with aspirin therapy.
- Diabetes caused by atypical antipsychotic medications (neuroleptic psychiatric drugs).

## ADVERSE DRUG REACTIONS.

- Erectile dysfunction associated with many drugs, such as antidepressants.
- Insomnia caused by stimulants, Ritalin, Adderall.
- Seizures caused by withdrawal from benzodiazepine.
- Drowsiness or increase in appetite due to antihistamine use. Some antihistamines are used in sleep aids explicitly because they cause drowsiness.
- Suicide, increased tendency associated to the use of fluoxetine and other SSRI antidepressants
- Tardive dyskinesia associated with long-term use of metoclopramide and many antipsychotic medications.

## BIOLOGICAL IMPLICATIONS

- Disturbed basic functions i.e. sleep, appetite, activity level, bowel/bladder dysfunction.
- Impaired cortical functions i.e. attention, concentration, short term memory, learning.

## PSYCHOLOGICAL IMPLICATIONS

- Externalizing tendency in patient and care-givers?
- Sense of hopelessness and futility; being sick with no cure?
- Skewed social reality.
- Loss of self-esteem.

## SOCIAL IMPLICATIONS

- Multiple failed placements?
- Residential/long term treatment with no improvement.
- Increased cost of care?
- Depletion of family resources.
- Increased care-giver burden.

## Where do you fit in this picture?

- Social workers spend the most time with the patients therefore;
- Social workers can be instrumental in improving the process of informed consent for the families and children they serve.
- Social workers can act as a bridge between the patient and the medical professionals.

## What can you do?

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