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TREATMENT OF TS

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NON-PHARMACOLOGIC TX.

- EDUCATION, REASSURANCE (reduce fear, anxiety, guilt)
- INFORMATION AND REFERRAL (NJCTS, ATSAD)
- SUPPORT GROUPS, SCHOOL VISITS, PEERS
- EMPHASIZE SELF-CONFIDENCE, SELF-ESTEEM!
- HABIT REVERSAL THERAPY (HRT; CBIT)- Competing responses

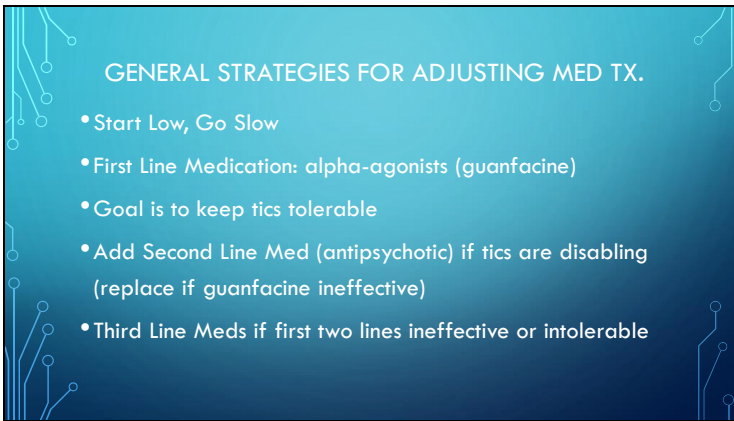
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TS PHARMACOLOGY

- Main Problem: Supersensitivity to Dopamine (DA)
- Main Pharmacologic Approaches:
 - Influence NE: Alpha-agonists (indirect)
 - Block DA Receptors: Antipsychotics
 - Inhibit DA Reuptake: Tetrabenazine and derivatives

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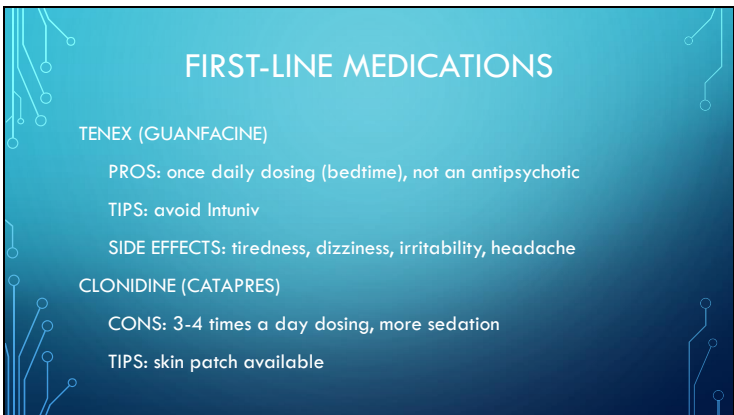


GENERAL STRATEGIES FOR ADJUSTING MED TX.

- Start Low, Go Slow
- First Line Medication: alpha-agonists (guanfacine)
- Goal is to keep tics tolerable
- Add Second Line Med (antipsychotic) if tics are disabling (replace if guanfacine ineffective)
- Third Line Meds if first two lines ineffective or intolerable

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FIRST-LINE MEDICATIONS

TENEX (GUANFACINE)

PROS: once daily dosing (bedtime), not an antipsychotic

TIPS: avoid Intuniv

SIDE EFFECTS: tiredness, dizziness, irritability, headache

CLONIDINE (CATAPRES)

CONS: 3-4 times a day dosing, more sedation

TIPS: skin patch available

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SECOND LINE MEDICATIONS

ATYPICAL ANTIPSYCHOTICS

risperidone (Risperdal), aripiprazole (Abilify)

side effects: sedation, wt. gain, gynecomastia

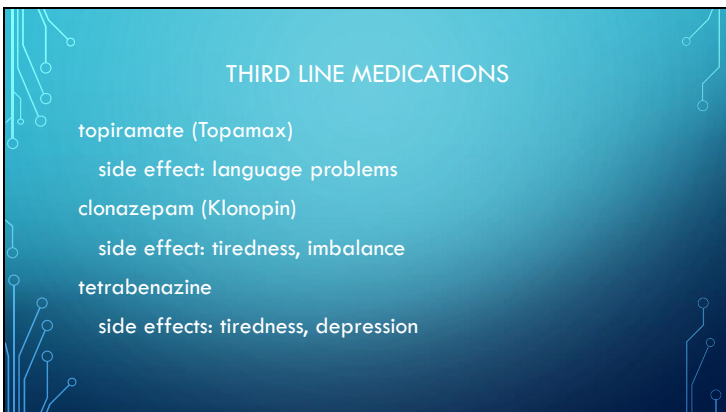
CLASSICAL ANTIPSYCHOTICS

fluphenazine (Prolixin), haloperidol (Haldol)

Unexpected for both: acute dystonia, tardive dyskinesia, zombism

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THIRD LINE MEDICATIONS

- topiramate (Topamax)
 - side effect: language problems
- clonazepam (Klonopin)
 - side effect: tiredness, imbalance
- tetrabenazine
 - side effects: tiredness, depression

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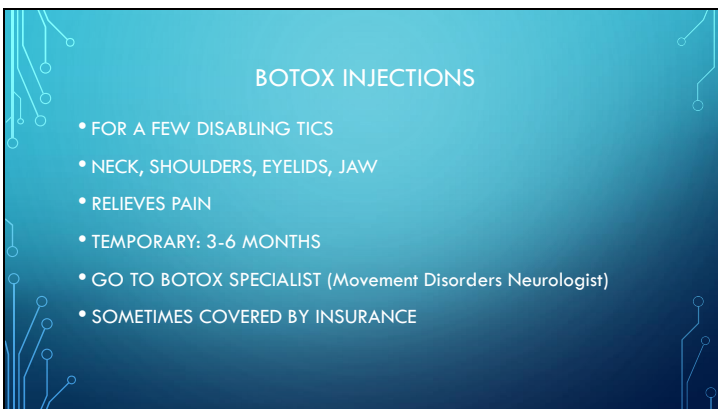


NEW MEDICATIONS

- SPECIFIC VMAT INHIBITORS (Valbenazine, deuterated-tetrabenazine)
- Avoid Most of the Side Effects of Tetrabenazine
- Clinical Trials Completed, Successful
- Should be Available Soon
- Should be Excellent Addition to TS Medications

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BOTOX INJECTIONS

- FOR A FEW DISABLING TICS
- NECK, SHOULDERS, EYELIDS, JAW
- RELIEVES PAIN
- TEMPORARY: 3-6 MONTHS
- GO TO BOTOX SPECIALIST (Movement Disorders Neurologist)
- SOMETIMES COVERED BY INSURANCE

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DEEP BRAIN STIMULATION SURGERY

- LAST RESORT
- MORE THAN 100 CASES WORLDWIDE
- INTEREST HAS DECLINED DUE TO MIXED RESULTS, UNCLEAR TARGET, RISKS
- AVOID IF SELF-INJURIOUS BEHAVIOR
- MAY BE BETTER FOR OCD

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TREATMENT OF ASSOCIATED DISORDERS

ADHD

Accommodations, behavioral treatments, devices

Medications

- guanfacine (Tenex), atomoxetine (Strattera)
- stimulants: methylphenidate (Concerta, Metadate, Focalin), amphetamine salts (Adderall, Vyvanse)
- immediate-release, extended release, skin patch, liquid

OCD

Cognitive behavioral therapy (CBT)

Medications: SSRIs, atypical antipsychotics

Deep Brain Stimulation (DBS)

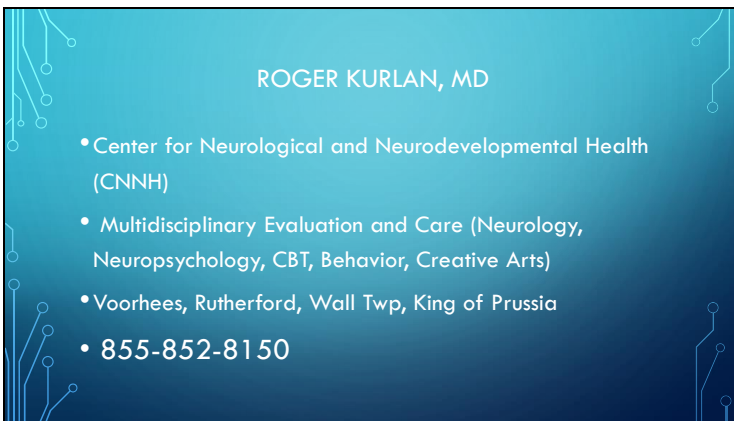
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OTHER ASSOCIATED DISORDERS

- DEPRESSION, BIPOLAR
- ANXIETY, PHOBIAS
- IMPULSE CONTROL DISORDERS, RAGE ATTACKS
- LEARNING DISABILITIES
- OTHERS

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