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PSYCHIATRY ACADEMY

Obsessive-Compulsive Disorder

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Disclosures

Emalex: Consultant and Medical Advisory Board

Obsessive-Compulsive Disorder (OCD)

- Diagnostic Criteria
  - Obsessions and/or compulsions
    - *Obsessions*: Unwanted, intrusive, fixed or repetitive ideas, thoughts, images or impulses
    - *Compulsions*: Behaviors one "must do" to get rid of the unwanted feelings caused by the obsession
  - At least **one hour** a day, and/or
  - Need to cause **distress** and/or **impairment** in daily functioning
    - Insight? ("I know this doesn't make sense… but I can't help it!")
    - **Tic-related?**

OCD characteristics

- 2-3% prevalence in children / adolescents
- Onset age between **8-12 (early-onset)** or late teens/early adulthood
- Early onset more genetic, more co-occurring conditions (e.g. tics)
- >50% have at least 1 co-occurring condition
  - *Tic Disorders
- Course:
  - Wax and wanes
  - Frequently chronic

OCD and Co-Occurring Conditions

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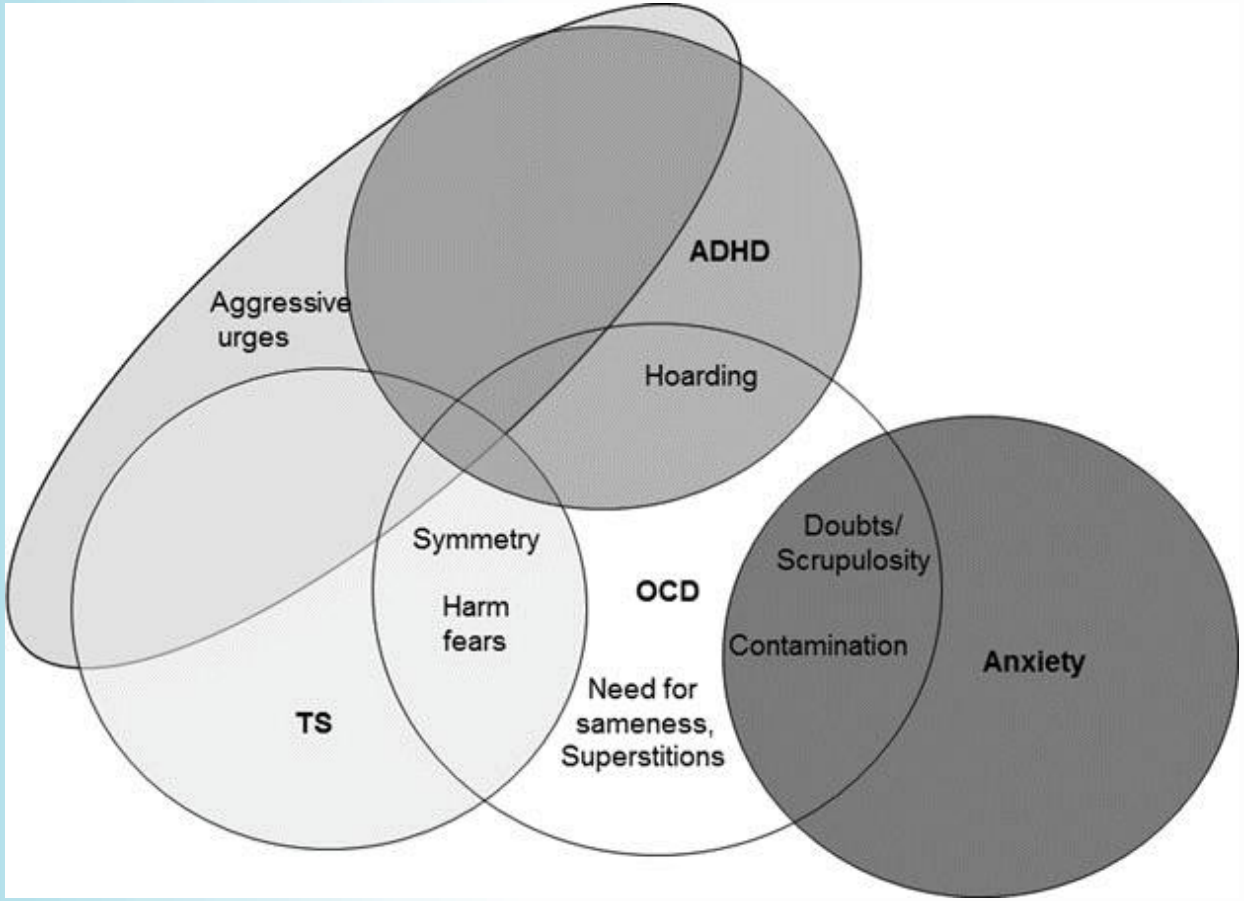
>50% have at least 1 co-occurring condition

- Other OC related disorders
  - Hair pulling/skin picking disorder
  - Body dysmorphic disorder
  - Hoarding disorder
- Anxiety disorders
- Tic disorders
- ADHD and impulse control disorders
- Depression/mood disorders
- Sleep disorders
- Eating disorders
- Autism spectrum symptoms/disorder



Hirschtritt, et al. *Psychological Medicine.* 2017.

OCD Subgroups

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Four subtypes:

- Symmetry
  - Includes: symmetry, ordering, counting, repeating, re-writing
- Forbidden thoughts
  - Includes: aggressive, sexual, religious, somatic, checking
  - Taboo thoughts
  - Doubt and checking
- Cleaning/contamination
- Hoarding*

What else can precede compulsions…? Not just anxiety!

- Fear/anxiety
  - e.g. stop something bad from happening
- Disgust
- Incompleteness / “Not just right”
- Avoidance…

Stewart et al (2008) *JAACAP*
Williams et al (2013) *Psychopathology*

Specific to Pediatric-Onset OCD

- Children (possibly) more likely to have poor insight
  - "A voice told me…"
- More obsessions involving 'fear of harm' and separation
- More often see compulsions without obsessions
- More likely to minimize impact/severity
  - Cope through avoidance
- More rituals involving family members
  - Reassurance seeking/checking (esp. children)
- More common sexual and religious symptoms
  - Adolescents > children and adults
- More likely to see tics and other associated symptoms

Geller, D. Pediatric OCD 2006;
Adapted from Coffey BJ. *Pediatric OCD*. 2019

Screening and Severity Scales

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- Scales I use:
  - Child Yale-Brown Obsessive Compulsive Scale II (CY-BOCS II) – particularly the severity section (0-50 total)
  - Obsessive Compulsive Inventory – Child Version-Revised (OCI-CV-R)
  - Dimensional Obsessive Compulsive Scale (DOCS)

- Child Behavioral Checklist – 8 question Obsessive Compulsive subscale
  - Has good sensitivity and specificity – above 80% (Adam et al 2024)

OCD Treatment

- Behavioral Therapy:
  - Cognitive Behavioral Therapy (CBT), specifically Exposure Response Prevention (ERP)
- Medication:
  - SSRIs – fluoxetine, sertraline, *fluvoxamine, clomipramine
    - 30-40% reduction in symptoms (6 points on CY-BOCS), clinical effects begin within weeks, plateau at ~10 weeks
  - 2/3rds changes in first 2-4 weeks
- Moderators:
  - Tics, Hoarding, Low Insight, Increased Accommodation, Autism Spectrum Disorder
- ~2/3rds youth respond to first-line treatments

- **Pharmacological:**
  - Serotonin Reuptake Inhibitors (SSRIs): fluoxetine, sertraline, fluvoxamine*, clomipramine
    - No difference in effectiveness between SSRIs
    - Number Needed to Treat (NNT) = 5
  - Significant benefit of SSRI compared to placebo observed by week 2
    - 85% of improvement with SSRI use in youth occurred within first 2 weeks, and plateaued week 6 (Varigonda et al 2016 *JAACAP*)
    - Maximize tolerability vs. dose (absence of dose-response relationship / increased risk of activation)
  - Maintain SSRI at least 6-12 m post successful treatment (Bloch and Storch 2015 *JAACAP*)

Medications used in Treatment of OCD: Empirical Support and Dosing Guidelines

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	Empirical Support			
Medication	Child	Adult	Starting Dose (mg)	Usual Dose Range (mg/day)
Clomipramine*	A	A	25-50	100-250
Fluoxetine*	A	A	5-20	10-60
Sertraline*	A	A	25-50	50-250
Fluvoxamine*	A	A	25-50	50-350
Paroxetine	B	A	5-10	10-60
Citalopram	B	A	5-10	20-60
Escitalopram**	B	A	5-10	10-20

*FDA-approved for OCD

**Not well studied in OCD, presumed to be similar in efficacy to citalopram.

Scahill et al (2006) NeuroRx

Adapted from Coffey BJ 2019 Pediatric OCD; Child and Adolescent Psychopharmacology Slides

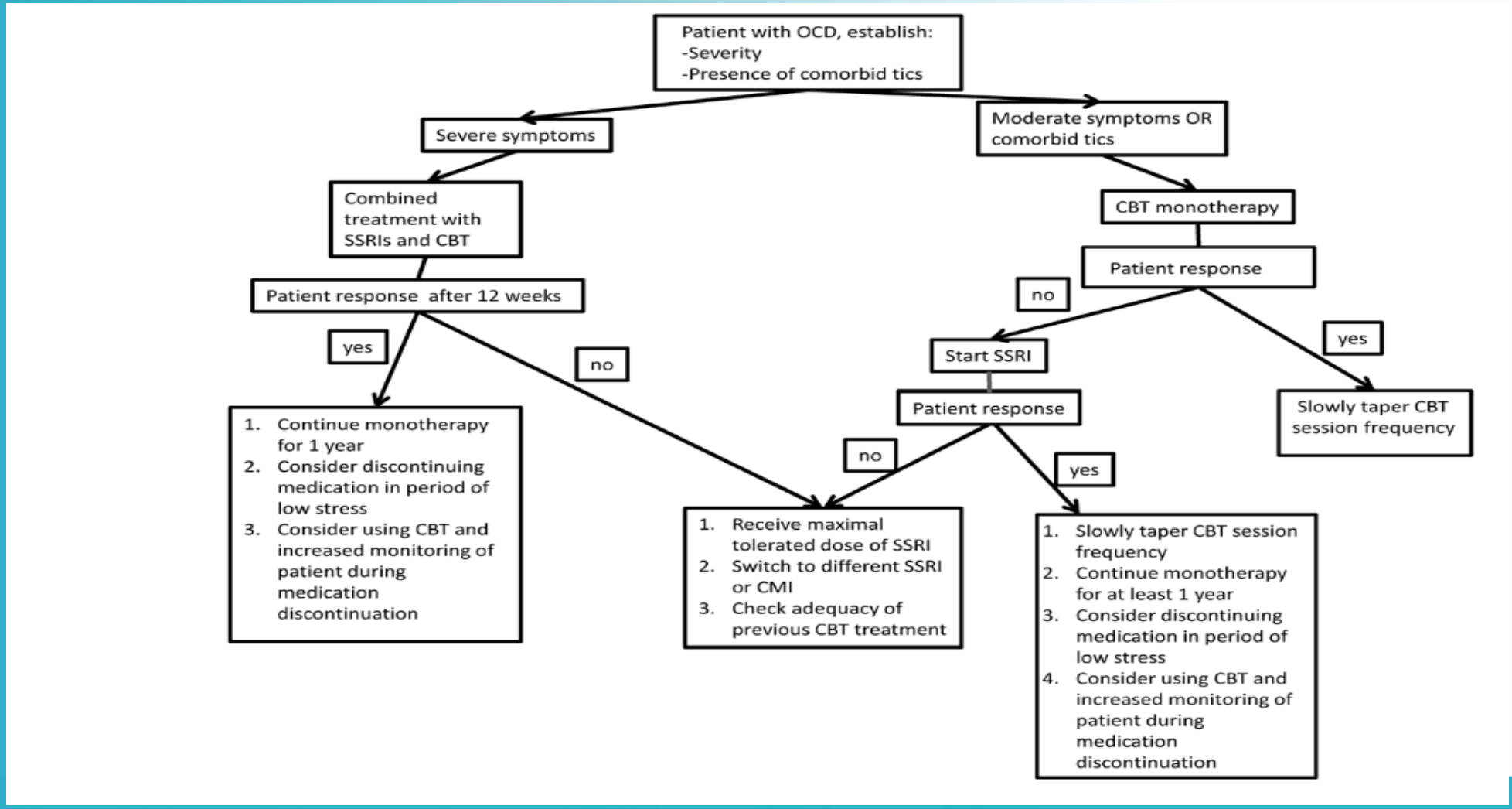
Pediatric OCD Treatment Study (POTS)

- Combination therapy (CBT and medication) is most effective for moderate-severe OCD (aiming for CY-BOCS<11)
  - Combined: 53.6%
  - CBT: 39.3%
  - Sertraline: 21.4%
  - Placebo: 3.6%

- POTS II: For children/adolescents who were partial responders to SSRIs
  - Weekly CBT with antidepressant (69% improvement)
  - Instructions on CBT and antidepressant (34% improvement)
  - Antidepressant alone (30%)

Garcia et al, JAACAP, 2010: Pediatric OCD Treatment Study (**POTS**)

Bloch, H. Michael. (2015). Assessment and Management of Treatment-Refractory Obsessive-Compulsive Disorder in Children.



Adapted from Coffey BJ 2019 Pediatric OCD; Child and Adolescent Psychopharmacology Slides

Next-step strategies

1/3 of youth with OCD don't respond to first-line approaches
- First ensure correct diagnosis and effective trial of ERP

- Increase SSRI dose to maximally tolerated
  - So long as incremental benefit and minimal side effects!
- Switch to a different SSRI
  - Consider checking CYP profile
- Switch to / augment with clomipramine (CMI)
  - Escitalopram/citalopram – no drug/drug interaction
  - Sertraline/fluoxetine – increases level of desmethyl-clomipramine (DCMI) (less serotonergic)
  - **Fluvoxamine** – increases level of clomipramine *and* prevents conversion to DCMI (more serotonergic)
- Clomipramine + fluvoxamine retrospective review (n=6) (Fung et al 2021)
  - Well-tolerated, effective, allowed for lower CMI doses

Bloch and Storch *JAACAP* 2015
Pittenger et al 2022

Next-step strategies – Neuroleptic augmentation

- Tics, poor insight, ASD, significant mood instability
- In adult meta-analysis, number needed to treat (NNT) = 4-5 (Bloch et al 2006)
  - Strongest evidence: risperidone, haloperidol, aripiprazole (higher D2R affinity)
  - Also with positive evidence: quetiapine, olanzapine
  - May induce OCD symptoms: clozapine
- If no benefit after 6-12 weeks, stop
- Neuroleptic without SSRI - ineffective

Bloch and Storch *JAACAP* 2015
Masi et al 2010, 2013
Pittenger et al 2022
Ferrao et al 2009

Additional Augmentation Possibilities

- Glutamatergic agents
- Benzodiazepines
- Serotonin/norepinephrine reuptake inhibitors (SNRI)
- Stimulants
- Cannabis
- Ondansetron

Glutamatergic Augmentation

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Riluzole:	• Some promise in uncontrolled studies (adults and youth), controlled trial in peds population was ineffective
Memantine:	• Effective as augmenter in small controlled study (adults); positive case report youth; ?pos executive function impact
N-acetyl cysteine (NAC):	• Effective as augmenter in small controlled study (adults); possible limited benefit in youth (dosed 2700mg split bid)
Topiramate:	• Two small controlled trials (adults), one with benefit
Amantadine (glutamatergic and dopaminergic):	• Effective as augmenter in controlled study (adults); well-tolerated NNT: 2.5
Ketamine:	• Small trials in adults, possible short-lived benefit (cases in pediatrics that were not effective by 2 weeks)
D-Cycloserine:	• Mixed results as ERP enhancing agent
Gabapentin/Pregabalin	• Gabapentin negative augmentation trials; Pregabalin (adult) positive DB-RCT trial as augmenter to SSRI (225-675mg/d)

OCD Augmentation continued

- Serotonin/Norepinephrine reuptake inhibitors (SNRI):
  - Non-inferior to SSRI in controlled trial (adult)… though greater improvement switching from SNRI to SSRI vs switching from SSRI to SNRI (Denys. J Clin Psychiatry. 2004)
    - Consider in youth if unable to tolerate SSRI
- Benzodiazepines:
  - Ineffective in controlled studies (adults) – monotherapy or add-on
  - Could consider during SRI initiation or severe symptoms short-term
- Stimulants:
  - Methylphenidate in small controlled trial (adults), well-tolerated – NNT: 2 (Zheng, et al. 2019)
- Cannabis:
  - Small controlled study (adult) (CBD, THC, placebo) negative in OCD (Kayser et al. 2020)
- Ondansetron: (5-HT3 receptor antagonist; anti-nausea) (Stern et al 2025)
  - Small DB-RCT in adults; significant benefit in those taking concurrent SRI (24mg/d)

Mills and Strawn *JAACAP* 2019

“Tourettic OCD”
Coined by Mansueto et al 2005

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- Associated with:
  - Male sex, earlier OCD age of onset, more OCD impairment
  - Early sensory hypersensitivity
  - Attentional difficulties, learning disorders, impulsivity
  - Skin picking / other body-focused repetitive behaviors
  - Increased anxiety disorders and depression symptoms

- Not-just-right feelings
  - Describe sensory phenomena / feeling of incompleteness driving symptoms
  - Not afraid of something bad happening, afraid they “will explode”
    - Limited response to fear-based exposures (ERP)

Mansueto and Keuler 2005
Ferrao et al 2009

Medication response in those with OCD and Co-occurring Tics

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- Serotonergic agents (SSRIs, clomipramine) perhaps less effective for OCD when co-occurring tics
  - POTS study, no significant separation between sertraline and placebo when tics
  - NOT the case for everyone, but lower threshold to consider combined treatments – targeting both OCD *and* tics
- Medication augmentation strategies
  - Dopamine blocking agent (atypical or typical antipsychotic)*
    - Most evidence, from adult studies; NNT 2 in OCD with tics vs NNT 6 in OCD and no tics
    - E.g. Aripiprazole, Risperidone, Ziprasidone, Haloperidol, Fluphenazine
  - Alpha-agonist?
    - E.g. Guanfacine, Clonidine (Hollander et al 1991)

March et al 2007
Bloch, et al 2006

OCD and additional Co-Occurring Conditions

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- Pediatric-onset OCD and ADHD highly comorbid (~25%)
  - If co-occurring OCD and ADHD, important to treat Both conditions – associated with better outcomes
    - Stimulants recommended!
- OCD and increased rates of emotional dysregulation
  - Consider stimulants (esp if co-occurring ADHD) and/or alpha agonists (enhance prefrontal cortical function)
  - Consider augmenting with mood stabilizing agents
    - e.g., Lamotrigine, neuroleptics
- **Can't effectively treat OCD when there are significant mood challenges present!**

Faraone et al *J Child Psychol Psychiatry.* 2019.
Cabarkapa, et al. *Frontiers in Psychiatry.* 2019.
Geller et al. *JAACAP.* 2002.
Yap et al. *J Clin Psychology.* 2018.

OCD and Bipolar Disorder (BD) - Background

- Bipolar disorder in (pediatric) OCD: 14.6% (95% CI 4.5–29.1) (Amerio et al 2015)
- OCD in pediatric bipolar disorder: 16.7% (95% CI 11.4–23.8%) (Yapıcı Eser et al 2020)
  - Greater OCD rates in youth vs adults with BD
- Earlier age of OCD onset (OCD onset prior to BD)
- Increased rates co-occurring conditions
  - ADHD, ODD, anxiety, hoarding(!)
- Greater association with bipolar II (vs bipolar I)
- **Worse response to treatment and worse quality of life**
- **Increased suicidality**
- **Increased substance and alcohol use disorders**

De Filippis et al (2024) *J Clin Med*
Masi et al (2018) *J Affect. Disord.*
Amerio et al (2019*) J Affect. Disord*
Barmante et al (2023) *Int J Psych*

OCD and BD Treatment Summary

- **Primary Goal: Mood stabilization!**
  - In all selected studies, OCD/BPAD patients received mood stabilizers
    - Need to stabilize mood prior to treating OCD
    - Add SRIs to mood stabilizers with significant caution
- Lithium (with aripiprazole) commonly used (Masi et al 2018)
  - Consider memantine, quetiapine, topiramate, (and aripiprazole and risperidone)
- Consider other non-serotonergic augmenters with evidence for OCD
  - Lamotrigine (Burno et al 2012); pregabalin (Mowla and Ghaedsharaf 2020); ondansetron (Stern et al 2025)
  - Non-pharmacologic interventions: TMS? ECT (positive case report)
  - Psychedelics: psilocybin? nitrous oxide?

Amerio, et al. *J Affect Disord. 2019.*

Thank you!