

# Childhood OCD

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# Question 1

Early onset OCD is characterized by:

- A) Increased comorbid tic disorders
- B) Decreased comorbid ADHD
- C) Onset of OCD precedes tics by many years
- D) Minimal genetic loading

# Question 2

Common comorbid diagnoses with OCD include all of the following except:

- A) ADHD and ODD
- B) Major depression and anxiety
- C) Somatoform disorders
- D) Motor tics

# Question 3

The following medications are effective in the treatment of OCD, except:

- A) Clomipramine
- B) Fluoxetine
- C) Desipramine
- D) Fluvoxamine

# Question 4

The POTS trial in OCD found that the greatest reduction in CYBOCS scores results from:

- A) Sertraline alone
- B) CBT alone
- C) Combined CBT+Sertraline
- D) Family Therapy

# Question 5

Criteria for diagnosing PANDAS include:

- A) Motor and vocal tics
- B) Obsessive and compulsive disorder of childhood onset
- C) Tourette Disorder
- D) Sudden onset of OCD after a streptococcal infection

# Teaching Points

- Distinguish between normal rituals vs. OCD; young children may not recognize their rituals as unreasonable or excessive
- Commonest obsessions: Concerns regarding contamination, self harm, doing the right thing (scrupulosity), reassurance or sexual thoughts
- SSRI+CBT may be the most efficacious treatment choice
- Look for PANDAS

# Outline

- OCD vs. normal childhood rituals
- DSM-IV criteria
- OCD epidemiology and symptomatology
- Comorbidity of OCD
- Assessment of OCD
- Course of OCD
- Treatment options: CBT & Pharmacotherapy
- The POTS study
- Special issues: PANDAS



# OCD vs. Normal rituals

- Obsessions: Persistent thoughts, images or impulses that are ego-dystonic & intrusive
- Compulsions: Repetitive, purposeful behaviors in response to an obsession, usually to relieve anxiety
- Compared to adults, youth may hide their rituals & can be secretive about them
- Young children may not recognize their rituals as unreasonable or excessive; Important for clinician to help recognize associated impairment

# OCD vs. Normal rituals

- Normal developmental rituals may include avoiding stepping on cracks in sidewalks (rituals related to belief in power of wishing) & normal collecting behaviors including baseball cards
- Must distinguish vernacular “obsessive” and “compulsive” from clinical syndrome
- Look for severity of behaviors and functional impairment

# DSM-IV criteria

A) Presence of either obsessions or compulsions

## Obsessions:

- 1) Recurrent and persistent thoughts, impulses, or images that are experienced as intrusive and inappropriate and that cause marked worry or distress
- 2) Not simply excessive worries about real-life problems
- 3) Attempts to ignore or suppress them or neutralize them with some other thought or action.
- 4) Recognize they are a problem of ones own mind and not imposed from without (not children)

## Compulsions:

- 1) Repetitive behaviors (hand washing, ordering, checking or mental acts (praying, counting, repeating words) one is driven to perform
- 2) Behaviors ward off distress or prevent dreaded situation (not children)

# DSM-IV criteria

- B) Is recognized as excessive or unreasonable  
(not children)
- C) More than 1 hr a day or interfere with normal  
routine
- D) Not part of another Axis 1 condition
- E) Not caused by a substance or general medical  
condition

# Common symptoms

- Excessive worries about danger, separation & contamination → rituals of checking, hoarding & checking
- Commonest obsessions: Concerns regarding contamination, self harm, doing the right thing (scrupulosity), reassurance or sexual thoughts
- Common compulsions: Washing, repeating, checking, counting, touching, arranging and hoarding
- Obsessions are more age dependent

# Symptoms of Childhood OCD

- Obsessive thoughts and washing- some times in 85%
- Repeating rituals in 50%:need to be perfect
- Checking in 46% (e.g., doors, windows, appliances)
- Ordering, arranging and symmetry in 17%,
- Scrupulosity in 13%
- Takes 4-6 months before parents aware of sx's, secretiveness leads to long time before diagnosis (Leonard 1993)
- In teens, sexual and religious obsessions (Scahill et al 2003)
- Symptoms shift over time (Rettew et al 1992)

# Epidemiology

- Point prevalence 0.8%; lifetime prevalence 1.9%
- Boys more likely with prepubertal onset; girls with pubertal onset
- Male/female ratio equalizes in adolescence
- Early-onset OCD: ↑ tic disorders; ↑ comorbid ADHD; onset of tics often precedes OCD by many years
- Early-onset OCD: Associated with stronger genetic loading
- One-third to one-half adults with OCD have childhood-onset

# Etiology

- Genetic transmission- Twin studies show ‘genetic influences’: 45-65% (van Grootheest et al 2005)
- Higher rates of OCD in 1° relatives (Nestadt et al 2000); 30% of adolescents had 1° relatives with OCD (Lenane 1990)
- Areas of brain implicated: Basal ganglia
  - Increase size of caudate nuclei (Calabrese 1993)
  - Functional deficits in cortico-striato-thalamo-cortical circuit underlie OCD
  - Neurochemicals implicated: Serotonin



# Etiology

- Hormonal dysregulation: Implicated as male/female ratio is 7:1 before age 10 years & 1:1.5 after puberty
- Pediatric Autoimmune Neuropsychiatric Disorders Associated with Streptococcal Infections (PANDAS) subgroup: Post streptococcal production of auto-antibodies which cross-react with cellular components of basal ganglia

# Differential Diagnosis (Leonard et al 2006)

- Depression and Anxiety disorders
- Eating disorders
- Tic disorders
- Body dysmorphic disorder
- Normal childhood rituals

# Comorbidity

- Sole diagnosis (26%)
- Major depression (26% )
- Anxiety disorders: Simple phobia (17%), SAD (7%), Overanxious disorder (16%)
- Motor tics (30%) may have younger age of onset
- Reading and language delays (24%)
- ODD (11%), more in preadolescent boys
- ADHD (10%)--but 30% in preadolescent boys (Swedo 1989)

# Assessment

- Use multiple sources of information
- Look for comorbidities
- Estimate extent of impairment
- Review developmental and family history
- Look for possible medical causes
- Utilize instruments such as Children's Yale-Brown Obsessive Compulsive Scale (CYBOCS)  
([http://www.bpchildresearch.org/grand/grand\\_rounds.cfm?ID=24&page=YBOCS](http://www.bpchildresearch.org/grand/grand_rounds.cfm?ID=24&page=YBOCS))

## Assessment: Instruments (Merlo et al 2005)

- Semi-structured interviews (e.g. Anxiety Disorders Interview for Children): Clinician administered with parents and children interviewed separately for 45-60 mins or K-SADS with one of five subscales
- Child's Leyton Obsessional Inventory: Cards sorted 3 times for type, resistance and interference (Berg 1988)
- Drug sensitive Scales: C-YBOCS, NIMH OC scale (Goodman 1992)

# Children's Yale Brown Obsessive Compulsive Scale (CYBOCS)

- Checklist of symptoms and 10 item clinician-driven questionnaire with 4 degrees of severity- 2 subscales Obsessions (20 points) and Compulsions (20 points)= 40 points; Integrate parent, child & clinician observations
- Total 0-7 subclinical
- Total 8-15 mild \*10=remission
- Total 16-23 moderate
- Total 24-31 severe
- Total 32-40 extreme
- Good interrater reliability (Yucclen et al 2006)

# Assessing response using CYBOCS

- CY-BOCS not extremely sensitive to change at highest severity
- A 25% or 35% decrease is generally taken as efficacy and a score of 10 indicates full remission

# Childhood OCD with and without tics: Are there differences?

- Patients with OCD & comorbid tic disorder: Higher rates of symmetry, touching, rubbing, staring, blinking (Leckman 1994)
- Patients with OCD alone have more contamination and cleaning
- OCD comorbid with tics more familial, more common in boys and has early onset (Geller 2001)



# OCD with comorbid ADHD

- In a survey of youth with OCD, 25% patients had co-morbid ADHD (Masi et al 2006)
- Comorbid ADHD can compromise school performance (Geller et al 2003); concentrating on school and homework common problems (Piacentini et al 2003)
- More problems in social functioning, school and depression (Sukhodolsky et al 2005)
- ADHD+ OCD: Higher rate in males, an earlier onset of OCD, a greater psychosocial impairment, and a stronger co-morbidity with bipolar disorder, tic disorder, and oppositional defiant disorder/conduct disorder (Masi et al 2006)

# Prognosis and long term outcome

## ❖ Meta-analysis by Steward 2003:

- ✓ 16 samples, n=521 children & adolescents with OCD: followed for 1-15 yrs
- ✓ Pooled data: 41% had full OCD at follow-up, 60% full or sub-threshold OCD
- ✓ Predictors of full OCD: Early age of onset, ↑ OCD duration & being inpatient; Comorbid psychiatric illness & poor initial treatment response were poor prognostic factors

## ❖ Long-term medication studies: Modest incremental improvement but not normalization over 52 weeks of SSRI treatment; relapse rate after SSRI discontinuation possibly high

# Pharmacotherapy

- FDA approval for youth:
  - ✓ Clomipramine >10 yrs
  - ✓ Fluoxetine >8 yrs
  - ✓ Fluvoxamine >8 yrs
  - ✓ Sertraline >6 yrs
- May need 10-12 weeks at highest tolerated doses
- 30-40% reduction in OCD symptoms with pharmacotherapy alone
- Black Box warning for suicidality for all antidepressants in youth, regardless of disorder being treated

# Pharmacotherapy: Important points

- All SSRIs appear equally effective
- Choice made on side effects, pharmacokinetic profiles and drug interactions
- Check for sexual side effects
- Go slow with upward titration
- 12 months of treatment better than 6 months
- Slow taper when discontinuing

# Childhood OCD: Meta-analysis

- Meta-analysis of all DBPC medication trials in pediatric OCD including paroxetine (Geller et al 2003)
- 12 studies met inclusion criteria: 1044 children included; 8-12 weeks of treatment
- Overall effect size of 0.46 (modest effect)
- Clomipramine superior to each SSRI (which were indistinguishable from each other); this may however have resulted from its use (as the first such medication available) in non-refractory population

# Clomipramine

- 3 studies support efficacy:
  - Flament et al 1985, 10wk DB cross-over of 23 youth 3mg/kg
  - DeVaugh-Geis et al 1992 led to FDA approval
  - Leonard et al 1989 DB crossover between CMI 93-5mg/kg/dy and DMI
- Ask about sudden death in first-degree relatives
- In youth, CBC, LFTs, creatinine, EKG, BP and HR
- Start at 25mg and gradually increase by 25 mg every 10-14 days, get EKGs and at least one plasma level of CMI and desmethylCMI before next level and aim for 3mg/kg/day but not higher than 5mg/kg/day.
- Watch for anticholinergic, seizures, blood pressure and heart rate changes