Anxiety and Other Child/Adolescent Topics

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Disclosures

- None
Objectives

- This presentation will provide a basic overview on phenomenology, treatment guidelines and major studies related to:
  - Childhood anxiety disorders
  - Childhood OCD
  - Childhood PTSD and Trauma
  - ODD and Conduct Disorder
  - DMDD and Early onset Bipolar Disorder
  - Tic Disorders
Other Topics

- The following C&A topics will not be covered, but a basic knowledge could be required for the Royal College exam:
  - Enuresis
  - Encopresis
  - Learning Disorders
  - Attachment disorders
  - Speech and Language disorders
  - Feeding Disorders of Infancy
Recommended Study Tools

- DSM-5

- AACAP “Practice Parameters” (Clinical Practice Guidelines):
  - Anxiety, ADHD, Depression, Bipolar, Conduct, ODD are considered “historical” (2007 or earlier)

- Landmark Studies in Child and Adolescent Psychiatry: CAMS, TORDIA, TADS, MTA, POTS, ACES
Anxiety: Normal Development

- Infants have fear of: loud noises, being startled, stranger anxiety (~9 months)
- Toddlers: imaginary creatures, darkness, separation (~18 months)
- School-age: injury, natural disasters
- Teens: school performance, social competence and health
Childhood Anxiety Disorders

- Most common disorder in C&A Psychiatry
  - prevalence 6% to 20% over several large epidemiological studies (Costello et al., 2004)
- Social Anxiety Disorder, Generalized Anxiety Disorder, Separation Anxiety Disorder, Specific Phobia (Panic Disorder onset is later, mid-teens)
- F > M
- Highly comorbid (80%)
  - Depression, ADHD, substance abuse (used to alleviate symptoms?), ODD, learning d/o, language d/o
- associated with poor academic performance
Separation Anxiety Disorder

- Symptoms:
  - Distress: physical or mental upon separation
  - Preoccupations: with being lost/never reunited, harm to caregiver
  - Reluctance: to be separated within home, outside home (e.g. school), bedtime

- High maternal over-involvement associated with separation anxiety disorder: considered a disorder of the “dyad” rather than the child
Selective Mutism

- Symptoms:
  - Failure to speak in specific social situations, despite speaking elsewhere
- Often associated with social anxiety disorder
- $F > M$ (slightly)
- Onset usually before age 5, but not problematic until school
- Differentiate from language disorder, learning disorder, MR, ASD
Differences in Children

• Differences in anxiety disorder diagnosis compared to adults:
  • Anxiety may be expressed as crying/tantrums/freezing/clinging
  • Do not need to recognize that fear is excessive
  • Social: anxiety must occur with peers (not just adults) but can show normal interaction if comfortable (vs. ASD)
  • GAD: only 1, not 3, physical symptom required
  • Specific Phobias: “Other type” specifier includes costumed characters or loud noises in children
CAMS - Child and Adolescent Anxiety Multimodal Study (2008)

- 488 C&A (age 7 – 17) with Separation/Social/GAD
- Given: Sertraline + CBT, Sertraline, CBT or Placebo

Results:
- At 12 weeks: **Combo > Sertraline = CBT > Placebo**
- Combo NNT = 2 (Sertraline or CBT alone = 3)
CAMS - Child and Adolescent Anxiety Multimodal Study (2008)

• Conclusions:
  • Combination only slightly more efficacious than medication or CBT alone
  • Any treatment is effective
  • In this study, SSRIs did not increase the risk of suicidal ideation
Childhood Anxiety Disorders: Treatment

- Psychotherapy: First-line for mild disorders/specific phobia
  - CBT: (i.e. Coping Cat/Coping Bear/Taming the Worry Dragons)
    - Group CBT can be used
    - Demonstrated efficacy for GAD, social, separation anxiety
      - less evidence for panic d/o and selective mutism
  - Classroom modifications: IEP, extended time on tests, increased support
  - Family interventions (especially if anxious parent)
Childhood Anxiety Disorders: Treatment

- Medications
  - SSRIs:
    - Many RCTs, better evidence than for use in MDD
    - Use if moderate/severe, comorbidity or partial response to psychotherapy
    - Greater severity and presence of social phobia predict less favourable outcome
    - Separation anxiety less responsive to SSRIs
  - Some evidence for SNRIs
  - No evidence for buspirone
  - Conflicting evidence for TCA’s (side effects make them relatively contraindicated)
  - Benzos have not shown benefit in controlled trials
Childhood OCD

• Prevalence:
  • 1-4% of C&A
  • 1/3 – 1/2 of Adult OCD patients have onset before age 15

• Gender: M=F overall
  • M>F before puberty; F>M after puberty

• Comorbidities:
  • Males more likely to have tics
    • Common triad: ADHD, OCD, and Tics; presence of tics predicts worse outcome
  • Adolescents: Depression

• Diagnosis/Symptom Tracking: CY-BOCS
How Does OCD differ in kids?

- Children may not realize that their rituals are unreasonable

- Worries about harm befalling parents/loved ones very common

- Insidious onset common…

- PANDAS: Pediatric Autoimmune Neuropsychiatric Disorder Associated with Streptococcal infection
  - Prepubescent, abrupt onset OCD, tics and/or choreiform movements
  - Associated with GABHS (Group A Beta-Hemolytic Strep)
OCD Treatment

- **Mild to Moderate**
  - Psychotherapy:
    - CBT with Exposure-Response prevention
    - Often involves externalizing symptoms

- **Moderate-Severe: Pharmacotherapy + ERP**
  - SSRIs (30-60% response)
  - Some evidence for risperidone augmentation
  - Meta-analysis (Geller, et al. 2003) ; n=973
    - SSRI’s effectively equal
    - Clomipramine significantly greater effect
POTS - Pediatric OCD Treatment Study (2004)

- C&A (age 7 – 17) with OCD; n=97
- Given either Sertraline (ave. dose 170mg), CBT, Sertraline + CBT, or Placebo
- Results:
  - 12 weeks: Combo (55%) > CBT (40%) > Sertraline (21%) > Placebo
  - NNT=2 (combo), 3(CBT), 6(Sertraline)
Childhood PTSD

- Trauma is common (25%)
- Recent US study: prevalence of PTSD (age 12 – 17) 4% M, 6% F
- Risk Factors: Female, Multiple traumas, Greater exposure to index trauma, Pre-existing Anxiety D/O, Parental Psychopathology, Lack of social supports (parents/community not believing them)
- Common co-morbid disorders:
  - Depression
  - ADHD
  - Other anxiety disorders
  - Substance Abuse
PTSD: Differences in Children

- Dissociation or memories may occur as repeated play with themes/reenactment of trauma
- Nightmares about other frightening things (not necessarily the event)
- DSM 5: “Preschool specifier” (under age 6):
  - Either experienced, witnessed or heard about trauma to close caregiver
  - Less symptoms needed for diagnosis and child-specific wording
    - Preschool does not include: amnesia; foreshortened future; persistent blame of self or others, reckless behaviour
    - Negative emotions can include irritability, such as temper tantrums
PTSD Treatment

• Psychoeducation of child, family, primary care, school personnel
• Psychotherapy:
  • Trauma-focused CBT (most evidence)
  • EMDR
  • Psychodynamic
• Including parents may help reduce symptoms
• Indications for pharmacotherapy (conflicting evidence)
  • Severe PTSD with need for immediate symptom resolution
  • Unsatisfactory or partial response to psychotherapy
  • Comorbidities (depression 60%)
Childhood Adverse Events Study (1998)

- N=17,337

- Collected data on adverse childhood events:
  - Physical abuse
  - Sexual abuse
  - Emotional abuse
  - Physical neglect
  - Emotional neglect
  - Mother treated violently
  - Household substance abuse
  - Household mental illness
  - Parental separation or divorce
  - Incarcerated household member
Physical and Mental Health Outcomes

- Compared to an ACE score of zero, ACE score of 4 associated with:
  - 4- to 12-fold increased risks for alcoholism, drug abuse, depression, and suicide attempt
  - 2- to 4-fold increase in smoking
  - 2-fold increase in cancer diagnosis
  - 1.4- to 1.6-fold increase in physical inactivity and severe obesity

- ACE > 6:
  - died nearly 20 years earlier on average
  - 30-fold increase in attempted suicide

- Follow up studies:
  - ACE score ≥4:
    - 51% learning or behavioral problems in school (ACE score of 0 : 3%)
    - 3x likely to take ADHD medication (compared to <4 ACE)
Possible Neurobiological Mechanisms

- ACE’s can alter:
  - Structural development of neural networks
  - Biochemistry of neuroendocrine systems
  - Epigenetic effects with stress during pregnancy or during interactions between mother and newborns
Conduct Disorder

- Aggression to people or animals
- Destruction of property
- Deceitfulness/theft
- Serious violations of rules (i.e. truancy before age 13)
- Childhood-onset type (at least one symptom <10 years) vs. Adolescent (NO symptoms before 10)
- If >18, ASPD must not be met
- Specify if:
  - “with limited prosocial emotions”: lack of remorse/guilt, lack empathy, unconcerned about performance, shallow (*poorer prognosis)
CD: Risk Factors

• Individual: Difficult Temperament, Impulsiveness/Hyperactivity, Low IQ and low school achievement, Reading Problems

• Environment
  • Urban, low SES, low family income, high crime neighbourhoods
  • Antisocial peers, high delinquency rate schools
  • Early institutional living

• Family
  • Harsh punitive parenting
  • Chaotic home conditions/divorce/abuse/neglect
  • Psychotic/drug abusing parents (distant rather than enmeshed)
  • Young/ antisocial mothers (depressed rather than anxious)
  • Isolated families/ mobile families/ Large family size
  • Poor parental supervision
CD: Treatment

- Gold Standard: Multisystemic Therapy: involves school, peers, family
  - Individual: social skills training
  - Parent Skills/Management Training
  - Pharmacotherapy to target symptoms/comorbidities

- No medication is specific to CD
  - SSRIs for mood/anxiety
  - SGAs or mood stabilizers for aggression
  - Stimulants for ADHD
  - Alpha agonists (esp. if comorbid with ADHD)
## 2015 Canadian Guidelines: Disruptive and Aggressive Behaviour in ADHD, ODD or CD

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<th>Medication</th>
<th>Population</th>
<th>Outcome: D=Disruptive A=Aggressive</th>
<th>Recommendation</th>
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<td>Risperidone</td>
<td><strong>IQ:</strong> ODD/CD (+/- ADHD)</td>
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ODD

- Diagnosis: Angry/Irritable Mood, Argumentative/Defiant Behaviour, Vindictiveness
- Prevalence: 10%
- Average age of onset: Age 8
- M>F until adolescence when it equalizes
- Theorized etiologies: Difficult temperament, inadequate parenting, violence, insecure-avoidant attachment
- Comorbidities: ADHD (onset usually prior), Anxiety/MDD (onset usually after), learning disabilities
- Prognosis: Good. 66% improve. 33% go on to have CD. Majority do NOT develop ASPD
ODD Treatment

• Prevention:
  • Head Start Programs (preschool age)
  • Home visitation to high risk families
• Parent management programs (Incredible Years, Triple P)

Common elements:

1) Reduce positive reinforcement of disruptive behavior.
2) Increase reinforcement of prosocial and compliant behavior. Positive reinforcement varies widely, but parental attention is predominant. Punishment usually consists of a form of time out, loss of tokens, and/or loss of privileges.
3) Apply consequences and/or punishment for disruptive behavior.
4) Make parental response predictable, contingent, and immediate.
ODD Treatment

- No convincing evidence for individual therapy for child
- Dramatic, short-term programs (“Boot camps”) are not recommended
- Atypical antipsychotics are commonly used but have limited evidence outside of MR/ASD
  - NOT recommended as sole treatment
- Assess and treat co-morbid disorders
  - stimulants in co-morbid ADHD can reduce ODD symptoms
Tic Disorders

- Sudden, involuntary, non-purposeful movement or vocalization
- Simple Motor:
  - eye blinking (often first), shoulder shrugging, mouth opening, arm extending
  - facial grimacing, lip licking, eye rolling
- Simple Vocal:
  - throat clearing, grunting, yelling, sniffing, barking, snorting, coughing
  - spitting, humming
- Complex Motor:
  - Coordinated movements involving multiple muscle groups
Tic Disorders

• Tourette's Disorder:
  • Two motor AND one vocal tic, >1 year, multiple times a day

• Persistent Motor or Vocal Tic Disorder:
  • motor OR vocal, >1 year, multiple times a day

• Provisional Tic Disorder:
  • motor OR vocal, <1 year

• For all, onset must be before age 18
Tourette’s Disorder

- Prevalence 0.5 – 3%
- Average onset: Age 7 (can present as early as few months old)
- Motor usually precedes vocal
- M > F (2:1)
- Common motor tics: Starts face/neck (eye blink most frequent starting point) then moves down body, arms and hands to lower limbs
- Irritability/tension felt before onset of tics
- Can suppress for varying amount of time with social pressure
- Comorbidities: ADHD (onset usually before); OCD (onset usually after)
- Course: waxing/waning but most improve during adolescence (65% remit by age 18)
Tourette’s Disorder

• Treatment:
  • Mild or no significant impairment:
    • Psychoeducation, assess for comorbidities, classroom accommodations
  • Moderate tics, with impairment:
    • Habit Reversal Therapy
  • Moderate-to-severe tics, with severe impairment:
    • Haldol/pimozide (most studied, but risk of EPS so rarely used
    • Risperidone, Olanzapine, Aripiprazole (risk of weight gain)
    • Alpha-2 agonists (clonidine, guanfacine XR)
DMDD and Bipolar

- Elimination of emotion regulation symptoms from “hyperkinetic child” (ADHD) in DSM-III
- Children with outbursts became diagnostic dilemma; more children being diagnosed with “Bipolar NOS”
- Evolution of 2 types of bipolar disorder:
  - Conservative/narrow phenotype
  - Liberal/broad phenotype (aka “Severe Mood Dysregulation” by Leibenluft, et al. in 2003)
DMDD Diagnosis

- Frequent temper tantrums (3x/week)
- Baseline mood is irritable or angry
  - Children who are always “just below the boiling point”
- Onset before age 12; no period < 3months without symptoms
- Some believe DMDD = ADHD + ODD + emotionally labile temperament
- Rates of co-morbid ADHD 70 – 90%
DMDD Treatment

- Since DMDD diagnosis was “just invented” and SMD was coined in 2003, very few medication trials; all treatments are off-label
  - First, maximize treatment of base condition of outbursts (ADHD, anxiety, ASD)
  - Added parent training helps
  - Added risperidone helps (not as much as stimulants/PT)
  - TEAM study demonstrated mood stabilizers were not effective alone, but KSADS study shows they appear to be effective in a sub-group of stimulant-refractory DMDD when stimulant dose maximized

- Half of children admitted to hospital were able to maintain self-control and had no outbursts on unit (clear expectations, positive support, less stress)
Early Onset “Narrow” Bipolar Disorder Treatment

• Mania/Mixed:
  • Risperidone > Lithium = Valproate (according to the TEAM Study)
  • Lithium (approved for age 12 and up)
    • especially if FHx of Lithium response
  • Quetiapine + VPA (one RCT showed combo better than VPA alone)
• Maintenance: Combo is key (Lithium + SGA, Lithium + VPA)
• Others:
  • social/family intervention, Psycho-ed, relapse prevention, psychotherapy, academic/occupational functioning
Enuresis

- Cannot make diagnosis until age 5 (before is normal)
- Nocturnal Enuresis most common
- Can be associated with Expressive Language Disorders
- M>F
- Genetic: 75% have a parent with history of enuresis
- Course: Remits by age 8 usually
- Treatment:
  - None usually: reassure
  - Classical conditioning with bell and dry pad
  - Meds: Desmopressin (DDAVP) or Imipramine: efficacious but not often used of side-effects
Stuttering

- Prevalence: 1%
- Onset: 2-7 years (two peaks: 2-3.5 y and 5-7 y)
- Insidious onset: consonants, then words, then phrases
- Course: 80% spontaneously remit
- M>F
- Comorbidities: Expressive/Mixed Language Disorder; Social Anxiety, Motor tics (facial grimaces), ADHD
- Etiology: Genetic, worsened by Anxiety
- Treatment: Direct Speech Therapy
References


- Carlson, G. “MDD, DMDD, Suicidal Behaviour and Bipolar Disorder” Presentation at AACAP Douglas B. Hanson Annual Review Course; March 2015, San Francisco, CA.

- Courtney, D. “Childhood Mood and Anxiety Disorders”. Presentation at Ottawa Review Course; Jan 2012, Ottawa, Canada.
