# PTSD in Youth

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# Question 1

Which of the following statements about PTSD in youth is true?

A) PTSD symptoms only develop in youth over the age of 7 years

B) PTSD can develop by witnessing domestic violence

C) The DSM-IV criteria apply equally well to adults and toddlers

D) PTSD symptoms relent in youth and rarely recur

# Question 2

Which of the following treatments have been shown to be effective in the treatment of PTSD in youth?

A) Trauma-focused CBT

B) Hypnosis

C) Valproate

D) Buspirone

# Question 3

Which of the following statements is true about play therapy in PTSD in children?:

A) Children with PTSD have normal play

B) Children with PTSD have more imaginative play than those without PTSD

C) Children with PTSD have routinized anhedonic play that symbolized the trauma

D) Children with PTSD never symbolize their trauma in play

# Question 4

Which of the following medications may be useful to treat symptoms of PTSD in children?

A) Clonidine, hypnotics, SSRIs

B) Clonidine, valproate, buspirone

C) Hypnotics, carbamazepine, SSRIs

D) SSRIs, clonidine, carbamazepine

# Question 5

Which criteria of PTSD is likely to be absent from children?

A) Re-experiencing the trauma

B) Persistent arousal symptoms

C) Persistent avoidance

D) Nightmares

E) Startle reaction

# Teaching Points

- PTSD: Often overlooked in youth
- Treatment of choice for PTSD symptoms in youth is  trauma-focused CBT
- Since symptoms recur in youth with chronic PTSD, treatment must be tailored to current symptoms

# Outline

- DSM-IV diagnostic criteria
- Modifications of criteria for children
- Type1 and Type 2- Terr
- Risk factors
- Epidemiology
- Co-morbidity
- Management of PTSD

# PTSD in youth

- Relatively new area of interest-25 years
- Lenore Terr and Chowchilla bus kidnapping sparked interest in 1981
- In 1985, Michael Rutter concluded that children's reaction to trauma were less severe than adults and did not warrant their inclusion within a diagnostic category of PTSD
- In 1987, DSM-III-R first recognized PTSD in youth

# Types of Trauma

- Interpersonal: Trauma of human design; include warfare, terrorism, witnessing domestic violence, physical & sexual abuse & neglect
- Non-interpersonal: Natural disasters, accidents, life-threatening illness
- Interpersonal trauma more common in children & adolescents

# DSM-IV criteria

- Criteria A: Symptoms follow a traumatic event
- Criteria B: Intrusive re-experiencing of trauma
- Criteria C: Persistent avoidance/numbing of associated stimuli
- Criteria D: Persistent symptoms of increased physiological arousal
- Creiteria E: Functional Impairment
- Criteria F: One month or more duration of symptoms

# DSM-IV

## Criteria-A

- ✓ Witness or experience an event with threat of death or serious injury to self or others
- ✓ Experience "intense fear, helplessness or horror"

## Criteria-B

Need one of the following:

- ✓ Recurrent recollections or image
- ✓ Distressing dreams
- ✓ Flashbacks
- ✓ Intense distress if internal or external cues
- ✓ Physiologic distress if internal or external cues

# DSM-IV

Criteria-C

Persistent avoidance of cues /thoughts or numbing; need 3 of the following:

- Avoid thoughts, feelings or talk about event
- Avoid cues of event
- Amnesia for important aspects of event
- Diminished interest in others
- Feeling detached from others
- Restricted range of affect
- Sense of a foreshortened future

# DSM-IV

Criteria-D:

Arousal symptoms; two of the following needed:

- Difficulty falling or staying asleep
- Irritable mood or angry outbursts
- Difficulty concentrating
- Hypervigilance
- Exaggerated startle response

# DSM-IV criteria modifications

**(De Bellis 2005)**

- Criteria not sensitive for very young kids
- Also not sensitive to long-term effects of physical or sexual abuse
- Teens more likely to meet adult criteria

## Event Criteria for kids: Modifications

- Younger kids may not have “feelings” or behavioral changes at the time of “disorganized or agitated behavior

# Re-experiencing criteria in children: Modifications

(De Bellis 2005)

- Recurrent intrusive memories: Younger kids have repetitive play or volitional re-enactments that may be dangerous
- Recurrent dreams of event: May be non-specific
- Flashbacks: Uncommon in very young kids
- Events and symbols of events: Kids have condensation of symbols and sense of danger

# Avoidance criteria in kids: Modifications

(De Bellis 2005)

- Must have cognitive ability to link the event with trying to avoid it
- Especially thoughts when quiet or at night
- Sense of foreshortened future in kids very common
- Instead of anhedonia, loss of skills or new fears including separation fears
- Instead of detachment, restricted range of affect

# Arousal Criteria in kids: Modification

**(De Bellis 2005)**

- Startle may be generally present (maturation of inhibition develops at 8-10 years and may be prevented by PTSD)

# PTSD: Three stages

- Acute: Symptoms present from 1-3 months
- Chronic: Symptoms present for > 3 months
- Delayed: Minimum of 6 months between the event and symptoms
- If symptoms resolve in one month: Acute Stress Disorder which may go on to PTSD
- Partial symptoms of PTSD may not meet criteria but still needs treatment

# PTSD in Early Childhood

**(Coates, 2009)**

- Very young children's responses to an event trauma also involves reexperiencing, numbing/avoidance, and hyperarousal.
- 3 additional factors differentiate young children's responses to a trauma from those of older children and adults:
  - their cognitive immaturity,
  - their developmental vulnerability,
  - and the relational context of early trauma given young children's dependence on caregivers-also are discussed.

# Salient features of PTSD in children

- National Center of PTSD estimates: 15-43% girls & 14-43% boys have experienced at least 1 traumatic event
- North Carolina study: 25% children experienced at least one DSM extreme stressor by age 16
- Current prevalence rate of PTSD among US adolescents: 5%
- Higher rates among females than males; events precipitating PTSD: abuse & violence

# Salient features of PTSD in children

- Prevalence in pre-schoolers: 0.1%; prevalence in adolescents: 3-6%
- Difficult to detect hyperarousal, avoidance & re-experiencing before age 4 years; alternative criteria for preschoolers developed
- PTSD symptoms common within 1st month after trauma; gradually fade away after 3 months
- Children with subthreshold & threshold PTSD suffer similar clinical impairment: Need intervention

# Terr's Type1 and 2
(Famularo 1996)

- No evidence-based support
- Type 1: From single event; Re-experiencing, avoiding and increased arousal (especially sleep difficulties)
- Type 2: From chronic or prolonged events; Dissociation, restricted affect, sadness and detachment

# Risk factors for PTSD development

- Poor social support
- Adverse life events
- Hx childhood maltreatment
- Poor family functioning
- Family Hx psychiatric disorders
- Introversion or extreme behavioral inhibition
- Female gender
- Previous mental illness

# Characteristics of PTSD play

(based on Terr, 1981)

- "Terrible sameness"- compulsive repetitiveness-driven quality to play
- Unconscious link with event
- Literalness of play with simple "defense", e.g., identification with aggressor, passive into active, doing and undoing
- Play does not relieve anxiety-contagious quality
- Wide range of ages

# Re-enactment

- Potentially dangerous
- Sexual re-enactments
- Re-enactment example: Boy who had seen his father being shot and falls from porch thus repeating this action whenever he heard loud noises.

# Epidemiology

- Kids 3-6% in community samples
- 14-25% after MVA (de Vries 1999)
- 20% after visualization of domestic violence (Mertin and Mohr 2002)
- Urban teens 12-36% full criteria
- Maltreatment 39% (Famularo 1992)
- In juvenile detention, 11.2% (Abram 2004)
- Natural disasters low except for more severe ones such as earthquakes or hurricanes 63% (Bradburn 1991)

# Remember!

- Rarely does PTSD exist by itself
- Importance of co-morbidity
- If trauma occurs in a developmentally sensitive period with changes in neurotransmitters, then child vulnerable to other conditions (e.g., attachment, social skills, aggression, drug abuse, sexualized behaviors etc)

# PTSD Comorbidity

Specific fears around related trauma events or social phobias

- Generalized Anxiety Disorder, later panic attacks
- Survivor guilt
- Complicated bereavement and pathological grieving reactions
- Depression with suicidal ideation, intent, attempts
- Aggression/violence
- For teens, dissociative features, self-injuries behaviors,and especially with girls, substance abuse (Lipschitz 2000)

# Diagnostic issue

- Reactive Attachment Disorder (RAD) and PTSD
- Both may have same etiology-maltreatment, but RAD must occur before 5 years
- Child may have had maltreatment and have both or one or none
- RAD refers to “relatedness” : disinhibited or inhibited type and PTSD, the cognitive structures overwhelmed

# Children under 4 years
## (Scheeringa and Zeenah 2001)

- Preschoolers cant manage stress alone
- Dyadic perspective “relational PTSD” and vicarious effects
- 3 patterns of adult response: unresponsive, overprotective, re-enacting
- Symptom diagnosis needs to be modified

# 5 Goals of assessment (Lonigan 2003)

- Was there a traumatic event
- Negative reaction to the event
- Clear symptoms that meet criteria B,C,D
- Establishing duration of symptoms
- Establishing impairment criteria

# Clinical Assessment

- Requires a face-to-face interview with child skillfully done to avoid re-traumatization
- Let the child tell the whole story of event
- Later, go back with prompts for more details
- Symptoms not volunteered should be asked for
- Any thoughts about the future?
- Play assessment if appropriate-look for traumatic play
- Review: tie trauma and symptoms: ask how they felt about interview: “courage award”
- Learn about event from others if appropriate

# Screening questions for PTSD
## (adapted from Levinson and Engel 1991)

- What is the worst thing that has ever happened to you?
- Have you ever been in danger or seen someone else in danger?
- Have you seen grown-ups be mean to each other? Yell? Fight?
- Do you ever think about it?

# Assessment of PTSD in children

- Information from multiple sources
- Child PTSD-RI: 20 item report measure with algorithm for DSM-IV diagnosis; used as self-administered, one-to-one verbal administration and in group settings
- Other instruments: The Clinician-Administered PTSD scale for Children and Adolescents (CAPS-CA), KSADS, DISC-IV
- Projective psychological testing may be useful

# Treatments: Phase Based

- ✓ Safety
- ✓ Skills development
- ✓ Meaning Making
- ✓ Enhancing Resiliency

# Treatment modalities

- Trauma-focused CBT-treatment of choice- either individual of

  concurrent child trauma-focused CBT and parent therapy (Cohen 1998) or group models for teens (Cloitre 2002)
- Play therapy: younger children
- IPT
- Parent-child dyadic psychotherapy (Lieberman 1997, infant and toddlers)
- Milieu model ARC (Cook 2003), Sanctuary (Bloom 2003)
- School based approaches (DeRosa 2003)

# Treatment of chronic PTSD-overview

- No quick fixes; have an overall treatment plan related to symptoms and situation
- Importance of being and feeling safe:protect from further trauma and own aggressivity,  SIB, sexualized behavior
- Severity of sxs change and recur over time with particular events: alternation of numbing and re-experiencing
- Pulsed therapy: series of short term interventions: sometimes close down sxs, sometimes active treatment; importance of non-verbal techniques
- Treat co-existing conditions (e.g. insomnia, ADHD)

# Trauma-focused CBT
## (Saunders et al, 2001)

- Trauma processing & exposure to traumatic arousal in "tolerable doses"
- Establishing a coherent narrative to promote habituation of conditioned anxiety
- Learning to cope with unpleasant affect & physiologic sensation
- Revising maladaptive cognitive schemas
- Correcting cognitive distortions
- Learning stress management & relaxation skills
- Facilitating cognitive or narrative restructuring

# Trauma-Focused CBT

- PRACTICE!
  - Psychoeducation and parenting skills
  - Relaxation
  - Affective expression and modulation
  - Cognitive Coping
  - Trauma: Narrative Processing
  - In vivo mastery of trauma
  - Conjoint parent-child sessions
  - Enhancing safety and future development

Cohen J. Anxiety Disorders Association of America, Annual Meeting 2010.

# CBT program for chronic PTSD

**(Perrin et al 2000)**

- Start with education and goal setting
- Goal is to take "the sting out of the malignant memories" (e.g. anxiety reduction when confronted by stimulus, reduction of the power of the intrusive thoughts)
- Coping skill box-recognize triggers and reduce avoidance: learn relaxation techniques, imagery, positive self-talk, thought-stopping

# CBT program for chronic PTSD

**(Perrin et al 2000)**

- Start with relaxed child
- Develop a "thermometer of distress" (TOD)
- Ladder of less-to-more stressful parts of event
- Imaginary or in-vivo exposure and relaxation using TOD and review of feelings during session and stay until TOD is decreased
- When relaxed, discussion of cognitive attributions of the trauma and how future will be changed
- Discussion of coping strategies- thought suppression, distraction

# CBT program for chronic PTSD

**(Perrin et al 2000)**

- Homework assignments of gradual exposure to traumatic reminders
- If appropriate, parents involved
- Guardians must not support avoidance but rewards positive coping
- Termination and relapse prevention: make a videotape
- Booster therapy few months after and at anniversaries

# When to consider medication

- 2 central roles: Treats current symptoms and helps them to utilize psychological treatments
- Consider if aggression, SIB, disorganization, insomnia, anxiety or depression
- Since PTSD is relapsing condition, may have to treat different target symptoms over time
- Important to pick the target that is most significant or a “broad -spectrum” intervention

# Combined Sertraline + Trauma focused CBT

- Pilot trial to examine potential benefits of adding sertraline vs. placebo to trauma-focused CBT (TF-CBT) in PTSD (Cohen 2007)
- 20 female adolescents & primary caretakers randomly assigned to receive TF-CBT + Sertraline or TF-CBT + placebo for 12 weeks.
- Both groups had significant improvement in PTSD symptoms with no significant differences, except for better ratings with the sertraline group in the C-GAS scores
- Conclusions: There is minimal evidence to suggest any major benefits in PTSD symptoms following addition of sertraline to TF-CBT

# Trials of Meds for ASD/PTSD

| Medication | Author and year | Type response |
|---|---|---|
| Citalopram | Seedat 2002, Seedat 2002 | Open 8 wks n=24; 38% reduction in sxs and open 8 wk, comparison with adults with equal efficacy |
| Risperidone | Horrigan 1999 | Open n=18; 13/18 positive |
| Propanolol | Famularo 1988 | Open 5wks; n=11; 8/11positive |
| Imipramine 100 mg hs vs 25mg/kg chloral hydrate | Robert 1999 | Double blind head to-head; n=25 ASD 83% vs. 38% in burn pts |
| Clozapine | Kant 2004 | Chart review serious s/es |
| Nefazodone 200-600mg | Domon Andersen2000 | Case series improvement in aggression, insomnia, hyperarousal |
| Carbamazepine serum levels 10-11.5ug/ml | Loof 1995 | Case series N=28 sexually abused; 22/28 positive |
| Phenytoin | Douglas Bremner 2004 | Open label; significant decrease in PTSD symptoms on CAPS (mean score pre-treatment 65; post-treatment 38 |

# Signs & symptoms of Hyperarousal

- May be most amenable to treatment in youth (Donnelly 2003)
- Irritability, concentration difficulties, hypervigilence, startle, ourtbursts
- Child is on-the alert-- scanning
- Sleep difficulties: initiations, nightmares, awakenings

# Clonidine in PTSD in youth

| Author/yr | Type of study | Signs/symp | Instrument | Result |
|---|---|---|---|---|
| Harmon 1996<br>0.1 mg hs or patch | Open n=7<br>preschool | Aggression<br>Hyperarousal<br>Insomnia | Clinical | 5/7-7/7 |
| Pearsall 2003 | Open n=56;<br>5-24y | Nightmares<br>Flashbacks | Natural | Improved if < 6mos post trauma |
| Perry 1994<br>0.05-0.1mg bid | Open n=17 | Anxiety, arousal, concentration mood impulsivity | Clinical | |

# SSRIs

- Borrowing from adult literature, start with "broad spectrum" treatments such as SSRIs (Donnelly and Amaya-Jackson 2002)
- Paroxetine and sertraline have FDA approval in adults
- Antidepressants decrease both avoidant & dissociative behavior
- Two open trials with citalopram (Seedat 2002, Seedat 2002)
- Affects all PTSD symptoms

# SSRIs

- Double blind placebo controlled trial with Sertraline.
- 131 patients (6-17 years) randomized to sertraline (50-200 mg) and placebo.
- UCLA PTSD scale used; 10 week long study
- No difference between sertraline and placebo in least squares (LS) mean change in the UCLA PTSD-I score.

Robb AS, et al. J Child Adolesc Psychopharmacol. 2010 Dec;20(6):463-71.

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# Question 5

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E) Startle reaction

# Answers

- 1-B
- 2-A
- 3-C
- 4-A
- 5-C