Posttraumatic Stress Disorder (PTSD) in youth

J. R. Oesterheld, M.D.

Pre-Lecture Exam Question 1

1. **Which child is least apt to develop chronic PTSD? Pick one of the following:**

A. An 8-year-old boy who saw television coverage of a hurricane.

B. A 12-year-old girl who has seen domestic violence between her parents.

C. A 5-year-old boy who has been physically abused by a babysitter.

D. A 17-year-old boy who was shot in the abdomen.

Question 2

2. Which one of the following statements about PTSD play is true?

A. The play is always an exact replication of the trauma.

B. The child exhibits a sense of mastery at the end of the play.

C. The play is avoided by other children because of its violence.

D. The play has an anhedonic quality.

Question 3

3. A 5-year-old girl has been subjected to repeated sexual abuse by an older uncle. Which one of the following statements is NOT diagnostic of PTSD, chronic type?

A. She has repeated nightmares of monsters chasing her.

B. She plays “sex games” with her Barbie dolls.

C. She is very fidgety.

D. She startles at loud noises.

Question 4

4. Which one of the following statements about the treatment of PTSD-chronic type is true?

A. EMDR is the treatment of choice.

B. Treatment may include both CBT and pharmacotherapy over time.

C. To be successful, treatment must start within a month of the traumatic event.

D. There are double-blind, placebo-controlled studies that show SSRI's are effective in children.

Question 5

5. Which one of the following statements is true about PTSD in children?

A. If the symptoms develop after 6 months, it cannot be PTSD.

B. If the trauma is from a natural disaster, the prognosis is better.

C. If the symptoms include traumatic play, the prognosis is better.

D. If the symptoms include aggression, the prognosis is better.

Question 6

6. A 14-year-old girl has severe PTSD and co-morbid depression. Which of the following treatments do you recommend? Choose the best response.

A. Play therapy and nefazodone

B. Psychoanalytic psychotherapy and protein

C. CBT and olanzapine

D. CBT and fluvoxamine

Question 7

7. **Which one of the following best describes how to elicit a history of trauma in an interview?**

A. In a stern voice, demand that the child tell all of the events that have been traumatic.

B. The first question in a gentle voice, ask the child what terrible things his mother has done to him.

C. After a period of getting to know the child, ask the child whether he knows what happens to liars.

D. After a period of getting to know the child, ask if the child has ever seen anything that scared him.

Concept of PTSD in youth

- Relatively new area of interest-20 years
- 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
- Lenore Terr and Chowchilla bus kidnapping sparked interest in 1981

PTSD DSM-IV criteria describes single event trauma

- 1-Follows a traumatic event (event criteria)
- 2-Re-experiencing of trauma (one)
- 3-Persistent avoidance/numbing of associated stimuli (three)
- 4-Persistent increased arousal symptoms (two)
- One month or more duration of symptoms

DSM-IV Event criteria

- Witness or experience an event with threat of death or serious injury to self or others
- Experience intense fear, helplessness or horror -- like the antelope just about to be caught by the lion--- frozen (cognitive surrender)

DSM-IV Re-experiencing criteria

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
- Unique to PTSD

DSM-IV Avoidance criteria

Persistent avoidance of cues /thoughts or numbing

Need 3 of following:

- avoid thoughts, feelings or talk about event
- avoid cues of event
- cant recall important aspects of event
- not interested in important life events
- feeling detached from others
- restricted range of feelings
- sense that life will be short

DSM-IV Arousal Criteria

- Arousal symptoms (2 necessary)
  - sleep difficulty
  - irritability
  - Poor concentration
  - hypervigilence
  - exaggerated startle

How to put these criteria together

- Go thru or see a terrible event
- Wave of recollections threaten to sweep over you
- Try to avoid them or numb self
- Left with a sense of watchfulness

The DSM-IV criteria best fits adults and single event

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

Modification of Criteria for Youth

Event Criteria for kids

- Younger kids may not have “feelings” or behavioral changes at the time

Re-experiencing criteria for kids

- Recurrent intrusive memories- younger kids have

repetitive play or volitional re-enactments- dangerous

- Recurrent dreams of event: kids have non-specific
- Flashbacks -uncommon in very young kids
- Events and symbols of events- kids have condensation of symbols and sense of danger

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 not relieve anxiety-contagious quality
- Wide range of ages

Example of PTSD play

- 8 year old who saw his father drop his baby brother out of the window would play over and over again that small plastic play animals would be dropped from heights and saved at the last minute by superman.

Re-enactments

- Potentially dangerous--
- Sexual re-enactments (as well as sexualization of immature psyche)
- Example: Boy who had seen his father being shot and fall from porch repeated this action whenever he heard loud noises.

Avoidance criteria for kids

- Must have cognitive ability to link the event with trying to avoid it
- Especially thoughts when quiet or at night
- “Its like my mind is a library with all of the books tightly shut until I talk, then all the books open”
- Sense of foreshortened future in kids very common, omens and time-skewing
- Instead of anhedonia, loss of skills or new fears including separation fears
- Instead of detachment, restricted range of affect

Arrousal Criteria in kids

- Generally present
- Insomnia
- Irritability
- Difficulty concentrating
- Hypervigilence
- Startle (maturation of inhibition develops at 8-10 years and may be prevented by PTSD)

Trauma and symptoms

- Core issue is individual can't control the memories of the event and associated affects
- Most individuals have symptoms for awhile with gradual decline in acute symptoms
- But in PTSD, these symptoms are impairing and avoidance sets in

"The early onset of intrusive phenomena is considered a normal reaction to an extreme event. The maintenance of such symptoms may result from a variety of maladaptive responses" (Meiser-Stedman 2002)

PTSD changes the child's brain

Neurobiology (Teicher et al 2002)

- Abnormalities in glucocorticoids, noradrenalin and vasopressin-oxytocin
- These ---> neurogenesis, synaptic overproduction and pruning and myelination
- Abnormalities include reduced mid-portions of the corpus callosum; development of the left neocortex, hippocampus, and amygdala along with abnormalities of frontotemporal cortex and cerebellar vermis.

MRIs of maltreated children with PTSD

- Smaller prefrontal cortex, prefrontal cortical white matter, and right temporal lobes, areas of the corpus callosum (no hippocampal changes as in adults). Volumes correlated with age of onset of trauma and negatively with duration of abuse, and boys may be more affected (De Bellis et al 2002)

PTSD changes the physiology- may have increased cortisol (in contrast to adults who have decreased cortisol)

(Carrion et al 2002)

What types of events lead to PTSD?

- Accidents of all kinds (e.g. gun shots to abdomen, Gill 2002), gang warfare, medical procedures (e.g., liver transplant,Shemesh et al 2002), peer suicides, natural disasters, sexual and physical abuse
- Witnessing an event has same significance, especially domestic violence and 10% of murders, rapes, suicides witnessed by kids
- Near-misses or hearing about them

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

Is PTSD present?--- remember Three forms

- Acute = symptoms present 1-3 months
- Chronic=more than 3 months
- Delayed=minimum of 6 months between the event and symptoms
- If symptoms resolve in one month= Acute Stress Disorder

Not everyone who experiences a single terrible event will develop PTSD: about 30% will

-not absolutely related to type, severity frequency---importance of age, developmental level, responses of "safety net"

Possible Risk Factors for Developing PTSD after a Single Event

- Severity of trauma (threat, duration, injury, loss)
- Parental Distress/psychiatric diagnosis
- Type of threat (worse if caused by people)
- Sexual trauma more than physical
- Cult and ritualized sadistic trauma, psychotic or bizarre adults

If a physical trauma so severe, child has no recall, will PTSD develop

- Lesions from closed head injury in the limbic system on the right may inhibit subsequent manifestation of PTSD (Herskovits et al 2002

- Parents and clinicians tend to downplay traumatic events and possible responses of children

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?

Remember!

- Rarely does PTSD exist by itself
- Importance of co-morbidity

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)

Confusing differential diagnoses

- Relationship of PTSD and ADHD confounding preexisting predisposing conditions? Or kids with ADHD bump into trouble or brain changes of PTSD

  -> ADHD with symptoms develop after trauma

Further confusion

- 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 - cognitive structures overwhelmed

Assessment of PTSD

Interviewing and Scales

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

Standard Inventories

For older than 8 years

- Children's PTSD Reaction Index * not cover all of DSM-IV-20 items (Pynos 2002, 1987)
- Children's PTSD Inventory-*acute, chronic (Saigh 2002)

For less than 6 years,-Angie/Andy Cartoon Trauma Scales (ACTS) cartoons and visual thermometer rating scale *self -report (Praver 2002)

For 0-4 years, Checklist for PTSD (Scheeringa 1995)

Scheeringa Criteria Alternative Criteria for Dx PTSD in Children Less than 4

- Criteria A: Event without not intense fear
- Criteria B: only one
- Post-traumatic play, play re-enactment, recurrent recollections that may not be distressing, nightmares, episodes like flashbacks or dissociation

(Scheeringa et al 1995, 2001)

Scheeringa Criteria-2

- Criteria C - Only one
  - Constriction of play, socially withdrawn, restricted range of affect loss of developmental skills
- Criteria D-
  - Night terrors, difficulty with sleep initiation, sleep walking, decreased concentration, hypervigilence, startle

Scheeringa Criteria-3

- Criteria E- only one needed

New aggression, new SAD, new fears

Treatment of PTSD

Treatments of Acute Trauma

- A safe milieu
- Window of opportunity before affect seals over-- re-exposure in controlled doses “contain the horror”-work through drawing, play,dramatization
- CBT-education, coping skills with every-day reminders, fears, sleep disturbance (relaxation, desensitization) working through grief, supporting family to validate child, normalization of responses
- Acute debriefing alone may actually worsen symptoms in the long run
- Eye movement desensitization and reprocessing (EMDR)

CBT for Single Incident Trauma-Results

- Improvements after 18 week group CBT intervention of single incident trauma PTSD
- 8 (57%) no longer met DSM-IV criteria for PTSD immediately after treatment; 12 (86%) of 14 were free of PTSD at 6-month follow-up (March et al 1998)

Treatment of chronic PTSD- overview

- No quick fixes
- 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)

CBT program for chronic PTSD-1 (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-2 (Perrin et al 2000)

- Start with relaxed child
- Develop a "thermometer of distress" (TOD)
- Ladder of less-to-more stressful parts of event
- Imaginal or invivo 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 (e.g., blame or omens) and how future will be changed
- Discussion of coping strategies- thought suppression, distraction

CBT program for chronic PTSD-3 (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

What about EMDR?

- "Several studies evaluated the efficacy of EMDR, but all suffer from methodological problems. Accordingly, in our view the efficacy of EMDR with traumatized ***women*** has not been established" --- Foa EB 2002
- There is only one open study in children (Chemtob et al 2002)

Pharmacological Interventions

- Paucity of medication trials in youth
- Careful assessment of co-morbidity (Donnelly and Amaya-Jackson 2002)
- Borrowing from adult literature, start with “broad spectrum” treatments such as SSRIs (Donnelly and Amaya-Jackson 2002) or nefazodone (beware of recent hepatitis warnings)

Other Pharmacological Interventions

- Tone down central NA system (locus ceruleus)-hyperarrousal and intrusion: clonidine/guanfacine or propanolol 2.5 mg/kg (Harmon and Riggs 1996, Famularo et al 1988)
- Treat insomnia
- Treat co-morbid conditions (MDD, ADHD etc)

Treatment of PTSD

- Resolution of symptoms may be slow
- Treatment should last for at least 6 months after symptoms resolution for acute PTSD and 1 year for chronic PTSD (Putnam and Hulsmann 2002)

Post Lecture Exam Question 1

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Answers to Pre & Post Competency Exams

1. A
2. D
3. C
4. B
5. B
6. D
7. D