



# Pediatric Pain: Current Concepts and Problems

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# Overview

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- What is Pain at Different Ages? Can Pain Experiences Early in Life Have Permanent Effects?
- What Chronic Pain Syndromes Could Occur in Children with TM?
- What are the Treatments Available for My Child's Pain?
- What Can I Do as a Parent to Help My Child with His/Her Pain?



# Pain

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Pain is an unpleasant sensory and emotional experience associated with actual or potential tissue damage



# Aimee's Definition of Pain

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- “Everyone know what pain is. It’s an oueee, silly daddy!!!!!!!!!!!!!!!!!!!!”



# Pain at Different Ages

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- Pediatric pain has been undertreated for years.
- Children's nervous system are too immature to experience pain.
- Children have no memory of pain
- Children become easily addicted to narcotics.
- Etc, etc, etc.
- Bottom Line: Medicine know very little about the field of pediatric pain syndromes as a disease and even less of how to adequately treat these diseases.



# Pediatric Pain: Treatment Success

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- In one survey in the Netherlands, chronic pain was present in 25% children (age 0-18 yrs).
- Major US study in children with terminal cancer: suffering with chronic pain was successfully treated in only 27% of patients.



# Best clinical detector of pediatric pain

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MOM or Caregiver



# Neonatal Pain

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- How do we recognize neonatal pain?
- Changes in facial expression
- Pitch, frequency, and duration of a cry
- Change in body movements
- Changes in color



# Pain in Childhood

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- How do we recognize pain in 1-5 year old children?
- Change in activity- quiet and not playing
- Verbalize pain non-specifically
- More emotional than usual
- Give off non-verbal cues as to location of pain



# Pain in Childhood and Adolescence

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- Refusal to do normal enjoyable activities
- They may verbalize specifics about pain or may refuse to do so.
- Older children and teenagers also need observation. They have similar non-verbal signs as younger kids.
- Most pain responses at this age are thought to be mediated by 1) prior experiences at earlier ages and 2) temperament



# Good News About Pediatric Pain

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- In a study of children with chronic pain 6 to 12 years old, maximal pain ratings in memory are only associated with more serious injury.



# Chronic Pediatric Pain: Successful Treatment

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- Assessment of physical, psychological, and environmental parameters
- Developing pain management strategies including medication and non-medication approaches
- Individual and family therapy as required



# Australian Chronic Pediatric Pain Study

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- 106 patients
- \*Cerebral Palsy/spasticity
- Malignant tumors
- \*Scoliosis
- Benign tumors
- Cystic fibrosis
- Intellectual delay
- Fibromyalgia
- Flat feet
- \*Vertebral and spinal cord abnormalities



# Good News: Only 19% had so called Neuropathic Pain

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Neuropathic pain --- due to nerve injury, nerve entrapment, or a benign nerve tumor (called neuroma)



# Most Common Functional Disabilities

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- School absenteeism
- Sleep disruption
- Inability to perform sports



# So What is the Catch Here?

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- The study only identified an organic cause in 35% of the children.
- Other causes identified are soft tissue injury, bone- or joint related injury, and unidentified kidney stone.



# Interventions

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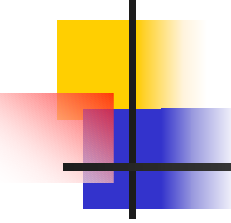
- Medications- Antidepressants, Non-aspirin steroidal drugs, Morphine like drugs, Anti-convulsants, Anti-hypertension drugs, valium like drugs, Anti-psychotic drugs, and GI drugs
- PT, Relaxation techniques, psychology/psychiatry, Epidural, nerve block, tendon/neuroma/joint injection



# Outcome of Chronic Pediatric Pain Syndromes

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- Good outcome- marked reduction in pain and marked functional improvement—65%
- Moderate- some reduction in pain and some functional improvement-15%
- Poor outcome: no improvement in pain or functional ability-8%
- Unknown— 12%

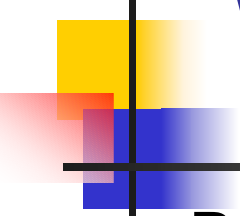


# Possible Pain Syndromes in Pediatric TM

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- Neuropathic causes- nerve root entrapment under a bone, nerve injury, or benign nerve tumor
- Spasticity
- Soft tissue injury- infections of skin lesions from trauma
- Bone-joint causes—scoliosis, osteoporosis, arthritis, etc
- GI- acid reflex, ileus, bowel obstructions
- Urologic- Kidney/bladder infections, stones, spasms

# What would you do if this kid was your kid, doctor?



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- Between the pediatrician and yourself, try to identify the type of doctor most helpful to your child's pain (first off—the doc must have empathy....2<sup>nd</sup> Ask whether the child need to see the neurologist, dermatologist, orthopedist, Peds GI, urologist)
- Go to doctor and undergo treatment + parents
- Ask myself.....how is the child holding up and how am I holding up?
- All else fails--- try a multidisciplinary pain clinic.....ask for the number of parents and specifically do they frequently treat kids?



# Neuropathic Pain

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- Pain in a distribution of a nerve or set of nerves that the child may describe as burning, searing, or electric type sensation.
- No other obvious GI, urologic, dermatologic, or bone/joint causes.



# Can Chronic Neuropathic Pain Be Present in TM?

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- The answer is Yes. There are 2 cases in the literature.
- Does this speak to the rarity of chronic neuropathic pain in TM? Or does it reflect that most chronic neuropathic pain is treated with medications in TM?
- How was it treated in these cases? The patients failed TENS, selective nerve blocks, and several meds (anticonvulsants, antidepressants, mexilitine, and neurontin).
- Treated with spinal cord stimulation



# Children with Neuropathic Pain: Our Options

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- Is the pain due to organs outside the nervous system?
- Evaluate neuropathic pain
- Evaluate quality of sleep
- Evaluate current coping abilities: Is there any depression or anxiety?
- Family history of regional pain syndromes



# Children with Neuropathic Pain: Treatment

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- Anti-convulsants (Neurontin, Topamax, Lamictal)
- If co-morbid depression or anxiety, try tricyclic anti-depressants (Elavil, Pamelor)
- If anxiety is a component, try SSRI (Prozac or Paxil)
- If they have trouble sleeping, you can add anti-hypertensive (clonidine) or anticholinergic (Benadryl) drug to spare exposure to morphine like drugs
- If the pain is intractable, refer to biofeedback or other behavioral support techniques



# Conclusion

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- Children with TM are at risk for pediatric pain syndromes.
- These are highly treatable.
- It is hard seeing your child in pain. Knowledge is power....use it to help your child. Remember: chronic pain is not likely to last.
- You need to partner with a set of doctors to help your child and you through this time.



# Thanks

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- Sandy Siegel, Doug Kerr, and TMA members for inviting me.
- Thanks to the audience.
- I take lots of questions.....I am deluged with questions at my own house. Do not be afraid to ask me this weekend.
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