Nonpharmacologic pain management

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Disclosure

• I have no relevant financial relationships with the manufacturers(s) of any commercial products(s) and/or provider of commercial services discussed in this CME activity

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Responsibility to address pain in children.

Reduction of pain is both a professional imperative and an ethical expectation because untreated pain has detrimental consequences such as greater pain sensitivity in later childhood and may lead to permanent neuroanatomical and behavioral abnormalities as demonstrated in animal models.


Barriers to Pediatric Pain Control

- Belief that children, especially infants, do not feel pain the way adults do
- Lack of routine pain assessment
- Lack of knowledge in pain treatment
- Fear of adverse effects of analgesics, especially respiratory depression and addiction
- Belief that preventing pain in children takes too much time and effort

Pediatrics, 18 (3) 2001
5 General Principles of Pain Management

- Anticipate & prevent pain
- Adequately assess pain
- Use multi-modal approach
- Involve parents
- Use non-noxious routes
*non-noxious – is not harmful or injurious to health or physical well-being.

The Terminology

- “Complementary” - using a non-mainstream approach together with conventional medicine.

- “Alternative” - using a non-mainstream approach in place of conventional medicine. [http://nccam.nih.gov/health/whatiscam]

- “Integrative medicine or integrative health care” – Most often associated with managed care in US.

- May also refer to patient centric care for populations with physical, developmental or cognitive disabilities and related chronic conditions or complex illnesses. [http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1480401/]

Pediatrics in Review 2003; 24 (10)
Terminology

- **National Center for Complementary and Alternative Medicine (NCCAM) – NIH**

- **Natural remedies** - herbs (also known as botanicals), vitamins and minerals, and probiotics. They are widely marketed, readily available to consumers, and often sold as dietary supplements.

- **Mind and Body Techniques** - large and diverse group of procedures or techniques administered or taught by a trained practitioner or teacher.

http://nccam.nih.gov/health/whatiscam

Terminology

- **Other complementary health approaches** - traditional healers, Ayurvedic medicine from India, traditional Chinese medicine, homeopathy, and naturopathy.

- **Non pharmacological interventions** is any treatment that does not include prescription or over-the-counter medicines.

http://nccam.nih.gov/health/whatiscam
Practices Used Vary: Age and Health Status

• 10 % of infants are given teas or botanical supplements, usually for fussiness or stomach problems.

• 21 and 42 % of children of kids 2-8 yrs take multivitamins
  • only age group w/ nutritionally adequate diets whether they took multivitamins or not.

• Teens – take products to enhance sports performance, energy levels, or weight loss.

• > 50 % of kids with chronic medical conditions use some form of complementary health approach, usually along with conventional care.

Chronic vs acute
Two basic categories of pain experienced by infants and children

**Procedural or acute**
- Vaccines
- Heel lance
- Venous puncture
- NG tube placement
- Lumbar puncture
- Bone marrow aspirate
- Intubation
- Laceration
- Fracture

**Chronic**
- Headache
- Abdominal pain
- Fibromyalgia
- Chronic complex regional pain syndrome
- Intubation
- Cancer
- Cystic fibrosis
- Sickle cell

Pediatric patients and pain

- The number of painful procedures was the strongest predictor of poorer psychological outcomes in children who had been hospitalized Rennick, 2004.

- Even in a hospital where pediatric pain control was a priority, 54% of children and caregivers reported no nonpharmacological strategies, 32% reported experience with nonpharmacological strategies and 10% were not sure Harrison et al, 2014.
Anticipatory Pain

• Children’s fears may significantly intensify the concept of pain
• Help child BEFORE the painful event, as much as during
• Developmentally appropriate engagement with child
  • Play and distraction
  • Fears – what are they?
  • Talk about the painful event

49 – 87 % of kids in hospitals reported to have pain


Even when nonpharmacological methods of pain management are used with infants and children, it is rarely documented in the medical record so it is hard to prove its efficacy. Harrison D, Joly C, Chretien C, Cochrane S, Ellis I, Lamontagne C, Vaillancourt R.(2014).
Of those ...

- 7.6% received a psychological, non-pharmacological intervention. Zhu et al 2012

And.....

- Even when nonpharmacological methods of pain management are used with infants and children, it is rarely documented in the medical record so it is hard to prove its efficacy.

Very minimal research regarding teaching kids how to control pain

Non-pharmacologic Pain Management

- Physical
  - Massage
  - Heat and cold
  - Acupuncture
- Behavioral
  - Relaxation
  - Art and play therapy
  - Biofeedback
- Cognitive
  - Distraction
  - Imagery and Hypnosis
PHYSICAL

- Acupuncture
- Breathing
- Bubble blowing
- Positioning
- TENS
- Cannabis extract
- Capsaicin (topical)

- Rub skin
- Numbing cream
- Tylenol, pre-medicate
- Needle free devices
- Sucrose water
- Breastfeeding
- Comfort hold

Buzzy for injections, needle sticks

http://www.youtube.com/watch?v=BRrKUc2UlV8
Behavioral

- Relaxation
- School engagement
- Art and play therapy
- Biofeedback
- Goal setting
- Cognitive Behavioral Therapy
- Avoiding “catastrophizing”
- Exercise
- Lifestyle changes

Cognitive (Psychological or mind-body therapies)

- Distraction
- Imagery
- Hypnosis
- “The Magic Glove”
- Virtual reality
- Music
- Meditation
Parents as coaches

Good News/Bad News

**Good news**
- We now know, as a result of good research, what helps fetuses, infants and children cope best with painful procedures

**Bad news**
- We are not doing what we know we should be doing all of the time. Or, even most of the time.
Relaxation for Doctors (if time permits)

Questions? Thank you!

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