AMPLIFIED PAIN SYNDROMES IN CHILDREN: WHEN IT HURTS TOO MUCH

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CONFLICT OF INTEREST DISCLOSURE

• Author’s Conflicts of Interest
  • Deb Krepcio – No conflict of interest

EDUCATIONAL OBJECTIVES

• At the conclusion of this activity participants should be able to:
  • Identify the clinical patterns of amplified musculoskeletal pain syndrome (AMPS) leading to treatment
  • Identify the principles of a therapeutic treatment plan for amplified musculoskeletal pain syndrome (AMPS)
  • Outline a multidisciplinary team approach to treatment, resources and treatment options offered for amplified musculoskeletal pain syndrome (AMPS)
PAIN – DEFINITIONS ARE IMPORTANT

- We define pain as -
  - An unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage

- Pain is always subjective

- Every child’s pain experience is unique

HOW DOES AMPS “TYPICALLY” PRESENT?

- Intermittent
- Constant
- Localized
- Diffuse
- Complex regional pain syndrome (CRPS)
- Total body with multiple painful points (pediatric fibromyalgia)

CAUSES OF AMPLIFIED PAIN
A PERFECT STORM

- Causal Factors
  - Injury
  - Illness
  - Psychological stress

- Possible Contributing Factors
  - Age
  - Hormones
  - Genetic predisposition
WORKING MODEL OF AMPLIFIED PAIN

IN ADDITION TO PAIN THERE CAN BE...

- Loss of independence & function
- Loss of participation in activities & relationships
- Isolation from peers and others
- Disbelief from others including medical & health professionals
  - You’re taking it!
  - You don’t look sick!

IMPACT ON CHILDREN & FAMILIES

- Physical
- Academic
- Social
- Emotional
- Athletics
- Financial
- Family
AMPLIFIED PAIN CAN PRESENT AS...

• 10 year old girl with a cold, swollen, blue foot who cannot walk and uses crutches after minor ankle sprain
• 13 year old boy with abdominal pain who has not attended school for over 6 months and uses a wheelchair
• 14 year old girl developed pain after soccer, no known injury, now crawls because of pain
• 15 year old girl with intermittent diffuse pain and sensitivity from head to toe – occurs only during the school year
• 8 year old boy with prolonged pain and scalp sensitivity after tonsillectomy
• 16 year old girl with widespread painful points

WHAT DO I DO FIRST?

RECOGNIZE IT

INITIAL EVALUATION

• Medical/Surgical history
• Medication history
  • Prescription and non-prescription
• Previous medical testing
• Integrative therapies
• Behavioral health screen & psychosocial history
• Nutrition and bone health screenings
  • Risk assessment for disordered eating & bone fragility
• School history
• Physical exam
AMPS – SOME HISTORICAL CLUES
• Increasing pain over time
• Pain out of proportion to injury or post-surgery
• Allodynia
• Pain spreads to other sites or is migratory
• Failed previous therapies for pain
• Color and temperature changes
• Incongruent history and exam – la belle indifference

AMPS – SOME SOCIAL HISTORY CLUES
• Major life event change or traumatic life event
• Role model for chronic pain
• “Typical” personality traits – Family
  • Spokes-parent
  • Enmeshment (subjective)
  • Reinforces the sick role
• “Typical” personality traits – Child
  • Pleaser
  • Perfectionist

BEHAVIORAL HEALTH SCREEN
• Stress and avoidance behaviors
• Primary trigger & complicating factor
• It’s okay to ask about stress/worry
• Be straightforward
• Screen for mood disorders/anxiety
• Screen for safety
• You may learn more than you wanted to
MEASUREMENT OF FUNCTION AND PAIN

• Pain
  • Verbal Rating: 0-10 scale verbal report - intensity
  • Visual Analogue Scale: 0-100 on a 10 cm line – intensity and affect
  • Body Maps - location

• Function
  • Functional Disability Inventory (FDI)
    • 15 physical tasks
    • Likert scale ranging from “no trouble-1” to “impossible-4”
    • Scores from 0-60 – the higher the score the more function is impaired
    • 0-12 = normal function, 13-28 = moderately disabled, >= 29 = severely disabled

    Parent and child complete separately at initial evaluation and each clinic return

AMPS – COMMON PHYSICAL EXAM FINDINGS

ALLODYNIA

• Increased sensitivity to things that should not normally hurt
• Extreme sensitivity to light touch or skin pinch
• Extreme sensitivity to deep touch or palpation
• Variable border
AMPS – COMMON PHYSICAL EXAM FINDINGS

AUTONOMIC DYSFUNCTION

- Cold
- Cyanotic
- Dystrophic
- Dystonic
- Edema

AMPS – COMMON PHYSICAL EXAM FINDINGS

CONVERSION

- One or more neurological symptoms affecting voluntary or sensory function
- No organic cause
- Brain subconsciously converts feelings and emotions into physical symptoms
- Pain behavior or conversion?

TREATMENT PLAN PRINCIPLES FOR AMPS

- Provide education and support of patient, family, school
- Provide a non-pharmacologic function based treatment plan
- Provide behavioral health support
- Patients assume an active role in their wellness and rehabilitation
INITIAL OUTPATIENT TREATMENT PLAN

• Primary goal of treatment is a full return to normal functional activities without accommodations for pain
  • Physical and Occupational Therapy
  • Not avoiding activities due to pain or fear of pain
  • Active participation in outpatient psychotherapy
  • Removing medical interventions for pain

MOVEMENT IS MEDICINE

• Physical and Occupational Therapy
  • Aim – To retrain the nerves in the nervous system to respond normally to sensory experiences and activities of daily living
  • PT – aerobics, endurance, strengthening
  • OT – activities of daily living, desensitization
  • Fully participate in Physical Activities in the Community and Home
  • Fully participate in Lifestyle Activities in the Community and Home
  • Fully participate in School
  • No physical accommodations
  • Function returns first!

DESENSITIZATION

• Therapies that provide consistent stimulus for short periods of time to areas that hurt
  • Brain responds to this demand by acclimating to the sensation and decreasing the body’s pain response to the particular stimuli
  • 3-5 times/day for 3-5 minutes
  • Incorporate desensitization into normal daily activities/routine
ROLE OF PSYCHOTHERAPY AND AMPS TREATMENT

• As essential (in many cases more so!) as movement
  • To address the despondency, loneliness and sadness that accompanies chronic pain
  • Stress is the primary trigger and complicating factor in AMPS
  • Childhood stressors – family, friends, school, social media
  • Kids that go to counseling ARE NOT CRAZY
  • Participation in cognitive behavior therapy to focus on feelings, emotions and ways to including coping strategies in every day life
  • Therapists are experts in feelings and emotions
  • What do you tell a therapist?
  • Family therapy may also be recommended

ROLE OF SCHOOL AND AMPS TREATMENT

• School is an essential part of normal growth & development
  • Missing school can lead to social isolation, anxiety, physical deconditioning leading to school avoidance
  • AMPS is not a disability
    • School full-time
    • No avoiding activities due to pain or fear of pain
    • No academic accommodations for pain
    • No medical excuses for missing school due to pain
    • Make connection with school personnel
      • School transition program
        • Coordinated plan – school, clinic, family, child
        • Partial homebound with return to full-time school timeline
        • Identify learning needs/disabilities

ROLE OF FAMILY AND AMPS TREATMENT

• Family may not be ready to hear/understand/believe in the diagnosis especially that psychological factors are impacting pain
  • Most families want what’s best for their child including their mental health
  • Partner with family
  • Education, education, education
  • Provide support and resources
  • Family therapy
  • Avoid over medicalization
  • Do not ask about pain!
HOSPITAL BASED AMPS TREATMENT

- When outpatient AMPS treatment fails to improve physical function and child remains disabled due to pain
- Day Hospital program (Monday-Friday) providing 5 hours of intensive physical and occupational therapy focused on desensitization and endurance
- Behavioral Health support: art therapy, music therapy, psychotherapy both individual and group
- Adjunct Therapies: therapy pool, yoga, mindfulness meditation, Ai Chi
- Parent programming
- School re-entry program
- Average hospital treatment is 3 weeks

NOW THAT YOU HAVE RECOGNIZED IT...

- Sympathize and acknowledge pain
- Stop further medical evaluations unless absolutely indicated
- Resist the urge to treat with medications for pain
- Refer to local physical/occupational therapy
- Discuss the role of stress and refer to psychotherapy
- Work with school and family on school re-entry
- Refer to an AMPS treatment center or AMPS knowledgeable provider for consultation if no improvement in overall function

THANK YOU

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