Objectives

• To identify helpful therapy interventions for patients with chronic pain
• To identify multidisciplinary skills that therapists can utilize in sessions to facilitate activity level
• To identify patient barriers and challenges in both inpatient and outpatient settings
Understanding Chronic Pain

- Chronic Pain: pain that lasts greater than 3 months, can be persistent or recurrent (King)

Chronic pain experience: (NIH)
- sensory-discriminative aspect which helps us localize where on our body the injury occurs
- affective-motivational aspect which conveys just how unpleasant the experience is
- cognitive-evaluative which involves thoughtful planning on what to do to get away from the pain.

Causes:
- Specific injury that led to prolonged pain due to movement restrictions, bracing, casting, swelling, fear of movement, reoccurring injury, etc
- Gradual or sudden idiopathic onset
- Dysfunction of pain pathways in peripheral nervous system, central nervous system, or both

Median prevalence of chronic pain in children and adolescents is 11% to 38%
- 2011 review of 32 studies by King
- Variable among diagnoses
Treat with chronic pain philosophy if…

- A thorough diagnostic work-up has revealed no abnormal results or results that do not explain the symptoms and reports
- The patient is not responding to typical medical and therapy interventions for presenting diagnosis
- Pain intensity and location are variable and do not lead you to believe other biomechanical issues are present
- The patient is demonstrating significantly decreased functioning
- The patient is demonstrating physical deconditioning from prolonged functional impairment and inactivity
- The patient struggles with pacing and life balance
- The patient struggles with motivation due to anxiety, depression, or other psychological factors

Golden Rules of Chronic Pain (Zeltzer)

- All Pain Is Real
- Improvement Is First Measured By Increased Functioning
- Don’t Ask If They Are In Pain
- Exercise Is Good For Sleep And For Chronic Pain
- Sleep Is Good
- Reduce Anxiety
- Positive Mental Attitude
- A Long-Term Problem Requires A Long-Term Solution
General Philosophy

• Focus on independent, age-appropriate functioning
• Treat the individual not necessarily the diagnosis
• Incorporate multidisciplinary concepts
• Communicate with team members as well as individuals playing a role in patient’s day-to-day life (i.e. School staff, coaches etc.)
• Incorporate “Golden Rules of Chronic Pain”

Outpatient Pain Rehabilitation

• Frequency: 1x/week for 6-8 weeks
  – Can transition to 1x/month follow-up
  – Can provide treatment 1x/week during summer break
• Build Rapport
• Gradually increase activity level each session
• Carry-over strategies from psychology
• Supplement treatment sessions with Home Exercise Program (HEP)
• Refer patient to community resources (i.e. Volunteer opportunities, sports)
• Refer patient to an intensive program
Role of Physical Therapy (Tse, Campos, Ris)

- PT's role in pediatric chronic pain focuses on helping to restore adolescents' perception of their abilities, physical mobility, and overall function. PT works to transition an adolescent with chronic pain from immobility and deconditioning to being confident in the way they move and the activities they participate in daily despite pain.

- Specific areas of focus:
  - Wean assistive equipment as appropriate as soon as possible, especially if it is not needed or recommended (crutches, braces, sunglasses, etc)
  - Progress physical activities, strength, and endurance with focus on posture and body mechanics
  - Energy and joint conservation strategies
  - Discussion and planning surrounding leisure mobility, school mobility, house hold mobility, return to sports

- Outcome Measures:
  - LEFS (Lower Extremity Functioning Scale) (Binkley JM)
  - Circuit Training (Functional Measures of Strength and Endurance)

Role of Occupational Therapy (Dunbar)

OT’s role in pediatric chronic pain focuses on helping adolescents with chronic pain return to age-appropriate and meaningful roles and occupations.

- Specific areas of focus:
  - Return to age-appropriate occupations
  - Engagement in preferred activities
  - Functional strength and endurance
  - Posture and body awareness during functional tasks
  - Goal setting
  - Sensory desensitization

- Outcome Measures:
  - Canadian Occupational Performance Measure (COPM) (Law, 2006)
  - Upper Extremity Functioning Index (UEFI) (Stratford. 2001)
  - Functional measures of strength and endurance
Role of Recreational Therapy

RT’s role in pediatric chronic pain focuses on assisting the adolescent return to function through physical activity, social interactions, and planning of appropriate leisure activities.

• Specific areas of focus:
  – Return to leisure activities
  – Introduce / facilitate use of creative outlets
  – Aquatics
  – Social Groups

• Outcome Measures:
  – Pie of life
  – Children’s Assessment of Participation and Enjoyment (CAPE)
  – Preferences for Activities of Children (PAC)

Treatment Ideas

“Put the fun in functional” make activities up that help focus on goals, do crazy animal walks, make up games based on popular movies or books, be creative!

Ask for the patient’s ideas and goals to incorporate!

Incorporate “group” therapy whenever possible!
Educational Topics for Therapy Services

• Energy conservation and pacing
  —Muscle fatigue
• Joint conservation, alignment, and impact of compensatory strategies
• Differentiating between acute and chronic pain

*Tie it all together by providing examples of how following or not following these tips will impact function and pain!

Find A Balance
Making Progress without Exceeding The “Pain Threshold”

- Alignment
- Stress
- Breathing
- Weight Bearing
- Feeling Unsafe
- Expectations
- Anxiety
- Pain
Challenges and Barriers in Treatment

- Finding “just right” challenge
- Parent “buy-in” and carry-over at home
- Patient motivation to leave “sick role”
  - Medicalization of symptoms
- Behaviors
  - Pain behaviors
  - Manipulative behaviors
  - Maladaptive behaviors

How to Overcome Challenges and Barriers

- Focus on parental involvement
  - Include parent(s) in therapy sessions
- Find what motivates patient or create a compromise
- Incorporate strategies from psychology
  - Behavior plan
  - Co-treatment
- Encourage use of coping skills
- Consider referral to a multidisciplinary program for evaluation
Coping skills

- Deep Breathing
- Belly Breathing
- Effortless Breathing
- Progressive Muscle Relaxation
- Imagery
- Autogenic Relaxation
- Distraction
- Aromatherapy
- Acupressure
- Problem Solving
- Coping Thoughts
- Acceptance
- Positive Mental Attitude

Pace Breaks

An active rest break where a patient runs through a mental checklist in order to focus on what he/she needs to do to continue participating in current activity

- Coping skills
- Stretches
- Exercises
- Hydrate
- Posture Check
- Correct use of body
- Increase length of pace break
Parent Involvement

- General chronic pain education and specific diagnosis or patient-related education
  - Focus on patient’s independence with guidance from parents only as needed for consistency
  - “Lifestyle change” not just a “quick fix”
  - Review pain rehabilitation philosophy: avoid pain talk, supportive speech, golden rules
  - Specific discipline-related education:
    - Throughout program (inpatient) or at end of session (outpatient) for review of activities and education, daily homework, and other recommendations

Biopsychosocial Approach

Behavior Planning and Management:
- Try positive reward system first
  - Use checklist or sticker chart
  - Find motivating reward
  - Rule of thumb: patient must be successful with 80% of attempts for behavior plan to be effective
- If unsuccessful, transition to negative reinforcement
Discharge Planning

• Problem solving
  — explain how to modify activities, speak up, take breaks automatically, plan ahead to
  spread out activity level

• Return to sports plans
  — Gradual return or initiation of new skills/sports/activities

• Specific recommendations/home program
  — Posture for alignment, comfort, avoid reinjure/flare
    - working thru pain experience w/ skills but not past
  — Listen to muscle fatigue
    - how nerves and muscles can have memory, remember what you do more

• Relapse Prevention Education
  — Think about what you have/haven’t done that could be contributing to pain
  Stay calm, seek help if needed

• Follow Up Recommendations

Specific “Return” Planning

• Provide as specific of examples as possible with overall concepts
  — What is their current activity level
  — Do they understand pacing? Provide specific examples for patient, family, and
    coaches/teachers
    — Ensure they are using “pace breaks” (can be at standard intervals or as needed)
      — Stretching, use of coping skills, posture check, check in on muscle/joint fatigue,
        make a smart decision about continuing with activity for that day, etc
  — Work on adding 1 new skill at a time, work on consistency of function along with
    new skill before adding additional skills
  — Increase slowly, make sure to change 1 component of each skill at a time
  — Do they understand what acute vs. chronic pain feels like
    — Provide some information specific to their activities about alignment, pacing,
      activity level that will help them understand if they are experiencing an acute issue
      or a chronic pain flare
Examples:

- Gym Class
  - Use stretching program in place of "school" stretches
  - Trial standardized physical fitness tests with modifications (and ask that school grade based on participation)
  - Allow for automatic rest breaks every 15-20 minutes for 5 minutes

- Gymnastics
  - Work on basic higher impact skills first (jumping in place, hopping in place)
  - Trial strength/conditioning activities independently with a therapist before initiating practice with peers/coaches
  - Transition back to 1 class at a time with a slow progression

Key Points

- Empower change in the patient and his or her family
  - Be supportive and empathetic
- Communicate with other disciplines
- Utilize multidisciplinary approach

- Education
  - Patient
  - Family
  - Team Members
References

References


