Meeting Pain Management Challenges in the Patient with Digestive Diseases

Esther Bernhofer, PhD(c), RN-BC
Pain Management/Education Coordinator
Medicine and Digestive Disease Institutes
Cleveland Clinic
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Objectives for today…

For patients with Digestive Diseases, be able to describe:

1. The bio-psycho-social model of pain
2. Barriers to optimal pain management
3. Strategies to consider for better pain management
For the patient with a digestive disease – what pain is like

The **bio-psycho-social model of pain** provides an excellent framework for understanding folks with complex digestive disease issues.
For the patient with a digestive disease – what pain is like

- **Bio** –
  - Neuropathic pain
    - Sensitization changes to pain in the peripheral and central nervous system
  - Nociceptive pain may include:
    - Visceral pain
    - Somatic pain

- **Psycho** -
  - Individual & very personal behavioral pain responses

- **Social** –
  - Often chronic, long term pain in not a very ‘socially acceptable’ body area
The Bio-Psycho-Social Model of Pain

Social

Illness behaviour

Psychological distress

Attitudes and beliefs

Pain

Main C J, de C Williams A C BMJ 2002;325:534-537
All of the difficulties in pain management manifest themselves in this patient population!

1. Subjectivity of pain.
2. Emotional component of pain.
3. Treatment can be influenced by provider attitudes.
4. Treatment side-effects/adverse reactions can be troublesome.
5. Pain is often chronic or lingering acute with exacerbation.
6. Financial difficulties in obtaining pain treatment due to difficulty maintaining a job.
Things to remember about the **bio-psycho-social model** in persons with DD.

- Pain is ALWAYS attached to emotion
  - The psyche is paramount in our relationships, overall health status, and quality of life

- Persons with Digestive Diseases often have symptoms greatly exacerbated by emotions
  - Depression is very common
Things to remember about the **bio-psycho-social model** in persons with DD.

- **Depression in DD**
  - Crohn’s, IB, and other DDs may be related to autoimmune disease, and are certainly inflammatory diseases.
  - Innate immune cytokines influence virtually every pathophysiological domain relevant to depression.
  - Patients with treatment-resistant depression are more likely to exhibit evidence of increased inflammation.

*(Miller & Raison, 2008) American Psychiatric Association*
More on Depression and Anxiety…

- In a German study (2011) in *European Psychiatry*, 1083 patients with Crohn's disease & ulcerative colitis reported severe fatigue. Clinically relevant anxiety in 24%, depression in 29% of men and 21% of women.

- Multivariable analysis revealed that a history of acute diverticulitis and a raised anxiety score on the HADS were the best independent predictors of recurrent pain (Humes, et al. 2008) *British Journal of Surgery*
More on Depression and Anxiety…

- Depressive symptoms in patients with perianal Crohn’s disease self-reported at very high rates in some studies (Mahadev et al. 2011) *Colorectal Disease*
  
  - 13% reporting feeling suicidal at some point.
  - 73% reporting feeling depressed
  - Associations were found between depressive symptoms and duration of disease, prior surgery, past or present stoma, and anal stenosis.

- Swedish study showed a statistically significant increase in suicide in celiac disease with current inflammation (Ludvigsson, 2011) in *Digestive and Liver Disease*
The importance of optimal pain management

- Without optimal attention to pain, the patient doesn’t want to deal with anything else!
  - Not diet
  - Not medication
  - Not activity
  - Not the future
Consider the DD patient population

- Many with multiple surgeries and procedures
- Persistent post-operative pain is common
  - Seen more often in those with depression
  - More often in those with poorly managed pain prior to surgery
  - More often in younger patients
  - Presents like neuropathic, chronic pain
Poorly controlled pain affects:

- The immune system
- The cardiovascular system
- The respiratory system
- The brain
- The psyche
- Healing
In the hospital...

- Poorly controlled pain leads to
  - Poor physical responses in cardiac, respiratory, endocrine, immunity, and healing mechanisms
  - Lack of desire/ability to be involved in self-care
  - Increased length of stay
  - Aggravation of old chronic pain issues
  - Risk of increased neurological damage and new chronic pain
  - Emotional distress
In the community…

- Poorly controlled pain leads to
  - Physical, emotional, and social distress
  - Less ability to return to work and general functionality
  - Greater use of health care system – return to ER and physician visits due to unmanaged pain
  - Greater drive to use un-prescribed pain medication
  - Lower quality of life
Barriers

- Complexity of medical issues –
  - Often there are many other medical issues
  - Chronic issues other than pain

- Nutrition factors
  - Not always able to get adequate nutrition
  - Absorption factors
  - Intrinsic in the diagnosis
  - Post-surgical issues
Barriers

- **Health care provider issues**
  - Does the patient trust the care-giver?
  - Does the patient repeatedly feel the need to explain they are NOT drug-seeking?

- **Opioid tolerance or hyperalgesia**
  - A huge reason for ineffectual analgesia in the hospital and post-discharge
  - Not the patient’s fault – it’s how opioids work!
Barriers

- Long term pain behaviors
  - Chronic pain behaviors include typical ways of dealing with life in pain

- Symptoms can be vague
  - Gut pain is not always easily described – it can be visceral, somatic, or neuropathic
Barriers

- Malingering – “to pretend to suffer in order to avoid work”

- Pseudo-addiction – an iatrogenic* syndrome resulting from poorly treated pain

- Tolerance – exposure to a drug results in a diminished effect of the drug of a need for higher dosage to maintain the same effect

- Dependence – exposure to a drug for any length of time that would precipitate withdrawal if the drug is stopped

*Induced in a patient by a physician’s activity, manner, or therapy
Barriers

Addiction – DSM-IV (Diagnostic Statistical Manual of Mental Disorders)

- A medical diagnosis characterized by an individual's inability to stop using even when it is in his or her best interest to do so.
- Criteria include:
  - 1) Desire or sense of compulsion to take the drug
  - 2) Difficulties in controlling drug-taking behavior in terms of its onset, termination, or levels of use
  - 3) Progressive neglect of alternative pleasures or interests because of drug use
  - 4) Persistent use despite harm
Barriers encountered with pharmaceutical methods of pain management:

- **Opioids**
  - The issue of opioid abuse and misuse
  - Creating tolerance/hyperalgesia

- **What about absorption of medication and nutrients?**
  - Short-gut
  - Post-surgical issues/wound issues
  - Gastroparesis
Strategies for overcoming pain management barriers

- Begin with proper pain assessment
  - Check your attitude
  - Use the right tool – acute vs. chronic pain management assessment tools
- Treat **WHO** not **WHAT**
  - Pain, especially DD pain, is highly personal!
Strategies for overcoming pain management barriers

- Check for and treat depression
  - The Beck Depression Inventory-II (BDI-II)
  - Hospital Anxiety and Depression Scale
  - Pay attention to suicide question answers
  - Or just ask, “Do you feel sad or depressed?”
  - Or “Do you every feel like you want to kill yourself?”
Strategies for Managing Acute DD Pain

First, remember that **acute pain** can be
- Post-surgical
- Non-surgical new pain
- Exacerbation of chronic pain
- Must be investigated

**Develop a comprehensive, individualized pain management plan**
Strategies for Managing Acute DD Pain

- Pharmaceutical methods
  - Usually first line, most effective
    - Opioids
    - Non-opioids
    - Adjuvant
    - The WHO ladder TOP-DOWN!
World Health Organization (WHO)
Pain Management Ladder

- **Acute Pain**: Pain decreases or goes away
  - Non-opioid
- **Weak Opioid**: Non-opioid
- **Strong Opioid**: ± Non-opioid
- **Chronic Pain**: Pain persists or increases
Opioids

- First line for acute pain because it works!
- Be aware of these needs:
  - Higher dosing due to patient exposure/tolerance in the past. **Very important to know this!**
  - Hyperalgesia considerations
  - Use the right opioid for the right conditions
    - Age
    - Renal function
    - Hepatic function
    - Poly-pharmacy
Opioids

- Administration methods can make all the difference
  - Routes of Administration
    - IV
    - Oral
    - Buccal
    - Sublingual
    - Rectal?
    - Subcutaneous
Opioids

- Around The Clock (ATC) vs. PRN
- PCA or no PCA
  - Timing vs. dosing vs. patient preference
  - Weaning
Others

- **Nucynta**
  - Dual mechanism of action
  - Weak opioid
  - Blocks re-uptake of norepinephrine
  - Less abuse potential
  - Helpful for those with bowel motility and aggravation issues

- **Buprenorphine**
  - Various formulations, but less abuse potential

- **Methadone**
  - Not for the inexperienced-doser!
  - Effective and cheap for chronic pain use
Non-opioids

- Never underestimate non-opioids for good pain relief!
  - Acetaminophen
    - Now available in IV route - Ofirmev™
    - Can potentiate and act as opioid-sparing medication
    - Safe in most cases at recommended dosages
  - Ibuprofen, Ketorolac, and Celecoxib
    - Very effective in ‘eligible’ patients
    - When deemed ineffective, it’s often not given in therapeutic doses
Adjuvants

- Alpha-adrenergic agonist
  - Clonidine
  - Zanaflex

- Anti-convulsants
  - Neurontin
  - Pregabalin
  - Trileptal
  - Dilantin
  - Topamax
Adjuvants

- Anti-depressants
  - Norpramin (Desipramine) or Nortriptyline (Aventyl or Pamelor)— preferred over amitriptyline (Elavil)
  - Bupropion (Wellbutrin) –
  - Duloxetine (Cymbalta)*
  - Milnaciprnan (Savella)*
  - Venlafaxine (Effexor)*
  - Others – second and third in line for neuropathic pain: Elavil, Tofranil, Remeron, Prozan, Paxil, Zoloft, Zometa

*Reduce dose by 50% in hepatic or renal insufficiency
Adjuvants

- Corticosteroids
  - Dexamethasone
  - Prednisone

- Others
  - Cannabis – medical marijuana helpful or with paradoxical effects?
Adjuvants

Others

- Vitamin D – Low levels in persons with DD - deficiency is between 22% and 70% for Crohn’s disease and up to 45% for ulcerative colitis
  - Assists with immune system regulation
  - Serum 25OHD levels must be much higher than what we consider ‘adequate’ for bone health in order to exert beneficial effects on the immune system.
  - vitamin D is lipid soluble and thus dependent on an intact fat absorption mechanism: problems with difficulty in bile salt deficiency, loss of absorptive surface, increased intestinal permeability, and loss of liver function (Pappa et al., 2008) Current Opinion in Gastroenterology

- I advocate sunlight exposure whenever possible!!
Non-Pharmaceutical Strategies for Managing Acute DD Pain

- Part of overall pain management plan
  - Can be extremely effective
    - Based on bio-psycho-social responses
    - Must be presented and used correctly
    - Also useful for persistent pain
  
- Include
  - Reiki
  - Therapeutic Touch
  - Gentle massage – not necessarily to painful area!
Non-Pharmaceutical Strategies for Managing Acute and Chronic DD Pain

- Include
  - Acupuncture*
  - Warm baths – showers – for relaxation
  - Music
  - Distraction – games, hobbies, TV
  - Spiritual attention – prayer
  - Counseling – treat mood issues
  - Sleep disturbance issues
  - Light exposure – circadian issues
What about on-going Chronic DD Pain?

- Include
  - Many of the strategies used for acute pain may be helpful
  - Careful of continued, escalating opioids since hyperalgesia may result
  - Good counseling is likely imperative for success
Clinical pictures that present the most challenges

- **Hepatic failure**
  - Liver transplant
  - Few prospective studies have offered an evidence-based approach.
  - Generally, Fentanyl is safest opioid but use adjuvants
- **Renal failure**
  - Kidney transplant
  - Fentanyl, again, safest, but use adjuvants
Clinical pictures with the most challenges

- **Ileus**
  - Few studies have addressed pain/symptom management
  - Opioid administration is appropriate pain treatment even in the context of suspected bowel obstruction *(Davis, Hinshaw, 2006)*.

- **Severe constipation and/or impaction** –
  - *remove/treat fecal impaction*,
    - Laxatives
    - *methylnaltrexone (Relistor)*
    - *Reglan may also help increase GI activity.*
    - Corticosteroids
    - Anticholinergics and Antiemetics
Clinical pictures with the most challenges

- **Gastroparesis**
  - Oral medications will not absorb properly
    - Use other routes
    - Frustration will ensue if this is overlooked
  - Is no excuse for inadequate pain management
Pain is no longer just a physiological response awaiting a pharmacologic treatment. Pain is a human response; pain is a suffering person in need of both competent treatment and compassionate attention.

(Betty Farrell, PhD, 2011)
Thank you!