QUICK TIPS: Chronic Non Cancer Pain (CNCP) Diagnosis and Management

BASIC CONCEPTS OF PAIN

- Pain may be defined as an unpleasant subjective experience primarily associated with tissue damage or described in terms of tissue damage, or both (H.Merskey, IASP Taxonomy).
- Chronic headaches, soft tissue injuries, low back pain**,** pain in addicts, and work-related injury pains have been found to be very important issues in a primary care practice with the bulk of chronic pain management falling in the shoulders of primary physicians (CPSO 1997 survey).
- Prevalence of chronic pain in Canada in a recent study was found to be 29%, though the estimates vary widely depending on the way studies are contacted.

CHRONIC NON-CANCER PAIN (CNCP): DISEASE VERSUS ILLNESS

- Disease is defined as a specific clinical entity associated with disturbed function or structure of a body part, organ or system (eg, limb amputation; nephropathy; atherosclerotic heart disease etc).
- Illness is a much wider concept referring to the way we view sickness and involves interaction of 4 elements: a) symptom perception, b) symptom interpretation, c) symptom expression, and d) coping behaviors. Note that many times health care utilization is driven by Illness behaviours.
- In the Medical Model, Illness is attributed to physical pathology, symptoms and disability are expected to be proportional and directly related to this physical pathology, and any psychological element is considered unimportant or secondary to the physical disorder.
- However, chronic pain and all types of chronic illnesses can be better understood and treated by the Bio-Psycho-Social Model of Illness.

FACTORS AFFECTING THE NATURE/ EXTENT OF PAINFUL EXPERIENCE

- Emotional reactions to pain (eg anxiety, sadness, anger);
- Cognitive processes (thoughts about what pain means, paying attention to pain etc);
- Beliefs about the origin and nature of pain;
- Behaviors of others (that can instigate maladaptive or adaptive patient responses)
- Characteriological traits and coping mechanisms;
- Psycho-traumatic experiences that confer vulnerability (eg. physical, emotional or sexual abuse; family violence; war or torture);
- Nature and type of original injury;
- Genetic and environmental factors;
- Gender factors etc.

PAIN BEHAVIOURS

- These can be verbal (verbalization, moaning etc) or nonverbal (limping, holding the painful part, grimacing etc).
- Such behaviors can be learnt and "unlearned" through different strategies and behavioral treatments.
- Pain experiences and behaviours also vary between cultures and should be viewed as "forms of communication" (though frequently maladaptive) among the patient, family, employers, health professionals, community, government agencies etc.

PREVENTING CNCP

Examples of *primary prevention* include good lifestyle choices (healthy eating, physical activity, stress management etc) to avoiding diabetes, obesity, vascular problems etc., many of which are associated with chronic pain. Immunization against shingles is example of prevention against post-herpetic neuralgia. Every year in Canada, 18% of the 130,000 new cases of shingles will develop PHN. The shingles vaccine has been shown to prevent 50-70% of the cases of shingles and 66% of cases of PHN. The National Advisory Committee on Immunization recommends the shingles vaccine in patients $\geq$60 without contraindications and may be considered for $\geq$ 50.

HOW DOES CNCP BECOME CHRONIC AND WHAT DOES IT MEAN

As pain becomes chronic, the autonomic and reflex changes tend to be diminished, the longer the pain lasts, while emotional and socio-environmental changes increase. This may lead to Chronic Pain Disorder or Syndrome (CPD/CPS), associated with significant and prolonged emotional distress, alteration in physical and psychosocial function, and cognitive/behavioral changes.

On the other end of the spectrum, one may find a patient who has a prolonged biomedical condition (for which there is no healing such as significant osteoarthritis or permanent nerve damage), who however, continues to maintain a positive outlook, is not affected by serious emotional distress, and continues to "live life productively with limitations". While CPD needs to be addressed from the biological, psychological and socio-environmental point of view, the second type of patient is much easier to treat. This spectrum reminds us of the fact that the treatment of chronic pain should be designed on the basis of each individual patient's specific condition and needs.

EXAMPLES OF YELLOW FLAGS FOR THE DEVELOPMENT OF CPD/CPS

- Intense and prolonged pain beyond that expected from underlying condition (eg pain ratings 8-10/10 for months after soft tissue injury)
- Spreading pains or new pains after original injury
- Consistent failure to respond to appropriate treatments for the condition
- Development of PTSD, anxiety or seriously depressed mood after an injury
- Mistaken/pessimistic beliefs (eg. I'll never get better; my spine is "crumbling")
- Preexisting the injury difficulties at the work place
- Inability of the employer to provide modified work

HOW TO ASSESS PAIN DISORDERS AND CONCURRENT DIAGNOSES

- Ask whether there is underlying biomedical pathology that can explain the patient's presentation.
- If the answer is no or maybe, ask WHAT else is contributing to the presentation (psychological/ psychosocial factors; mood and/or anxiety disorder; sleep disorder; other co-morbidities etc).

TIPS:

- **Do not** equate an X-ray or a blood test with the diagnosis; they are valuable only in the context of proper history and physical examination. Age contingent changes on X-Rays and MRIs are extremely common.
- Be very careful as to **what you tell** your patient regarding his/her complaints. What you say may initiate maladaptive behaviours.
- **Do not** underestimate the impact of psychological/ psychosocial factors in the generation and maintenance of chronic pain.
- **Do not** wait 6 months before you become alerted to the development of CPD/CPS. Signs may appear within 4-12 weeks and need to be addressed within a multidisciplinary approach.
- **Do not** rely exclusively on pain consultants to help you in your CNCP patients. You must acquire basic knowledge about how to manage pain yourself as over 90% of pain problems can be handled at the primary care level if appropriate training and resources are available.

TREATING CNCP: Basic steps

- Approach the treatment of CPD/CPS as an illness and not as a single symptom.
- Determine the **type** of pain: Nociceptive, Neuropathic or Mixed, as well as **level** of pain as Mild, Moderate or Severe.
- The treatment agent you chose should be backed by evidence that it works for the Type and Level of pain. Interdisciplinary multi-modality approaches are best for CPD/CPS.

TREATING CNCP: Treatment options

- **Medications**: NSAIDs, TCAs, neuropathic adjuvant drugs; analgesics (non opioid and opioid); sedatives and sleep inducing drugs; SSRIs and SNRIs for depression; cannabinoids for neuropathic pain, failing other treatments;

- **Physical/ Manual Therapies** including passive modalities such as acupuncture; TENS; heat and cold applications; soft tissue therapies such as massage and Active Release Techniques (ART) etc, as well as active modalities in the form of exercises;

- **Psychological Management** (one to one or group therapies) ranging from self management approaches to Mindfulness Based Stress Reduction (MBSR); Cognitive Behavioural Therapies (CBT) etc;

- **Interventional approaches**: soft tissue injections, nerve or nerve root injections; epidural injections etc; percutaneous radiofrequency procedures (such as facet denervation); sympathetic ganglion or sympathetic chain blocks, etc;

- **Surgery**: decompressive and stabilizing techniques (laminectomy, fusion); neuro-augmentation with peripheral nerve or spinal cord stimulation; and ablative surgeries (eg DREZ for brachial plexus injuries, though ablative surgeries are rarely used).

HOW TO MEASURE EFFECTIVENESS OF TREATMENT

- There are validated instruments in the form of questionnaires that allow physicians to evaluate before, during and after treatment status of patients.
- Numeric rating scale, brief pain inventory BPI and Pain Interference Scale are standardized tools that can help to measure the baseline of pain and measure the effectiveness of treatment.
- The patient Global Impression of Change (PGIC) is used to show patient's general perspective about the treatment effects.
- The Opioid Risk Tool (ORT) detecting risk of abuse behaviours or similar instruments and an opioid contract should be used in patients considered for Long Term Opioid Therapy.
- Evidence of improvement justifies the **continuation of treatments**. Lack of any evidence of improvement or evidence of deterioration justifies **treatment modification**.

GOAL SETTING/ DEFINITION OF SUCCESS:

- It is essential that the patient be an **active part** of the team in treatment of his/her chronic pain disorder.
- The treatment team/physician and the patient have to discuss and agree on setting **realistic goals** for improvement of pain, mood, sleep and function before start of the treatment, based on each individual patient's condition and needs.
- *Moving towards* the goal of improvement in pain, mood, sleep, and function, is a sign that the applied treatment works.
- *Moving away* from improvement in each of these aspects, is a call for **treatment modifications or goal re-evaluation.**

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