New Approaches For Treating Chronic Pain From the President of the Canadian Association of Orthopaedic Medicine -YOUAREUNLTD

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Dr. Gordon Ko

Chronic pain is the number one cause of disability in older adults ¹ and the number two cause of workplace absences and of visits to the family doctor.

As an interventional physiatrist based at Sunnybrook Health Sciences Centre, University of Toronto, and the Canadian Centre for Integrative Medicine in Markham, ON, I see firsthand the toll chronic pain takes on individuals and the healthcare system.

It's estimated to cost \$47 to \$60 billion a year – more than HIV, cancer and heart disease combined.² The opioid crisis, which led to 3,987 deaths in 2017, has risen also from this pain epidemic.

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This puts everyone, from those living with pain to physicians and allied health professionals, in a difficult position and points to a strong need for a fresh approach to treating chronic pain and neuromusculoskeletal disease.

As part of my research to find the "why" behind the pain in my Fibromyalgia (FMS) patients, I incorporate a "Four Component" approach. Coined originally by German physician Dr. Dietrich Klinghardt, it focuses on identifying the root causes of pain and fatigue, and resolves them with a multi-modal, interdisciplinary approach. It addresses the four components of chronic pain, including: neurological, structural, biochemical and psychoemotional.

Structural causes are usually due to physical trauma (such as "whiplash" after a motor vehicle accident) and overuse strains (from prolonged head forward posture with computer and cellphone use). Besides imaging studies (X-rays, MRI), further testing may include fluoroscopic-guided facet joint nerve blocks.

Treatment options could include, cortisone injections, facet joint radiofrequency denervation, botulinum-toxin A (BTX-A), viscosupplements and dextrose/ platelet-rich plasma (PRP) prolotherapy injections.³

Research shows these injections work best when combined with physical therapy to strengthen weak core muscles and restore functional movement patterns. I usually recommend patients first seek other treatments, such as intramuscular stimulation acupuncture, laser and/or Graston therapy with a therapist familiar with PRP and BTX-A.



As part of our mandate, the <u>Canadian Association of Orthopaedic Medicine</u> trains MDs on these injections and I strongly recommend that such treatments be done only by trained physicians, upon referral from the family doctor.

Biochemical causes that perpetuate chronic pain often include poor food choices (eating too much junk food with highly processed carbs and sugar). Other underlying conditions include, gut dysbiosis, toxins and hidden infections (such as chronic Lyme disease and viral reactivation syndromes, now termed MSIDS (Multi-Systemic Infectious Disease syndrome).⁴

Diagnosis requires testing beyond the standard family practitioner blood work-up and this would involve seeing a physician trained through the Institute for Functional Medicine and the International Lyme and Associated Disease Society.

Psychoemotional causes of pain include the stress from physical and/or emotional trauma, such as PTSD (Post-traumatic Stress Disorder). Research shows many chronic cases have predisposing factors that stem from childhood traumas.⁵

Evidence-based therapies for PTSD include eye movement desensitization retraining (EMDR), emotional freedom technique (EFT) and hypnosis. Neurotherapy incorporates computer-assisted feedback of brainwave activity that generates auditory/visual input to train the brain to allow for calming meditation or heightened concentration. Such technology works well when combined with psychotherapy (e.g. cognitive behavioral therapy). More information is available with the Association for Applied Psychophysiology and Biofeedback. **Neurological causes** include actual changes in the peripheral (nerves) and central nervous (brain, spinal cord) systems' function that perpetuates pain. This is a phenomenon called "central sensitization" and can be measured with functional MRI. Medical treatments include, oral medications, such as anti-seizure drugs, antidepressants, muscle relaxants, acetaminophen and opioids (the goal is to limit gut, renal, liver and cardiac side effects).⁶

More recent developments involve transdermal topical delivery systems (such as topical lidocaine gels or ointments that are rubbed directed on the painful area), intradermal BTX-A injections and plant-based medications, such as medical cannabis. Approaches to medical cannabis ideally incorporate high CBD (cannabidiol) and low THC (tetrahydrocannabinol) in oils, tinctures, capsules and topicals.⁷ Diet also matters.⁸

With the epidemic of chronic pain and the secondary opioid crisis affecting Canadians, we need to look beyond relying solely on synthetic painkillers and joint replacements.

To explore the new and emerging approaches, I invite physicians and allied health professionals to attend the 33rd annual CAOM conference Sept <u>28-30 2018</u>. The event – 90 and Below: Innovative Approaches to Managing Pain – brings together top experts to share new information and teach cutting-edge hands-on workshops relevant to the field of chronic neuromusculoskeletal pain. In addition to Lyme disease, topics include cannabis, injection therapies, nutrition, mind-body therapies and genomics. For details and to register, visit <u>www.CAOM.ca</u>.



Dr. Gordon Ko, an interventional physiatrist with Sunnybrook Health Sciences Centre, University of Toronto, is president for the Canadian Association of Orthopaedic Medicineand one of the presenters at the CAOM Conference in Markham, ON.

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