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EDITORIAL

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The Future Is Bright: Highlighting Trainee Contributions to the Canadian Journal of Pain

Canada has established itself as a leader in the global pain research landscape. The importance of fostering the next generation of fundamental and clinician scientists will continue to be a priority in the coming years for the Canadian Pain Society. The Canadian Journal of Pain is pleased to present this special issue that includes 12 articles in which Canadian trainees are the primary authors featuring content from coast to coast. The Knowledge Translation Committee at the University of Toronto Center for the Study of Pain was integral in the development of this cross-country initiative.

From the publication of the gate control theory[1] to the discovery of new paradigms about neuroplasticity and synaptic transmission,[2] Canada has historically held a leadership position in the pain research world based on its innovative theoretical work and empirical discoveries. Over the years, trainees have benefited from pioneering Canadian initiatives in education, research and clinical practice. Canada started the Pain in Child Health (PICH) global research training program in 2002 funded by the Canadian Institutes of Health Research (CIHR).[3] Over the years, PICH has helped to foster new leaders in pediatric pain. More recently in adult pain medicine, the creation of novel postsurgical treatment programs such as the Toronto General Hospital Transitional Pain Service has transformed the perioperative care space by modifying patient trajectories from acute to chronic pain with innovations in multidisciplinary pain care.[4] In this special issue, we highlight the innovate research of our trainees and point to future directions in pain education, research, and clinical practice.

Chronic pain and insomnia are common among people with temporomandibular disorder. Elsaraj and colleagues explored the relationship between insomnia and excessive daytime sleepiness for patients living with chronic obstructive sleep apnea and painful temporomandibular disorders.[5] Using a prospective approach, the authors found that excessive daytime sleepiness in study participants was associated with persistent painful TMD when chronic pain was defined by pain duration. A narrative review by Darville-Beneby et al. was undertaken by a group of national chronic pain leaders who found that preoperative patient education interventions demonstrated promise with respect to improving postoperative outcomes.[6] This paves the way for the creation of a national preoperative education program which could be made available to all Canadians undergoing a surgical intervention.

Canada has recently funded a chronic pain center of excellence for Canadian veterans, which was established to conduct research and help improve the well-being of Canadian Armed Forces (CAF) Veterans suffering from chronic pain, and their families. Huang et al. asked veterans and their family members to complete questionnaires following a 5-week intensive interdisciplinary chronic pain management program which included four weekly 1-h yoga classes.[7] The authors conclude that yoga may be a promising complementary pain management strategy for both veterans and civilians alike.

Chronic pain patients often complain of a multitude of symptoms (e.g., postural orthostatic tachycardia syndrome/orthostatic intolerance), which are often disregarded by clinicians given the lack of an overarching diagnosis. Tackey and colleagues provide an elegant summary of the sequelae of post-viral syndromes, describing the viral agents involved, the pathophysiology, treatment, and future considerations following infection.[8] This article is a must read for practitioners treating complex conditions that include pain as a primary symptom (e.g., Chronic Fatigue and Ehlers Danlos Syndromes). A third narrative review by Wong and Rajarathinam examined the accuracy, safety, and efficacy of ultrasound guided techniques for facet joint injections.[9]

Two articles within this special issue focused on people living with fibromyalgia. In a qualitative study, Nishikawara and colleagues report that individuals considered the health system as insufficiently equipped to support their needs and perceived a tendency of invalidation and prejudice from health care providers, in addition to misalignment between clinicians and individuals regarding treatment plans.[10] From a sample of 63 individuals self-reporting a diagnosis of fibromyalgia in Quebec, De Clifford-Faugère et al. found that the majority of the sample did not receive pharmacological treatment outlined in the Canadian Fibromyalgia Clinical Practice Guideline and other evidence reports published by recognized organizations.[11] According to the authors, the complexity of fibromyalgia treatment calls for better promotion of self-management strategies for patients and for improved

dissemination and implementation strategies to minimize the gap between knowledge and practice.

At the University of Toronto, Serota and colleagues utilized a narrative and ethics care approach to analyze interviews with family members of patients undergoing complex medical assistance in dying (MAiD). The interviews took place across three Canadian provinces (Ontario, British Columbia, and Alberta) and were concerned with the physical and emotional pain from bereavement and the associated controversies surrounding MAiD.[12] Authors highlight the importance of clinicians in providing care for family members following MAiD.

The challenge of assessing pain in patients unable to communicate motivated Shahid and colleagues to conduct a preliminary clinical testing of the Critical Care Pain Observation Tool for family caregiver use (CPOT-Fam).[13] Caregivers described the experience of using the CPOT-Fam as helpful and straightforward while also providing feedback for revisions to the tool. The refined version of the CPOT-Fam is now ready for clinical testing in terms of feasibility and acceptability and is a promising tool for clinicians and families of patients in the intensive care unit.

Diagnosing and differentiating complex regional pain syndrome (CRPS) from chronic musculoskeletal (MSK) pain in children is difficult. Although there are established signs and symptoms of CRPS in adults, these criteria have not been investigated in the pediatric population. By analyzing a dataset of two groups of children diagnosed with CRPS and MSK, Mesaroli et al. identified a cluster of symptoms that predict the probability of a diagnosis of pediatric CRPS.[14] This study lays the foundation for future research to improve differential assessment and diagnosis of other chronic pain conditions in children.

Killackey and colleagues collaborated with parent partners from several institutions across Canada to conduct interviews with youth living with pain during the COVID-19 pandemic. Both parents and siblings reported that the COVID-19 pandemic affected their families in a variety of ways and that restrictions imposed during lock-down impacted coping strategies across the family network.[15]

Finally, Dent et al. developed an observer independent approach to measuring pain hypersensitivity in rodents. Their advanced dynamic weight bearing assay provides an efficient and unbiased measure of chemically induced hyperacute pain in mice.[16]

This special issue showcases the high standard and significance of pain research conducted across Canada. Articles represent a variety of pain-related topics and research methodologies that contribute to improving clinical practice and to advancing knowledge through rigorous and innovative approaches. The future continues to be bright in the years ahead for Canadian pain research and care. We thank and are grateful to everyone who submitted their work to this issue in order to make it such a great success.

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