Canadian Pain Society Conference

June 14 – 17, 2006, Edmonton, Alberta

COMMUNITY PUBLIC EVENT
WEDNESDAY JUNE 14, 2006

7:30 PM – VOICES OF PEOPLE WITH PAIN

1

Chair: Helen Hays MD CCFP FCFP
Associate Professor, Department of Family Medicine, University of Alberta, Edmonton, Alberta
Speakers: Heather Divine RN, Catherine Ireland RN, Claude Roberto PhD

BRIEF DESCRIPTION: Voices of People with Pain is a public event open to pain sufferers, their families, their caregivers and the general public. This event features the stories of people living with pain as told in their own words and will put a face to the serious nature of pain. Untreated or undertreated pain is our nation's leading public health problem and the only way to move forward is to heighten the public's awareness about the impact pain has on those who suffer, their families and our health care leaders. The presentation covers three basic areas that pain sufferers experience on their journey through pain. As Thomas Jefferson said, "The art of life is the art of avoiding pain; and he is the best pilot, who steers clearest of the rocks and shoals with which it is beset." This leads to the premise of the presentation as follows:

- Chronic pain can happen to anyone. It does not discriminate. It affects people of all stages of life – the young, the middle-aged and the elderly.
- Not treating pain or believing it does not exist causes serious problems. Pain weakens the immune system and slows recovery from disease or injury. It diminishes quality of life and impacts almost every aspect of a person's life.
- People in pain can lead a productive life and contribute to society.

PAIN EDUCATION DAY
THURSDAY, JUNE 15, 2006

8:15 AM – KEYNOTE SPEAKER
MYOFASCIAL PAIN SYNDROME: MECHANISMS AND DIAGNOSTIC CRITERIA

2

Chair: Norman Thie MSc DDS
Diplomate-American Board of Orofacial Pain; Fellow-American Academy of Oral Medicine Associate Professor and Director, TMD/Orofacial Pain Clinic, University of Alberta, Edmonton, Alberta
Speaker: Robert Gerwin MD
President/Medical Director, Pain & Rehabilitation Medicine; Janet G Travell MD, Seminar Series, Bethesda, Maryland, USA

BRIEF DESCRIPTION: This talk will describe the clinical presentations and the known pathophysiology of myofascial pain syndromes. Myofascial pain is pain of muscular origin that is characterized by a variety of referred pain syndromes. These pain syndromes present as headaches, facial pain, shoulder pain, low back pain, viscerosomatic pain syndromes and nerve entrapment syndromes. Myofascial pain is characterized by a trigger point that is a small region of intense pain on a taut muscular band within the larger muscle. There is a characteristic electromyographic abnormality of high frequency, low amplitude end-plate potential activity called end-plate noise. There is also a biochemical abnormality associated with the active trigger zone that includes a lowered pH to the range of 4-5, elevated CGRP, substance P, bradykinin, and elevated cytokines IL1, IL6 and TNF alpha. Treatment of myofascial pain syndromes involves the inactivation of the trigger point. This can be accomplished by manual techniques (trigger point compression and muscle lengthening) and by needling ("dry" needling or injection of local anesthetic). Injection of botulinum toxin can inactivate the trigger point and provide prolonged relief from myofascial pain syndromes. Effective treatment must include the identification and correction or treatment of structural and mechanical predisposing factors, such as forward head posture and hypermobility or joint laxity. Metabolic, hormonal and nutritional predisposing factors like vitamin D deficiency, iron deficiency and hypothyroidism must also be addressed. Treatment can be effective in the acute state as shown in the treatment of acute myogenic (muscle tension) headache, and in the chronic state as demonstrated in the treatment of chronic whiplash syndrome.

9:00 AM – PLENARY SESSION
INTEGRATIVE PAIN MEDICINE

3

Chair: Anita Chakravarti MD FRCP
Department of Anesthesiology, Perioperative Medicine and Pain Management, Saskatoon Health Region; Clinical Associate Professor, College of Medicine, University of Saskatchewan; Centre of Integrative Medicine, College of Medicine, University of Saskatchewan, Saskatoon, Saskatchewan
Speakers: James Dillard MD DC Lac, Celeste Johnston RN DEd, Steven KH Aung MD FAAFP

3A

INTEGRATION OF COMPLEMENTARY AND ALTERNATIVE MEDICINE INTO PAIN MEDICINE

James Dillard MD DC Lac
Assistant Clinical Professor, Columbia University Medical Center, New York, New York, USA

3B

THERAPIES INVOLVING TOUCH FOR PAIN IN CHILDREN

C Celeste Johnston RN DEd, Kathryn McNaughton BScNII, Jasmine Byron BA BSW MScNII
School of Nursing, McGill University, Montréal, Québec

Learning Objectives:

1. Appreciate uniqueness of conducting research on pain in children.
2. Understand variations of available manual therapies for children.
3. Be aware of recent research on manual pain in children.

Manual therapies include, but are not restricted to, acupuncture, cutaneous stimulation, massage therapy, healing touch, therapeutic touch and passive manipulation of the body by a health care professional, are gaining attention as alternative nonpharmacological pain management techniques in adult populations. Nevertheless, due to the vulnerability of children and lack of rigorous research on adult populations, research conducted into the benefits of manual therapies as they relate to pain in children is limited. Other barriers to the use of manual therapies in children include limited caregiv-

er knowledge and experience as well as fear that techniques will cause distress in children (Kemper, 2000). However, the few existing studies suggest that manual therapies may be associated with a reduced pain response in infant, child and adolescent populations, and merit further investigation.

3C
INTEGRATION OF TRADITIONAL CHINESE MEDICINE AND WESTERN MEDICINE APPROACH IN PAIN MANAGEMENT

Steven KH Aung MD FAAFP
Clinical Associate Professor, Faculty of Medicine and Dentistry, University of Alberta; Clinical Associate Professor, New York University College of Dentistry, New York, New York, USA; Adjunct Professor, Faculty of Extension, University of Alberta, Edmonton, Alberta

Learning Objectives:
1. *Understanding the Western medicine approach to pain management.*
2. *Understanding the TCM approach to pain management.*
3. *Understanding and appreciation of the value of the integrative approach in health care.*
4. *Using the best of many systems to improve the quality of life in an evidence-based manner for the benefit of all concerned.*

Pain is the most common disabling sign and system in any system of medicine. There are many modalites, types and sites of pain throughout our lifetime. The major concern of all health care practitioners is to relieve the pain while at the same time to treat the underlying cause and conditions. Western medicine has many excellent ways of approach to pain management, mainly pharmaceutical products involving narcotics, anti-inflammatory agents and so on. Moreover, Western medicine also provides pain killing injections of drugs through the muscles and veins, sometimes in conjunction with surgical procedures. Sometimes some deleterious side-effects will occur. The ancient and modern traditional Chinese medicine (TCM) approach is a more holistic, naturalistic approach comprising an array of diagnostics and therapeutics encompassing herbology, nutrition/dietetics, acupuncture and related techniques, massage/manipulation as well as various physical, mental and spiritual exercises such as Qi Gong and Tai Chi Chuan. Our integrative approach provides the best of the Western medicine, TCM and other complementary approaches to help heal the pain and enhance the quality of life of our dear patients.

11:15 AM – PLENARY SESSION
PHARMACOLOGICAL TREATMENT OF PAIN: CLINICAL ISSUES

4
Chair: Robert Hauptman BMSc MD
Salvus Family Medical Clinic, St Albert Chief Department of Family Medicine, St Albert, Alberta
Speakers: Jacques Turgeon BPharm PhD, Brian Knight MD FRCPC, Harry Pollett MD FRCPC

4A
MEDICATION INTERACTIONS IN PAIN MANAGEMENT

Jacques Turgeon BPharm PhD
Faculty of Pharmacy, Université de Montréal, Montréal, Québec

4B
ROLE OF BOTULINIUM TOXIN TYPE A IN THE MANAGEMENT OF CHRONIC PAIN: AN EVIDENCE-BASED APPROACH AND COST ISSUES

Brian Knight MD FRCPC
Misericordia Hospital, Edmonton, Alberta

BRIEF DESCRIPTION: The talk will discuss the evidence available on botulinium toxin in myofascial pain syndrome and the pharma-economic implications of this therapy.

4C
THE ROLE OF INTRAVENOUS LIDOCAINE IN TREATING CHRONIC NONMALIGNANT PAIN

Harry Pollett MD FRCPC
Medical Director, Chronic Non-Malignant Pain Clinic, Northside General Hospital, North Sydney, Nova Scotia

Learning Objectives:
1. *Understand the indications and contraindications for using intravenous lidocaine.*
2. *Understand the methods of administering intravenous lidocaine and the precautions to be observed.*
3. *Understand the barriers to the use of this technique and how they can be overcome.*

Intravenous local anesthetics have been used for treating chronic pain for over sixty years. There has been a recent upsurge in interest in using intravenous lidocaine in clinics across Canada. Advantages include excellent pain relief, opioid sparing effect and effectiveness in treating otherwise difficult to treat conditions, such as fibromyalgia and myofascial pain syndrome. Disadvantages include the need for parenteral administration and the necessity for frequent repeat administrations. This workshop will describe the experience of over 15,000 administrations since 1996 including techniques and monitoring requirements. The results of using a newer technique of 48 h administration via an elastomeric pump will also be described. This technique, currently being examined, may permit long term pain relief and less frequent administration.

1:45 PM – SESSION 101
UPDATE ON THE MECHANISMS, DIAGNOSIS AND TREATMENT OF HEADACHES AND MIGRAINES

5
Chair: Dan Gray MD FRCPC
Anesthesia, Assistant Clinical Professor, Department of Anesthesiology and Pain Medicine, University of Alberta, Edmonton, Alberta
Speakers: Raquel Feroe MD FRCPC

5A
CHRONIC DAILY HEADACHE AND THE ROLE OF OPIOIDS

Raquel Feroe MD FRCPC
Internal Medicine, Lifemark Health, Edmonton, Alberta

Learning Objectives:
1. *Understand treatment challenges in chronic daily headache, especially when complicated by medication overuse.*
2. *Understand how to monitor treatment and improve outcomes when using opioids in CDH.*

The incidence of chronic daily headache is 4%. Effective treatment is important but can be difficult, especially when complicated by medication overuse. Relapse rates are as high as 70% in MOH and those compliant with treatment have sometimes been shown to have worse QOL. The best response expected using preventatives is less than 50% and the likelihood of sustained success over three months is likely one-half that. Cognitive behavioural therapy plus a preventive seems to be the standard treatment and the United States Headache Consortium Guidelines give us options, but as we become more aware of the toxicities of preventatives like paroxetine we need to rethink our strategies. We need to examine drugs not listed in the guidelines. We need to better understand the issue of MOH and the role opioids play. It is now accepted by the 'experts' that in a significant minority of treatment refractory CDH, CR opioid treatment will lead to a sustained response with a dramatic reduction in disability. The paper by Saper et al (Neurology 2004;62:1687) remains among the best published on the topic of chronic opioid Rx for headache suppression. Others such as Dr J Rothrock are finishing up 10 years of study of methadone Rx for refractory CDH. By the time this talk is given a written commentary on the topic of CDH should be available in *Headache Currents*. Looking at the numbers needed to treat for neuropathic pain, opioids fair well at 2.5 com-

pared with 3.1 for antidepressants, and 4.2 for anticonvulsants. Opioids are among the most effective treatments for pain.
This talk will examine some of the barriers that prevent effective treatment of CDH with opioids. In 25 min or less, I will discuss ways we may improve outcomes using opioids in CDH.

5B
WITHDRAWN

1:45 PM – SESSION 102
UPDATE ON THE MECHANISMS, DIAGNOSIS AND TREATMENT OF TEMPOROMANDIBULAR PAIN

6
Chair: Norman Thie BSc MSc DDS MSc
Diplomate-American Board of Orofacial Pain; Fellow-American Academy of Oral Medicine; Associate Professor and Director, TMD/Orofacial Pain Clinic, Department of Dentistry, Faculty of Medicine and Dentistry, University of Alberta, Edmonton, Alberta
Speakers: Norman Thie BSc MSc DDS MSc, Pablo Kimos DDS MSc, Brian Nebbe BDS Mdent FFD(SA)Ortho PhD

6A
TEMPOROMANDIBULAR DEGENERATIVE JOINT DISEASE
Norman Thie BSc MSc DDS MSc
Diplomate-American Board of Orofacial Pain; Fellow-American Academy of Oral Medicine; Associate Professor and Director, TMD/Orofacial Pain Clinic, Department of Dentistry, Faculty of Medicine & Dentistry, University of Alberta, Edmonton, Alberta

Learning Objectives:
1. *Understand the prevalence of temporomandibular degenerative joint disease.*
2. *Understand pathological mechanisms and diagnosis.*
3. *Understand treatment and prognosis.*

Osteoarthritis (OA) is one of the most common arthritides affecting the temporomandibular joint (TMJ). The term degenerative joint disease (DJD) is often used synonymously with OA, although DJD is simply a descriptive term that does not identify etiology. TMJ DJD is thought to be a manifestation of an imbalance between adaptive (remodelling) and non-adaptive (degenerative) responses. When active bony degeneration and pain accompany the condition it is often referred to as OA. As bony remodelling occurs, the condition can become stable with the condition referred to as osteoarthrosis. Generally, 8% to 12% of temporomandibular disorder patients who present to our clinic will receive a diagnosis of TMJ DJD. A large percentage of these patients are women in the postpubescent to premenopausal age range and the condition can occur unilaterally or bilaterally. Typically, there is an approximate 12 to 18 month destructive phase followed by a 12 to 18 month reparative and healing phase. This is quite different to other joints of the body (eg, knee joint OA) that typically affect older women and men in which the degenerative process can often progress and lead to disability and joint replacement. Etiological factors considered in the pathogenesis of this condition include acute trauma (eg, direct blow), mechanical overloading of the joint and internal derangement (particularly with disc deformation and perforation). Occlusion (bite relationship) remains to be proven as a causal factor, although secondary occlusal changes may accompany TMJ degenerative changes.

6B
GABAPENTIN AND CHRONIC MASTICATORY MYALGIA
Pablo Kimos DDS MSc
Department of Dentistry, TMD/Orofacial Pain Clinic, Orthodontic Graduate Resident, University of Alberta, Edmonton, Alberta

Chronic masticatory myalgia (CMM) can be defined as constant pain in the masticatory muscles for more than six months and is influenced by the central nervous system. The antiepileptic agent gabapentin acts centrally and it is used for managing different types of chronic pain conditions. Historically, opioids and tricyclic antidepressants have been used to control chronic muscular pain in the orofacial region. On the other hand, antiepileptic agents are used for neuropathic pain conditions, but such agents have not been tested for pain problems of muscular origin in the head and face areas. Data derived from a randomized, clinical trial testing the efficacy of gabapentin on CMM will be presented. Clinical applications will be discussed to present gabapentin as a new tested treatment alternative to reduce CMM.

6C
ADOLESCENT TEMPOROMANDIBULAR JOINT INTERNAL DERANGEMENT
Brian Nebbe BDS Mdent FFD(SA)Ortho PhD
Private clinical practice, Align Orthodontics, Edmonton, Alberta

Learning Objectives:
1. *Understanding associations between presentation of TMJ internal derangement in adolescent individuals and clinical signs and symptoms.*
2. *Understand the prevalence of internal derangement in adolescent orthodontic population.*

A sample of 194 male and female adolescents were imaged, making use of magnetic resonance imaging for the temporomandibular joints. MRI determined internal derangement was categorized and the prevalence of internal derangement was determined. Clinical signs and symptoms were recorded to determine whether these clinical factors could aid in predicting the status of jaw joint function.

1:45 PM – SPECIAL COURSE 103
METHADONE COURSE

7
Chair: Saifee Rashiq BM BS MSc(Epid) DA(UK) FRCPC
Associate Professor, Director, Division of Pain Medicine, Department of Anaesthesiology and Pain Medicine, University of Alberta, Edmonton, Alberta
Speakers: Roman Jovey MD, Mark Simmonds FRCA FRCPC, Ian Forster MBChB CASAM

Learning Objectives:
Attendees will be presented with:
1. *A historical, evidence-based and pharmacological rationale for prescribing Methadone in chronic pain.*
2. *The pitfalls and hurdles associated with the clinical use of Methadone.*
3. *The role of Methadone in addiction and in the dual pathological condition of chronic pain and addiction.*

Currently, there are barriers to the wider acceptance of Methadone as a treatment for chronic pain; partly due to regulatory requirements and partly due to the stigma of Methadone as a treatment for opioid addiction. An examination of the history of Methadone and its evidence for use in chronic pain reveals some compelling reasons for this drug to be included in the armamentarium of the chronic pain physician. Methadone has some peculiar pharmacokinetic and pharmacodynamic properties that confer some notable advantages over other controlled-release opioids. However, there are some cautionary tales associated with its use that may lead to the impression that it is "too hot to handle". Methadone has an established role in the traditional management of addiction, but we are becoming increasingly aware of the cohabitation of the dual pathologies of addiction and chronic pain.

7A
INTRODUCTION: METHADONE – POLITICS AND POTENTIAL
Roman Jovey MD
Alcohol and Drug Treatment Program, Credit Valley Hospital and CPM Health Centres Inc, Mississauga, Ontario

7B
METHADONE – A PECULIAR DRUG, BUT IS IT TOO DIFFICULT TO HANDLE?

Mark Simmonds FRCA, FRCPC
Assistant Clinical Professor in Anesthesiology and Pain Medicine, University of Alberta Hospital, Edmonton, Alberta

7C
IS IT PAIN OR ADDICTION? THE ROLE OF METHADONE IN HANDLING THE TOUGH ONES

Ian Forster MBChB, CASAM
Consultant in Addiction Medicine and Medical Director of LifeMark Health Institute, Edmonton, Alberta

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1:45 PM – SPECIAL SYMPOSIUM FOR BASIC SCIENTISTS 104
APPROACHES TO TRANSITIONAL RESEARCH: HOW TO GO FROM THE BENCH TO THE BEDSIDE?

8

Chair: Brian Cairns PhD RPh
Assistant Professor and Canada Research Chair Faculty of Pharmaceutical Sciences, University of British Columbia, Vancouver, British Columbia
Speakers: Jonathan Dostrovsky MSc PhD, Yoram Shir MD, Andy Dray PhD, James L Henry PhD

Learning Objectives:
1. *Discuss how data generated using advanced human research techniques, such as single unit recording in the human thalamus and microneurography, confirms or conflicts with findings in animal models.*
2. *Describe the relative value of various existing animal models of pain in terms of the predictive value of these models for the testing of new potential therapeutic agents.*
3. *Illustrate where research has yet to provide satisfactory animal models of disease as a way of highlighting potential new research directions.*

INTRODUCTION: For many years, pain researchers have employed animal models to investigate complex neurophysiological and neuropharmacological mechanisms related to the development and maintenance of both acute and chronic pain that cannot be adequately studied in humans. Although a phenomenal amount of new information has been generated based on these studies, it has proven difficult to translate findings from animal models directly into improved treatments for human pain conditions. The purpose of this session is to explore the validity of various animal pain models with special emphasis on translation of scientific information from these models into clinical practice.

8A
SIMILARITIES AND DIFFERENCES IN PROCESSING OF NOCICEPTIVE INPUTS IN PRIMATES AND NONPRIMATES: FOCUS ON THE HUMAN THALAMUS

Jonathan Dostrovsky MSc PhD
Professor, Department of Physiology, University of Toronto, Toronto, Ontario

Most neurophysiological studies of the nociceptive system are performed in rodents and it is generally assumed that the findings are applicable to the human. However, findings in monkeys and humans reveal significant species differences at the thalamocortical level. This talk will review some of these findings and focus on findings obtained from intraoperative neuronal recordings and stimulation in the thalamus of awake patients.

8B
THE ANALGESIC ROLE OF PROINFLAMMATORY CYTOKINE INHIBITION IN ANIMALS – POSSIBLE HUMAN APPLICATIONS

Yoram Shir MD
Associate Professor, Department of Anesthesia, Faculty of Medicine, McGill University, Montréal, Québec

Learning Objectives:
1. *To understand the mechanism by which inflammatory cytokines produce and maintain neuropathic pain.*
2. *To gain knowledge of possible analgesic role of cytokine inhibition.*

Proinflammatory cytokines are regulatory proteins playing a key role in acute and chronic pain states in animals, and probably in humans. Their proanalgesic effect has been shown in multiple rodent models of acute and chronic pain, including postsurgical and visceral pain and following peripheral nerve and spinal cord injury. Cytokines act through peripheral and central mechanisms such as induction of prostaglandin production and bradykinin receptors, and by modulation of the inflammatory response of the immune system. Their role in neuroimmune interaction, both peripherally and centrally, is critical for creating exaggerated pain states. There are convincing data showing that cytokine suppression, by means of specific cytokine inhibitors, dietary changes and genetic manipulation decrease pain and inflammation in animals. Cytokines probably play a central role in the development and maintenance of acute (eg, postsurgical) and chronic (eg, neuropathic, rheumatic) pain conditions in humans as well. Based on animal studies, preliminary trials in humans indicate that cytokine suppression is associated with analgesia. For example, treatment with cytokine inhibitors decreased acute postoperative pain and was beneficial in patients with complex regional pain syndrome and rheumatoid pain. Adjuvant medications like antidepressants probably exert their analgesic effect partially through cytokine inhibition. Finally, dietary supplement with bioactive ingredients like long chain n-3 polyunsaturated fatty acids or soy isoflavones decrease pain through cytokine suppression. It is likely, therefore, that further research into cytokine inhibition could lead to the development of new analgesic tools in hurting humans.

8C
ANALGESIA DEVELOPMENT: TRANSLATION FROM ANIMAL TO HUMAN

Andy Dray PhD
Chief Scientist, Astra-Zeneca Research and Development, Montréal, Québec

The development and testing of new analgesia targets from animal models requires an understanding of the mechanistic processes involved in the pain syndrome being modelled. Are these mechanisms faithfully conserved across different species? This talk will explore the how valid animal and human models for various pain conditions are essential to the development of new analgesic drugs by the pharmaceutical industry.

8D
MODELLING CLINICAL PAIN

James L Henry PhD
Scientific Director, Michael G DeGroote Institute for Pain Research and Care, McMaster University, Hamilton, Ontario

Learning Objectives:
1. *Participants will gain a better understanding of the rationale for developing animal models.*
2. *Participants will learn about how three different animal models of chronic pain have been studied to learn more about the human condition.*

Several animal models of chronic pain have brought us closer to understanding basic mechanisms of the respective types of pain, and this has in turn facilitated the development of therapeutic interventions to treat these pains. Yet, despite our optimism in terms of the impact of animal modelling for chronic pain, a sad fact is that there has not been a new class of drugs that has come on the market for chronic pain during the past two decades. This may be for a number of different reasons, but two issues will be discussed in this presentation. One issue is the relevance of animal testing to predicting effectiveness of a new chemical entity to the human

condition. Thus, questions will be raised concerning some widely used nociceptive tests and whether they relate to chronic pain in humans. The second issue is the types of chronic pain where animal modelling has not yet been achieved. Some types of chronic pain will be described as a starting point for discussion on the specific parameters that need to be included in a particular model. There will also be a call to the medical community to define what it is they want modelled, as in many cases the criticism that a model does not relate to the human condition can be countered by the challenge to come up with a uniform human condition to model.

2:45 PM – SESSION 105
UPDATE ON THE MECHANISMS, DIAGNOSIS AND TREATMENT OF ARTHRITIC PAIN

9

Chair: John Clark MD FRCPC
Director, Chronic Pain Centre, Calgary Health Region and Clinical Professor of Anesthesia, University of Calgary, Calgary, Alberta
Speakers: Kenneth Skeith MD PhD FRCPC, Mary-Ann Fitzcharles MB ChB FRCPC, Jennifer Stinson BScN MSC

9A
CLINICAL OVERVIEW OF ARTHRITIS CONDITIONS

Kenneth Skeith MD PhD FRCPC
Associate Clinical Professor of Rheumatology, University of Alberta; Clinical Rheumatologist, Edmonton, Alberta. PhD in NSAID pharmacokinetics/pharmacodynamics, Faculty of Pharmaceutical Sciences, University of Alberta, Edmonton, Alberta

9B
THE SPECTRUM OF ARTHRITIS: TREATMENT STRATEGIES AND CHALLENGES

Mary-Ann Fitzcharles MB ChB FRCPC
Department of Medicine, Division of Rheumatology and Montreal General Hospital Pain Centre, Montreal General Hospital, McGill University, Montréal, Québec

Learning Objectives:
1. *To understand treatment options pertinent to the arthritic disease process.*
2. *To gain insight into current practice strategies for physicians, as well as patient choices.*

Pain is a prominent symptom in any arthritic process. Recognition of the disease process as either inflammatory or degenerative determines treatment strategies for arthritis. Disease modification with agents that influence immunity, the disease modifying antirheumatic drugs (DMARDS) are the cornerstone for inflammatory disease treatment. No DMARDS exist for the degenerative arthropathies. DMARDS do not cure, but rather offer suppression of disease and prevention of damage. In routine clinical practice, symptomatic and physician directed treatments for pain have until recently taken a second place. Pharmacological treatments, such as simple analgesics, nonsteroidal anti-inflammatory agents (NSAIDS) and, in recent years, opioids, have been the main physician directed focus for treatment of rheumatic pain. Nonpharmacological treatments, such as over-the-counter preparations, practitioner administered treatments or others such as dietary manipulations, are used extensively by rheumatology patients, without sound scientific basis for most. Topical applications and adjuvant drugs, beyond the simple antidepressants, may eventually play a moderate role in the care of rheumatic problems. Even in the setting of important structural damage, the benefits of continued exercise activity are increasingly recognized. Although barriers to optimum pain control still exist, physicians are now cognisant of the importance of pain relief.

9C
ASSESSING PAIN IN ARTHRITIS: BEYOND PAIN INTENSITY

Jennifer Stinson RM MSc CPNP
Chronic Pain Program, Department of Anaesthesia, the Hospital for Sick Children, Toronto, Ontario

Learning Objectives:
1. *Participants will gain an understanding of the multidimensional aspects of pain assessment in children and adults with arthritis.*
2. *Participants will learn about traditional and more innovative approaches to assessing pain in patients with arthritis.*

It is well recognized that pain is an inherently subjective and a multidimensional phenomenon. Dimensions of the pain experience include: sensory (pain intensity, location, quality), affective (pain unpleasantness) and cognitive aspects (pain's interference with everyday life). Although these dimensions of pain have long been explicitly acknowledged, everyday clinical practice and research on pain have placed greater emphasis on the sensory (pain intensity) than on the affective or cognitive dimensions. This presentation will provide an overview of traditional and some more innovative approaches (real-time data capture using electronic pain diaries) to assess the multidimensional aspects of pain in children and adults with arthritis. Finally, selected methodological issues associated with these measurement approaches will be discussed.

2:45 PM – SESSION 106
PAIN PSYCHOLOGY FOR THE REST OF US

10

Chair: Brian Knight MD FRCPC
Misericordia Hospital, Edmonton, Alberta
Speaker: Bruce Dick PhD RPSYCH
Assistant Professor, Department of Anesthesiology and Pain Medicine, University of Alberta, Edmonton, Alberta

Learning Objectives:
1. *Understand research that supports best practice standards in psychological management of chronic pain.*
2. *Understand psychological treatment of chronic pain can be effectively carried out using cognitive-behavioural methods.*
3. *Understand factors that often affect chronic pain sufferers seeking psychological treatment of chronic pain syndromes.*

There is a growing body of research that has explored effective psychological treatments for individuals with chronic pain. This session will review what has been learned from these studies. A practical framework based on this research will be presented for a cognitive-behavioural pain management program that can be used in individual and group settings. Practical suggestions will also be provided for primary care providers including family physicians and other health care professionals.

4:15 PM – KEYNOTE SPEAKERS PEDIATRIC ANALGESIC TRIALS: BABY STEPS FORWARD

11

Chair: Ian Forster MBChB CASAM
Medical Director and Consultant in Addiction Medicine, Lifemark Health Institute, Edmonton, Alberta
Speaker: Anna Taddio BScPhm MSc PhD
Scientist, Department of Pharmacy and Population Health Sciences, Hospital for Sick Children; Assistant Professor, Faculty of Pharmaceutical Sciences, University of Toronto, Toronto, Ontario
2005 Recipient of the Canadian Pain Society Early Career Award
BRIEF DESCRIPTION: This presentation will focus on clinical trials of analgesics in infants undergoing procedural pain and the challenges of designing and conducting such studies. There will be an emphasis on new data for various therapeutic interventions including systemic opioid analgesics, topical local anesthetics and sucrose. Our experiences with conducting such trials will be highlighted.

SCIENTIFIC PROGRAM FRIDAY JUNE 16, 2006

8:00 AM – KEYNOTE SPEAKER UNDERSTANDING THE MECHANISMS OF HEADACHES – WHERE ARE WE NOW AND WHERE WE ARE GOING

12

Chair: Raquel Feroe MD FRCPC
Internal Medicine, Lifemark Health Institute, Edmonton, Alberta
Speaker: Rami Burstein PhD
Associate Professor, Vice Chairman-Research, Department of Anesthesia and Critical Care, Beth Israel Deaconess Medical Center, Department of Neurobiology, Harvard Medical School, Boston, Massachusetts, USA
BRIEF DESCRIPTION: In recent years, we discovered that the network of neurons that senses pain signals from the dura changes rapidly during the course of a single migraine attack and that the treatment of an attack is a moving target. We found that if the pain is not stopped within 10 min to 20 min after it starts, the first set of neurons in the network, those located in the trigeminal ganglion, undergo molecular changes that make them hypersensitive to the changing pressure inside the head which explains why migraine headache throbs and is worsen by bending over and sneezing. We found that if the pain is not stopped within 60 min to 120 min, the second group of neurons in the network, those located in the spinal trigeminal nucleus, undergoes molecular changes that convert them from being dependent on sensory signals they receive from the dura by the first set of neurons, into an independent state in which they themselves become the pain generator of the headache. When this happens, patients notice that brushing their hair, taking a shower, touching their periorbital skin, shaving, wearing earrings, etc, becomes painful, a condition called cutaneous allodynia. Based on this scenario, we showed recently that the success rate of rendering migraine patients pain-free increased dramatically if given before the establishment of cutaneous allodynia and central sensitization. The molecular shift from activity-dependent to activity-independent central sensitization together with our recent conclusion that triptans have the ability to disrupt communication between peripheral and central trigeminovascular neurons (rather than inhibiting directly peripheral or central neurons) explain their clinical effects. Both our clinical and preclinical findings of the past five years point to possible short- and long-term advantages in using early-treatment approach in the treatment of acute migraine attacks.

10:00 AM – PLENARY SESSION INDIVIDUAL DIFFERENCES IN PAIN AND ANALGESIA: CONTRIBUTIONS OF SEX, GENDER AND GENETICS

13

Chair: Gary B Rollman PhD
Department of Psychology, University of Western Ontario, London, Ontario
Speakers: Roger Fillingim PhD, Patricia McGrath MS PhD, William Maixner DDS PhD

13A

INDIVIDUAL DIFFERENCES IN EXPERIMENTAL PAIN RESPONSES

Roger Fillingim PhD
College of Dentistry, University of Florida, Gainesville, Florida, USA
Pain and analgesic responses are characterized by tremendous interindividual variability. Indeed, an identical noxious stimulus can produce vastly different pain responses across individuals, and equivalent doses of an analgesic can produce highly discrepant effects across patients. Historically, scientists and clinicians have regarded this variability as a nuisance; however, increasing evidence suggests that these individual differences may provide valuable information that can be used to enhance clinical management of pain. Numerous factors contribute to individual differences in pain and analgesia, including demographic (ie, sex, age and ethnicity), genetic and psychosocial variables. These factors are discussed in the context of the biopsychosocial model of pain, which posits that pain perception is influenced by interactions among biological, psychosocial and sociocultural factors. Finally, the clinical and scientific implications of individual differences in pain are discussed.

13B

WHAT CAN WE LEARN FROM PEDIATRIC PAIN RESEARCH

Patricia McGrath MS PhD
Divisional Centre for Pain Management and Pain Research, Anesthesia, Hospital for Sick Children, Toronto, Ontario

13C

WHAT CAN WE LEARN FROM PAIN GENETIC RESEARCH IN HUMANS

William Maixner DDS, PhD
Center for Neurosensory Disorders, UNC Chapel Hill School of Dentistry, Chapel Hill, North Carolina, USA

11:30 AM – HOT TOPICS IN PAIN RESEARCH – STUDENT PRESENTATIONS

14

Chair: Anita Unruh PhD RSW OT(C) Reg NS
Professor, School of Health and Human Performance, Dalhousie University, Halifax, Nova Scotia
Speakers: Joanne M Gillespie PhD, Cheryl Harris BA, Paula C Miceli MSc, Stéphanie Pagé MSc

14A

THE ROLE OF ANXIETY IN CHILDREN'S PREDICTION, EXPERIENCE, AND RECALL OF IMMUNIZATION PAIN

Joanne M Gillespie PhD[1,2], Gary B Rollman PhD[2], Graham J Reid PhD[2], Tom Freeman MD[2]
[1]IWK Health Centre, Halifax, Nova Scotia; [2]The University of Western Ontario, London, Ontario
Anecdotal and clinical reports indicate that there is significant variation in the amount of pain children experience during routine medical procedures.

AIM: To examine the influence of individual differences in anxiety on young children's prediction, experience, and recall of immunization pain intensity.
METHOD: Participants included 95 children (47 boys, 48 girls) between the ages of 4.00 years and 7.83 years (M= 6.38 years, *SD*=1.08 years), presenting to the local public health unit for routine immunization (Diphtheria, Pertussis, Tetanus, Polio (DPTP) and/or Measles, Mumps, Rubella (MMR) vaccinations). Children and their parents completed ratings of anxiety and predicted pain intensity prior to the needles. Ratings of experienced pain (self-report and behavioural) were obtained immediately following the procedure. Recalled pain was assessed by telephone approximately six weeks later.
RESULTS: Girls were more anxious than boys before having the needle and older children reported less anticipatory anxiety. Children's anxiety was positively correlated with the intensity of immunization pain predicted, experienced, and subsequently recalled by them. Relative to children who rated the pain from needles as low in intensity, children who reported experiencing clinically significant pain from the needles also reported significantly higher anticipatory anxiety ratings.
CONCLUSION: Effective intervention to decrease the amount of anxiety children are experiencing prior to a routine medical procedure such as immunization is extremely important in order to reduce the pain they subsequently experience from that procedure.

14B
PSYCHOMETRIC CHARACTERISTICS OF THE BECK DEPRESSION INVENTORY-SECOND EDITION (BDI-II) IN INDIVIDUALS WITH CHRONIC PAIN

Cheryl A Harris BA
School of Psychology, University of Ottawa, Ontario
Joyce L D'Eon PhD CPsych
The Rehabilitation Centre and University of Ottawa, Ontario

Learning Objectives:
1. *Understand psychometric properties of the BDI-II in the area of chronic pain.*
2. *Better understand the issues of symptom overlap between pain and depression, and sex invariance.*

Given the high prevalence of depression in individuals with chronic pain and negative outcomes associated with such comorbidity, the importance of assessing depressive symptoms is acknowledged by professionals in this area. Although no study to date has evaluated psychometric properties of the BDI-II in chronic pain patients, this measure is commonly employed at multidisciplinary pain centres. This study evaluated factorial validity, gender invariance and reliability of the BDI-II in chronic pain patients (n=481). Results support the conceptualization of depression as a singular latent construct, within a hierarchical factor structure consisting of three first-order factors – negative attitude, performance difficulty and somatic elements. Except for one differential factor loading and correlated error, this structure was invariant across sex. Factor structure and corrected item-total correlations support the inclusion of somatic items even given their probable overlap with symptoms of pain. Internal consistency was satisfactory. Mean scores were in the moderately severe range. In contrast to the general population, no difference was found between average scores of women and men. Overall, results indicate that the BDI-II is a reliable and valid tool for assessing depressive symptoms in both women and men with chronic pain.

14C
INFLUENCE OF SUBSTANCE ABUSE HISTORY AND REPORTED ANALGESIC RELIEF ON NURSING STUDENTS' JUDGMENTS OF POSTSURGICAL PAIN

Paula C Miceli MSc PhD(c)
York University, Toronto, Ontario
Professor Joel Katz, Department of Psychology and School of Kinesiology/Health Science, York University, Toronto, Ontario

AIM: To examine the role of substance abuse history (SAH) and pain relief (PR) on nursing students' perceptions of postoperative pain and addiction risk in a hypothetical patient (HP).
METHODS: Participants were randomly assigned to receive one of four vignettes describing a 45-year-old man after total hip replacement. The HP was described as (i) having/not having a SAH (alcohol, opiates) AND (ii) experiencing adequate/inadequate PR. Participants rated their perceptions of the HP's experienced and reported pain intensity (0 to 100 mm VAS) and addiction risk (0% to 100% VAS). Pain intensity was expressed as a Perceived Pain Difference Score (PPDS; reported pain minus experienced pain).
RESULTS: Analysis was conducted on 85 responses from students in BSc nursing programs. Program year was a factor influencing perceived addiction risk (first year 45% versus senior year 22%). SAH and PR factors had a significant interactive effect on PPDS. With inadequate PR, PPDS were similar in SAH present and absent groups. With adequate PR, PPDS were significantly less in the SAH absent group compared to the SAH present group.
CONCLUSIONS: The presence of substance abuse history was associated with greater levels of perceived addiction risk. The perception of increased addiction risk was not sufficient to alter mean perceptions of the difference between reported and experienced pain. Rather, when substance abuse history was present, the level of pain relief (adequate versus little) in the HP influenced judgments of the strength of perceived pain, with a tendency towards believing that patients would report more pain than would be experienced.

14D
THE PERSISTENT PAINFUL STIMULATION (PPS) PROCEDURE

Stéphanie Pagé MSc
Clinical Research Center, Sherbrooke University, Sherbrooke, Québec

Learning Objectives:
1. *Participants will gain a better understanding of pain tests.*
2. *Participants will learn the persistent painful stimulation (PPS) procedure.*

Pain is a dynamic phenomenon under the influence of several endogenous mechanisms of control. One of these mechanisms, the diffuse noxious inhibitory control system (DNIC) is recruited following a painful stimulation of great intensity. However, few clinical tests measure the systemic effects of DNIC effectively. The objective of this study was to find a clinical test able to measure DNIC. The procedure consisted of a continuous pain perception measurement during a 2 min thermal stimulation, using an electronic visual analogical scale (COVAS). This procedure was repeated with the same intensity before and after the immersion of the contralateral arm in a cold water bath (7°C, 10°C or 12°C) during 2 min. When comparing the pain perception curves before and after the immersion, we observed a significant differences in perceived pain intensity ($P<0.05$), with less pain after immersion for all the temperatures. These differences are present after several seconds of stimulation suggesting a better effect on C-fibres. However, we observed that DNIC intensity is dose-dependent since its strength decreased progressively when the bath temperature rose from 7°C to 10°C and finally to 12°C ($P<0.05$). Additionally, sex contrasts showed that women evaluated the water bath as significantly more painful (7°C, 10°C and 12°C water bath) ($P<0.03$) and needed significantly lower thermode temperatures to reach a 50% pain score ($P<0.002$). This test is particularly well suited to measure the rapid analgesic effects produced by endogenous inhibitory control systems and holds the promise of being effectively used in clinical settings.

1:30 PM – TRAINEE SESSION
TRANSITION AS A NEW INVESTIGATOR: STRATEGIZING FOR YOUR CAREER AS AN INVESTIGATOR AFTER GRADUATE TRAINING

15

Chair: Michael McGillion RN PhD(c)
Faculty of Nursing and University of Toronto Centre for the Study of Pain, University of Toronto, Toronto, Ontario
Speaker: Rebecca Pillai Riddell PhD CPsych
Department of Psychology - Atkinson, York University, Toronto, Ontario; Department of Psychiatry Research, Hospital for Sick Children, Toronto, Ontario

Learning Objectives:

1. *Use Maslow's Hierarchy of Needs to offer a strategy for maximizing graduate training.*
2. *Discuss common myths and misconceptions regarding a university tenure-track professorship.*
3. *Facilitate an interactive discussion based on audience questions.*
4. *Provide a list of recommended resources for further reading.*

Maslow purports that needs can be considered in a hierarchy of importance, and that lower needs must be met before the obtention of higher level needs. Using this analogy for the academic context, successfully obtaining the core requirements of graduate school (eg, winning trainee funding, theses, dissertations, comprehensive exams, clinical requirements) will be discussed as core needs that must be managed before the budding research trainee begins to divide their time with more higher level needs (eg, additional research or clinical training opportunities). Strategies to maximize one's efforts in concurrently working toward these 'needs' will be presented. The second half of the talk will focus on Dr Pillai Riddell's experience transitioning from graduate school to a new investigator position at York University and the Hospital for Sick Children. Students who are contemplating an academic career at any stage of their training are strongly encouraged to participate in this interactive session.

1:30 PM – SYMPOSIUM 107
USING EXPERIMENTAL HUMAN AND ANIMAL PAIN MODELS TO STUDY THE EFFECTIVENESS OF ANALGESICS: ADVANTAGES AND LIMITATIONS

16

Chair: Michael Salter MD PhD FRSC
Canada Research Chair in Neuroplasticity and Pain (Tier 1) Senior Scientist Programmes in Brain and Behaviour and Cell Biology, Hospital for Sick Children; Professor of Physiology, University of Toronto Director, University of Toronto Centre for the Study of Pain, Toronto, Ontario
Speakers: Roger Fillingim PhD, Gary Bennett PhD, Andy Dray PhD

16A
EXPERIMENTAL PAIN MODELS AS ANALGESIC ASSAYS

Roger Fillingim PhD
College of Dentistry, University of Florida, Gainesville, Florida

16B
ANIMAL MODELS OF PAINFUL PERIPHERAL NEUROPATHY – ONE SIZE WON'T FIT ALL!

Gary Bennett PhD
Anesthesia Research Unit, McGill University, Montréal, Québec

16C
USING EXPERIMENTAL PAIN MODELS TO BRIDGE TO CLINICAL PAIN THERAPY

Andy Dray PhD
Chief Scientist, Astra-Zeneca Research and Development, Montréal, Québec

1:30 PM – WORKSHOP 108
MANAGING ACUTE PAIN IN THE PATIENT WITH OPIOID DEPENDENCE

17

Chair: Roman Jovey MD
Alcohol and Drug Treatment Program, Credit Valley Hospital and CPM Health Centres Inc, Mississauga, Ontario
Speakers: Roman Jovey MD, Howard Heit MD FACP FASAM, Douglas Gourlay MD MSc FRCPC FASAM

17A
INTRODUCTION AND CASE SCENARIOS

Roman Jovey MD
Alcohol and Drug Treatment Program, Credit Valley Hospital and CPM Health Centres Inc, Mississauga, Ontario

17B
THE TRUTH ABOUT PAIN MANAGEMENT: ADDICTION, PHYSICAL DEPENDENCE AND PATIENT EVALUATION

Howard Heit MD FACP FASAM
Board Certified in Internal Medicine and Gastroenterology/Hepatology; Certified in Addiction Medicine; Medical Review Officer, Chronic Pain and Addiction Specialist, Assistant Clinical Professor, Georgetown University, Fairfax, Virginia, USA

17C
MANAGING ACUTE ON CHRONIC PAIN IN THE OPIOID DEPENDENT PATIENT

Douglas Gourlay MD MSc FRCPC FASAM
Center for Addiction and Mental Health and The Wasser Pain Management Centre, Mt Sinai Hospital, Toronto, Ontario

Learning Objectives:

1. *Describe the definitions of addiction in a patient on long-term opioids for pain.*
2. *Differentiate a chronic pain patient from an addicted patient.*
3. *Explain the appropriate use of urine drug testing in patients with pain.*
4. *Develop an approach to the assessment and management of acute on chronic pain in the opioid tolerant patient.*
5. *Use "universal precautions" when prescribing opioids, to optimize pain management in the challenging patient with pain.*

Opioids are increasingly being used for the treatment of opioid addiction and also for the management of patients with chronic noncancer pain. Patients on long-term opioid therapy for either reason can develop acute superimposed on chronic pain resulting from acute medical problems, trauma or surgery. In both groups of patients, some degree of opioid tolerance may already be present, creating a challenge for adequate acute pain management. This can be especially problematic in the patient on Methadone or buprenorphine opioid agonist treatment (OAT) for addiction. Using a combination of short case vignettes, didactic presentation and a discussion period this workshop will help the pain clinician to develop an individualized approach to the assessment and treatment of this challenging group of patients.

1:30 PM – WORKSHOP 109
BOLDLY GOING WHERE NO ONE HAS GONE BEFORE... VENTURING WITH CONFIDENCE INTO THE UNCHARTED QUADRANTS OF LOW BACK AND PELVIC PAIN

18

Chair: Pamela M Barton MD FRCPC
Neuromusculoskeletal Consultant, Calgary Health Region Chronic Pain Centre (CHRCPC); Clinical Associate Professor, Division of Physical Medicine and Rehabilitation, University of Calgary, Calgary, Alberta
Speakers: Pamela M Barton MD FRCPC, Magali Robert MD FRCSC, John Jarrell MD FRCSC MSc

OVERALL AIM: This workshop will introduce clinicians to the critical, yet usually overlooked inter-relationship between low back pain and pelvic pain in women with regard to relevant concepts, anatomy, etiology, sequelae, assessment and treatment options.

Learning Objectives:
Participants will:
1. *Understand the anatomy, conceptual model and causes of lumbopelvic instability.*
2. *Understand the features of and interrelationships among low back and pelvic pain and pelvic floor dysfunction.*
3. *Review the physiology of chronic pain as it relates to the pelvis.*
4. *Review the inter-relationships of visceral disease of the pelvis and the somatic manifestations of pelvic pain.*
5. *Be familiar with the screening history and clinical examination (both musculoskeletal and pelvic) for lumbopelvic instability and pelvic floor dysfunction.*
6. *Understand the range of treatment options for lumbopelvic instability and its sequelae.*

Lumbopelvic instability, the loss of structural integrity of the bony pelvic ring and sacroiliac joints, is an extremely common, yet unrecognized, cause and perpetuator of chronic low back, buttock and leg pain as well as chronic pelvic pain and pelvic floor dysfunction. This workshop is being presented by three experienced pain clinicians who have had more than five years of common experience in treating this condition in a comprehensive interdisciplinary chronic pain centre. Causes and clinical strategies for managing lumbopelvic instability and its sequelae will be explored, within the context of clinical cases, stressing the need for an integrated management approach that transcends the traditional boundaries of the medical and rehabilitation disciplines.

18A
LUMBOPELVIC INSTABILITY, LOW BACK PAIN AND THE SACROILIAC JOINTS

Pamela M Barton MD FRCPC
Calgary Health Region Chronic Pain Centre (CHRCPC); Clinical Associate Professor, Division of Physical Medicine and Rehabilitation, University of Calgary, Calgary, Alberta

Lumbopelvic stability, the ability to effectively transfer load from the trunk through the pelvis to the lower extremities, is a result of the unique anatomy of the lumbar spine and pelvis (bones, joints, muscles, ligaments and fascias). Current understanding of the biomechanical principles and neural influences controlling these structures lays the groundwork for their clinical evaluation in low back and pelvic pain patients. Knowledge of these concepts and principles allows a rational interdisciplinary approach to the management of this challenging patient population.

18B
PELVIC FLOOR SEQUELAE OF LUMBOPELVIC INSTABILITY AND THEIR TREATMENT

Magali Robert MD FRCSC
Program Director, Pelvic Pain Program, CHRCPC; Director, Pelvic Floor Clinic, Calgary Health Region; Clinical Associate Professor, Department of Obstetrics and Gynecology, University of Calgary, Calgary, Alberta

Any change in lumbopelvic stability will have an impact on the pelvic floor. Similarly, any pelvic floor dysfunction will have an impact on lumbopelvic stability. Pelvic floor dysfunction, a common yet frequently overlooked disorder, should be considered in individuals with lumbopelvic instability who are unresponsive to treatment. In pelvic floor dysfunction, the history is significant for urinary dysfunction, bowel dysfunction, dyspareunia in women and ejaculatory difficulties in men. A simple examination can screen for pelvic floor dysfunction and direct further therapy.

18C
VISCEROSOMATIC INTER-RELATIONSHIPS IN CHRONIC PELVIC PAIN

John Jarrell MD FRCSC MSc
Consultant, Pelvic Pain Program, CHRCPC; Professor, Department of Obstetrics and Gynecology, University of Calgary, Calgary, Alberta

Chronic pelvic pain is a common condition among women. One of the most common conditions that cause such pain is endometriosis. This presentation will review the development of viscerosomatic pain among women with this condition, particularly with reference to the epidemiology of important clinical findings associated with the chronic pain state. The interaction of visceral disease of the pelvis and myofascial dysfunction in relation to pelvic pain will be addressed.

References:
1. Jarrell JF, Vilos GA. Consensus Guidelines for the Management of Chronic Pelvic Pain. JOGC 2005;164:781-801;869-87.
2. Vleeming A, Mooney V, Dorman T, Snijders C, Stoeckart R, eds. Movement, Stability and Low back Pain – The essential role of the pelvis. Edinburgh: Churchill Livingstone, 1999.
3. Lee DG. The Pelvic Girdle, 3rd edn. Edinburgh: Elsevier Science, 2004.
4. McGill SM. Ultimate back fitness and performance. Waterloo: Wabuno Publishers, 2004. ISBN 0-9736018-0-4 (www.backfitpro.com).

1:30 PM – WORKSHOP 110
CANADIAN HEALTH CARE ACCREDITATION STANDARDS FOCUS ON PAIN MANAGEMENT: MAKING IT HAPPEN

19

Chair: Jennifer Stinson RM MSc CPNP
Chronic Pain Program, Department of Anaesthesia, The Hospital for Sick Children, Toronto, Ontario
Speakers: Mona Sawhney RN MN ACNP[1], Maggie Gibson PhD CPsych[2], John Clark MD FRCPC
[1]Acute Pain Service, North York General Hospital, Toronto;
[2]St Joseph's Health Care/Lawson Health Research Institute, London, Ontario

AIMS: This interactive workshop will review the Canadian Council on Health Services Accreditation (CCHSA) standard that focuses on evaluating pain management, introduce the manual that was created through the Nursing Issues Special Interest Group and explore practical applications in which organizations can meet this standard.

Learning Objectives:
1. *Review CCHSA standard which focuses on pain management (7 section 7.4).*
2. *Review the key components of the manual 'Accreditation Pain Standard: Making it Happen'.*
3. *Provide an interprofessional perspective on strategies that can be used to meet the standard.*

OUTLINE OF THE WORKSHOP: Pain assessment and management are an individual's right and an important part of basic clinical care for all patients as it can guide treatment. This is supported by the "Canadian Pain Coalition" in their Charter of Pain Patient's Rights and Responsibilities. A guide has been prepared as a resource by the Special Interest Group on Nursing Issues of the Canadian Pain Society, and has been reviewed by an interprofessional group. It has been developed to help organizations and health care professionals meet the new pain assessment and management standard from the CCHSA.

In this session, the CCHSA standard regarding pain management and key components of the manual developed to assist organizations in meeting this standard will be reviewed. Perspectives and strategies, regarding how to meet the standard, will be provided by three health care professionals with clinical practices in acute, chronic and long-term care settings. The session will focus on three major components of the standard: assessment, management, and organizational issues and ways members of multidisciplinary health care teams can make this standard happen in their institutions.

19A
OVERVIEW OF THE KEY SECTIONS OF THE GUIDE AND HOW NURSES CAN MAKE THE STANDARDS HAPPEN IN EVERYDAY PRACTICE

Mona Sawhney RN MN ACNP
CNS/NP Pain Management, North York General Hospital, Toronto, Ontario

The CCHSA standard 7.4 states that "All clients receive a pain assessment on admission and routinely thereafter; the team assesses pain using standardized clinical measures; the team identifies and consults with pain management experts; the team educates patients and families on pain management strategies; the team documents and shares the results of pain management strategies; the organization trains and updates staff on evidenced-based strategies to prevent, minimize or relieve pain." This presentation will focus on the key components of assessment, management and organizational issues from the CCHSA standard, highlighting recommendations from the guide developed by the CPS Nursing Issues Special Interest Group. Strategies for implementing this standard within an acute care setting and activities that nurses can engage in as part of the interprofessional team will be discussed.

19B
CHANGING PRACTICE: FINDING AND CLOSING THE GAPS

Maggie Gibson PhD
Psychologist, Veterans Care Program, Parkwood Hospital, St Joseph's Health Care, London, Ontario

Learning Objectives:

1. *Participants will learn about a motivation-based change strategy that can be used to meet the standard.*
2. *Participants will gain an understanding of how strategy implementation is adapted to different long-term care environments.*

There is a well-recognized need to focus on the processes of change implementation to ensure success in efforts to improve health care (Rantz et al, 2001; Solberg et al, 2000). Moreover, in the institutional care environment, readiness for change at the level of the team becomes as critical, if not more critical, than individual motivation, because no one individual can effect lasting and significant change independently (Levi, 2001). This presentation will describe the critical components of an empirically supported, stage-based, practice enhancement strategy, commonly known as the "readiness for change" model (DiClemente & Prochaska, 1998), that has been used to implement pain assessment and management standards in three long term, in-patient care settings (complex continuing care, long term care veterans care) within one large health care corporation.

19C
GOING THROUGH THE PROCESS, HOW TO GET READY FOR ACCREDITATION

John Clark MD FRCPC
Medical Director, Chronic Pain Centre, Calgary Health Region, Clinical Professor of Anesthesia, University of Calgary, Calgary, Alberta

The Calgary Health Region's Regional Pain Program (RPP) was assessed by the Canadian Council on Health Services Accreditation Program in April 2006. This presentation will focus on how the RPP prepared for the accreditation visit. Areas to be discussed include obtaining staff buy-in to the process, developing a working group to prepare the report, obtaining the right information to address the accreditation standard, having (or planning to have) the tools in place to meet the accreditation standard and involving all clients (patients, families), staff and other programs who depend on the RPP for its expertise.

4:00 PM – WORKSHOP 111
CANNABINOID COMPOUNDS IN THE TREATMENT OF CHRONIC PAIN: UPDATE AND CLINICAL GUIDELINES

20

Chair: John Clark MD FRCPC
Director, Chronic Pain Centre, Calgary Health Region; Clinical Professor of Anesthesia, University of Calgary, Calgary, Alberta
Speakers: Mary E Lynch MD FRCPC, Mark Ware MBBS MRCP MSc, John Clark MD FRCPC

PARTICIPANTS: Clinicians and other health care providers who have an interest in or seek further knowledge about the use of cannabinoid compounds available in Canada for the treatment of chronic pain.

OVERALL AIMS: To allow participants to understand how the cannabinoid compounds currently available in Canada can be used for the treatment of chronic pain and what risks are associated with their use.

Learning Objectives:

Participants will:

1. *Become familiar with how cannabinoid compounds have analgesic actions.*
2. *Review the clinical evidence for the analgesic actions of cannabinoid compounds.*
3. *Be aware of safety issues when cannabinoid compounds are used to treat chronic pain.*
4. *Discuss an algorithm that can be used by clinicians when considering the use of cannabinoid compounds for the treatment of chronic pain.*

BRIEF OVERVIEW: Dr Lynch will provide an overview of the endocannabinoid system and preclinical work relating to analgesic effects of cannabinoids. Dr Ware will review the evidence for analgesic efficacy in human and the safety issues that need to be considered in their use. Dr Clark will lead discussion about an algorithm that can be used to guide the clinician in the use of cannabinoid compounds in the treatment of chronic pain and to help participants to learn how to prescribe these medications.

20A
THE ENDOCANNABINOID SYSTEM AND ANALGESIA

Mary E Lynch MD FRCPC
Pain Management Unit, Queen Elizabeth II Health Sciences Centre and Dalhousie University, Halifax, Nova Scotia

Modern pharmacology of cannabinoids began in 1964 with the isolation and partial synthesis of Δ-9-tetrahydrocannabinol (THC), the main psychoactive agent in herbal cannabis. Since then, potent antinociceptive and antihyperalgesic effects of cannabinoid agonists in animal models of acute and chronic pain, the presence of cannabinoid receptors in pain processing areas of the brain, spinal cord and periphery, and evidence supporting endogenous modulation of pain systems by cannabinoids, has provided support that cannabinoids exhibit significant potential as analgesics. This section of the workshop will provide an overview of the endocannabinoid system and the preclinical science relating to analgesia.

20B
CANNABINOID THERAPEUTICS FROM EXPERIENCE TO EVIDENCE

Mark A Ware MBBS MRCP MSc
McGill University Health Centre Pain Centre and McGill University, Montréal, Québéc

One of the major obstacles to the use of cannabinoids in pain management has been a paucity of clinical trial data on safety and efficacy of these compounds. In the past two years, a number of clinical trial reports have been published that point to a potential analgesic role of cannabinoids. This presentation will show how experience with patients using cannabis has transferred into clinical trial results. The most recent published literature on cannabinoids in pain management will be presented, and participants will explore how these data may be interpreted in light of currently available cannabinoid compounds. Safety considerations will be discussed in light of adverse event reports from clinical trials.

20C
AN ALGORITHM FOR THE TREATMENT OF CHRONIC PAIN WITH CANNABINOIDS

Alexander J Clark MD FRCPC
Chronic Pain Centre, Calgary Health Region and University of Calgary, Calgary, Alberta

Guidelines for the use of cannabinoid compounds in chronic pain have recently been published based on a literature search and a consensus meeting held to discuss their role in chronic pain. These guidelines present a practical approach to the treatment of chronic pain with cannabinoid compounds and provide suggestions about off-label use in chronic pain. Audience participation will be encouraged through discussion of these guidelines and practical tips about prescribing cannabinoid compounds will be provided.

4:00 PM – WORKSHOP 112
THE TRADITIONAL CHINESE MEDICAL APPROACH TO PAIN MANAGEMENT

21

Chair: Mark A Ware MRCP(UK) MSc
Assistant Professor, Departments of Anesthesia and Family Medicine, McGill University, Director of Clinical Research, MUHC Pain Centre, Montréal, Québec
Speaker: Steven KH Aung MD FAAFP
Clinical Associate Professor, Faculty of Medicine and Dentistry University of Alberta, Edmonton, Alberta; Clinical Associate Professor, New York University College of Dentistry, New York, New York, USA; Adjunct Professor, Faculty of Extension, University of Alberta; President, Canadian Medical Acupuncture Society, Edmonton, Alberta; President, World Natural Medicine Foundation

Learning Objectives:

1. *Basic understanding of the traditional Chinese medical system – philosophy.*
2. *Basic understanding of the traditional Chinese medical system – diagnostics.*
3. *Basic understanding of the system – therapeutics.*
4. *General appreciation of traditional Chinese medical approach to pain management.*

This intensive 'hands on' lecture/workshop presentation will give participants an intensive informative introduction to traditional Chinese medical (TCM) diagnostics and therapeutics. This will enhance their awareness of one of the world's major traditional medicine systems. Basic TCM theories, methods and approaches will be explained. In TCM, as in other traditional medical systems, good health is defined in terms of physical, mental and spiritual harmony. Disease is considered a disruption of this essential harmony. TCM diagnostics encompasses inquiry (past diseases and present symptoms), inspection (including close scrutiny of the ear and tongue, as well as observation of mental and spiritual vitality), palpation (including pulse analysis and palpation of 'alarm' points) and auscultation/olfactory (careful listening and smelling for signs of disease).

4:00 PM – WORKSHOP 113
INTERDISCIPLINARY REHABILITATIVE TREATMENT FOR PROLONGED CHRONIC PAIN: THE CRITICAL ROLE OF INTEGRATED COGNITIVE BEHAVIOURAL TREATMENT IN RESTORING FUNCTION

22

Chair: Richard Marlin PhD CPsych
(Alberta, British Columbia, Nova Scotia, Ontario), Director of Odyssey Health Services, Burlington, Ontario
Speakers: Richard Marlin PhD CPsych, Michael Achong MB ChB FRCPC, Susan Abbey MD FRCPC (Psychiatrist)

BRIEF OVERVIEW: This workshop presents the details of an interdisciplinary treatment model that is specifically focused on the integration behavioural science with medical science, without the biomedical model being dominant. Techniques are presented that insure a truly effective working integration of behavioural science, including the power of cognitive behavioural therapy, with the medical management of disease and judicious use of medication. Data will be presented demonstrating the effectiveness of this approach to restoring function (including returning to work) in patients who have been disabled with respect to employment for between 2 and 15 years.

Learning Objectives:

1. *The appropriate individual roles of psychology, general medicine and psychiatry in the assessment and treatment of chronic pain.*
2. *How to effectively integrate behavioural science with the biomedical model to facilitate treatment.*
3. *Common pitfalls that can impair interdisciplinary treatment and cognitive behavioural treatment in particular.*
4. *How to achieve improved outcomes with the most challenging cases.*
5. *How to effectively collaborate with other health care providers, insurers, employers, lawyers and other interested third parties, to the patient's benefit.*

22A
THE CONCEPTUAL MODEL OF THIS INTERDISCIPLINARY APPROACH

Richard Marlin PhD Psychologist
(Alberta, British Columbia, Nova Scotia, Ontario), Director of Odyssey Health Services, Burlington, Ontario

Dr Marlin's presentation will describe the conceptual model of this interdisciplinary approach. Specific application to chronic pain patients who have been totally disabled for gainful employment for between 2 and 15 years will be discussed and outcome data presented. It is crucial that the potential areas of conflict between behavioural science and medical science be understood and managed for interdisciplinary care to be effective. While medical management, psychotherapy and cognitive-behavioural therapy can all contribute significantly to good outcomes, effective integration is crucial for obtaining good results with this population. Specific applications of cognitive behavioural therapy to this population will be discussed, as will practical issues of interactions with other health care providers, insurers, employers, lawyers and family members.

22B
THE ROLE OF THE BIOMEDICAL MODEL AND GENERAL MEDICINE IN THIS INTEGRATIVE APPROACH

Michael Achong (General Internist)
Associate Clinical Professor, Department of Medicine, McMaster University; Private practice; Medical Staff, St Joseph's Hospital, Hamilton, Ontario; Consultant to Odyssey Health Services, Burlington, Ontario

Dr Achong will discuss the role of the biomedical model and general medicine in this integrative approach. The distinction between disease and illness will be elaborated. Issues of when to involve particular specialists and when further investigations are indicated or contraindicated will be reviewed. The essential role of biomedical science in developing clear opinions concerning hurt versus harm and 'irreducible limitations' will be reviewed. Finally how to facilitate rather than undermine cognitive-behavioural intervention will be examined

22C
THE ROLE OF PSYCHIATRY IN THIS INTERDISCIPLINARY MODEL

Susan Abbey (Psychiatrist)
Director, Program in Medical Psychiatry, University Health Network, Toronto, Ontario; Affiliate Scientist, Toronto General Research Institute, Toronto, Ontario; Consultant to Odyssey Health Services[1], Burlington, Ontario

Dr Abbey will discuss the role of psychiatry (from both a pharmacological as well as psychotherapeutic perspective) in this interdisciplinary model. Dr Abbey will discuss how to optimize the benefits of medications while minimizing the detrimental effects, from both a pharmacological as well as psychological perspective. Dr Abbey will discuss when psychiatric diagnostic formulations can be beneficial and when they can impede progress. Finally, Dr Abbey will discuss when palliation conflicts with functional restoration.

[1]Odyssey Health Services is an interdisciplinary private practice that provides interdisciplinary assessment and treatment services. The majority of patients are funded by third parties, including long-term disability carriers, large employers and other insurers. Referrals are received from such third parties as well as health care providers, and in some cases, self-referral.

4:00 PM – WORKSHOP 114
SPIRITUALITY, RELIGION AND PAIN EXPERIENCE

23

Chair: Harold Merskey DM FRCPC
Department of Psychiatry, University of Western Ontario, London, Ontario
Speakers: Anita Unruh PhD RSW OT(C), Bruce Dick PhD RPSYCH, Helen Tupper RN

OVERALL AIM: To examine the ways in which spirituality and religion contribute to appraisal and coping with pain experience in everyday life.

DESCRIPTION: Throughout the ages, spiritual and religious beliefs have been interwoven with explanations about the origins of pain and strategies to relieve pain. Even as a more empirical and biological, psychological and sociological understanding of pain evolved, pain continued to have additional spiritual or religious dimensions for many people. Spiritual and religious views of pain can be an additional resource for coping effectively with pain but they may also be a hindrance and increase patient suffering. In this workshop, we will consider the possible spiritual and religious meanings associated with pain with implications for future research and clinical practice.

Learning Objectives:

1. *To identify possible spiritual misconceptions that may hinder effective pain management.*
2. *To identify spiritual strategies that may support effective pain management.*
3. *To identify directions for research related to better understanding the relationship between spirituality, religion and pain experience.*

23A
SPIRITUALITY AND PAIN: A HISTORICAL VIEW

Anita Unruh PhD, RSW, OT(C)
Reg NS Professor, School of Health and Human Performance, Dalhousie University, Halifax, Nova Scotia

In this review, we will examine the way in which views about religion and pain evolved through the ages to the 21st century and the current research about the impact of religion on pain experience. We will consider possible spiritual misconceptions as well as the existing evidence that spirituality and religion may enable coping with pain for some patients.

23B
SPIRITUALITY AND PAIN: EMERGING EVIDENCE AND A MODEL FOR COPING

Bruce Dick PhD RPSYCH
Assistant Professor, Department of Anesthesiology and Pain Medicine, University of Alberta, Edmonton, Alberta

Renewed spiritual searching and questioning is not uncommon in palliative care and may be juxtaposed against the experience of pain and suffering. In this paper, we will consider the importance of attention to spiritual concerns as part of a comprehensive approach to pain management in the palliative care context.

23C
PATIENT PERSPECTIVE

Helen Tupper RN
Founding Member, President, Canadian Pain Coalition, Artist, Halifax, Nova Scotia

This paper will provide the patient's voice to illustrate the way in which spiritual views may be interwoven with the way in which a patient constructs a meaning of the pain experience and approaches pain management.

SCIENTIFIC PROGRAM
SATURDAY, JUNE 17, 2006

7:30 AM – MERCK FROSST CANADA LTD SYMPOSIUM
A BURNING TALK ABOUT ZOSTER, POSTHERPETIC NEURALGIA AND THE FUTURE...

24

Chair: John Clark MD FRCPC
Director, Chronic Pain Centre, Calgary Health Region and Clinical Professor of Anesthesia, University of Calgary, Calgary, Alberta
Speakers: Dr Robert Johnson MD, C Peter N Watson MD FRCPC, Dr Robert Johnson MD
Consultant Anaesthetist and Director, Pain Management Clinic Bristol Royal Infirmary, Bristol, United Kingdom
C Peter N Watson MD FRCPC
Neurology Consultant, Rehabilitation Institute of Toronto, Toronto, Ontario

SESSION OVERVIEW: After the presentation, the participants should be able to: appreciate the incidence and prevalence of herpes zoster (HZ) and postherpetic neuralgia (PHN); describe the specificity of the pathogenesis of postherpetic pain; adopt a pain specialist approach to counselling and treating patients with PHN; assess the potential benefits of using a live, attenuated vaccine for prevention of HZ and PHN.

8:45 AM – KEYNOTE SPEAKER
THE THALAMUS AND PAIN

25

Chair: Brian Cairns PhD RPh
Assistant Professor and Canada Research Chair Faculty of Pharmaceutical Sciences, University of British Columbia, Vancouver, British Columbia
Speaker: Jonathan Dostrovsky MSc PhD
Professor, Department of Physiology, University of Toronto, Toronto, Ontario
2005 Recipient of the Canadian Pain Society Distinguished Career Award

BRIEF DESCRIPTION: Ever since the pioneering studies of Dejerine and Roussy on central postroke pain patients, there has been frequent speculation that the thalamus may play a key role in central pain. This talk will

review the anatomy and physiology of the thalamus in relation to nociceptive processing and then examine the evidence from animal and human studies for the role of thalamus in mediating central neuropathic pain.

10:30 AM – WORKSHOP 115
ESSENTIAL ASPECTS OF PAIN MANAGEMENT IN END-OF-LIFE AND PALLIATIVE CARE – FOR BUSY HEALTH CARE PROFESSIONALS

26

Chair: Yoram Shir MD
Associate Professor, Department of Anesthesia, Faculty of Medicine, McGill University, Montréal, Québec
Speakers: Yoko Tarumi MD, Mehrnoush Mirhosseini MD CCFP, Yoko Tarumi MD, Noush Mirhosseini MD CCFP
Division of Palliative Care Medicine, Department of Oncology, University of Alberta; Palliative Care Program, Capital Health Authority, Edmonton, Alberta

BRIEF OVERVIEW: This course offers the participants an overview of the essential aspects of pain management in end-of-life and palliative care based on the Learning Essential Approaches to Palliative and End-of-Life Care (LEAP) course material (Version 1.0, The Pallium Project.) LEAP has been developed upon the firm foundation of "Model to Guide Hospice Palliative Care: Based on National Principles and Norms of Practice". Canada is the only nation to date to lay claim to a broad, consensus-based national model on support of those with life-threatening and life-limiting illness.

Learning Objectives:

Upon competition of this module, participants will be able to:

1. *Categorize pain according to the inferred underlying mechanism and explain the clinical utility of this classification system.*
2. *Explain the concept of "total suffering".*
3. *Undertake an assessment of a patient with pain, with the aim of devising an effective management plan.*
4. *Use a standardized tool to assess pain and other symptoms.*
5. *Describe the factors that may predict difficulty in controlling pain.*
6. *Apply the WHO Ladder in selecting an appropriate analgesic regimen for a patient with pain.*
7. *Demonstrate the appropriate use of opioids including choice of types, formulations, routes, initiation, dose titration, management of adverse effects and switching to another.*
8. *List three adjuvant analgesics for the management of neuropathic pain, malignant bone pain and visceral pain.*

10:30 AM – WORKSHOP 116
MINDFULNESS-BASED CHRONIC PAIN MANAGEMENT COURSES (BASED ON MINDFULNESS-BASED STRESS REDUCTION): STRATEGIES AND OUTCOMES

27

Chair: Jackie Gardner-Nix MB BS PhD MRCP(UK)
St Michael's Hospital, Department of Anaesthesia, Sunnybrook and Women's College Health Sciences Centre, Department of Anaesthesia, Pain Management Programme Pain Clinic, University of Toronto, Department of Anaesthesia, Toronto, Ontario
Speakers: Jackie Gardner-Nix MB BS PhD MRCP(UK)[1,2], Lucie Costin-Hall BA MSc, Julianna Barbati
[1]St Michael's Hospital, Department of Anaesthesia, Pain Clinic; Sunnybrook and Women's College Health Sciences Centre, Department of Anaesthesia, Pain Management Programme, [2]University of Toronto, Toronto, Ontario

OVERALL AIMS: To demonstrate the effectiveness of Mindfulness-based chronic pain management classes, delivered on site and by telemedicine, on quality of life, pain scores, pain catastrophizing and suffering, in chronic noncancer pain patients.

Learning Objectives:

1. *Examine outcomes in chronic pain patients taking this course.*
2. *Understand the influence of mindfulness and meditation on brain processing of the chronic pain experience.*
3. *Consider strategies to increase availability of classes, and motivate chronic pain patients to comply with attendance.*

This workshop will describe the Mindfulness-based chronic pain management course (based on Jon Kabat-Zinn's stress reduction workshops given in Massachusetts) currently offered at two Toronto teaching hospital pain clinics. Validated tools (SF 36, Pain catastrophizing scale, Pain scale and PRISM test) were analysed on 138 patients, and showed highly statistically significant improvements in most of the parameters measured. This is believed to be the first report showing such compelling data on the effectiveness of this intervention in chronic pain.

Dr Gardner-Nix (chair) will describe the course, the validated tools selected to monitor outcomes, and the outcomes in 138 "on site" and telemedicine participants, compared to waiting list control data. Sixty-eight back pain patients were also analyzed separately, and the total data were reanalyzed to look at sex differences.

Lucie Costin-Hall will describe the modifications made to the classic Jon Kabat-Zinn course to enable chronic pain patients to participate, and the use of NORTH Network (telemedicine), to extend the courses to distant Ontario communities.

10:30 AM – WORKSHOP 117
FEAR OF PAIN AND FEAR OF FALLING AMONG SENIORS AND YOUNGER ADULTS: RECENT THEORETICAL MODELS AND RESEARCH FINDINGS

28

Chair: Thomas Hajistravropoulos PhD
CIHR Investigator and Professor of Psychology, Centre on Aging and Health, University of Regina, Regina, Saskatchewan
Speakers: Thomas Hadjistavropoulos PhD, Jaime Williams MA, Mark Carpenter PhD

Learning Objectives:

1. *Be familiar with new theoretical models designed to predict pain and falls among seniors with and without dementia.*
2. *Understand research findings relating to the aforementioned models.*
3. *Be familiar with findings demonstrating the relevance of fear of falling among younger patients with musculoskeletal problems.*
4. *Understand ways in which fear and anxiety affect balance performance among both younger and older adults.*

Falling represents a highly prevalent cause of hospitalization and painful injuries, especially among older adults. The presenters will explore the role of psychosocial predictors of falls and loss of balance using expertise from clinical psychology and kinesiology. Moreover, they will discuss the constructs of fear of pain and fear of falling by examining findings from laboratory, clinical and community studies. Theoretical models and initial research examining the relevance of fear of pain and fear of falling in the care of seniors with and without dementia will also be outlined.

28A
FEAR OF PAIN AND FEAR OF FALLING: DISTINCT CONSTRUCTS THAT CAN AFFECT THE FUNCTIONING AND REHABILITATION OF BOTH YOUNGER AND OLDER ADULTS

Thomas Hadjistavropoulos PhD
CIHR Investigator and Professor of Psychology, Department of Psychology and Centre on Aging and Health, University of Regina, Regina, Sasktachewan

BACKGROUND AND AIMS: Falling is a common cause of painful injuries, especially among older adults. Fear of pain has been studied primarily among young adults (as a predictor of rehabilitation outcomes) whereas fear of falling has been studied mostly among seniors (as a risk factor for falls). Extreme fears of pain and falls can lead to avoidance of

therapeutic and beneficial physical activity. This presentation aims to outline new models that we (Hadjistavropoulos, Asmundson and McCreary, 2002) have proposed regarding the contributions of fear of pain and fear of falling in the prediction of pain and falls. Relevant research findings will also be presented.

METHODS: The research methodologies involve assessment of psychological parameters and physical risk factors related to pain and falls. We have used both cross sectional and longitudinal research designs and studied both young adults and seniors.

RESULTS: Confirmatory and regression procedures supported the distinctiveness of fear of pain and fear of falling. Structural equation modelling with longitudinal data demonstrated the role of both fear of pain and fear of falling in the prediction of pain and falls. We also found that, in contrast to community samples, older and younger patients with musculoskeletal injuries are equally likely to experience fear of falling.

CONCLUSIONS: Fear of falling is likely to affect musculoskeletal injury patients regardless of age and it is distinct from (although related to) fear of pain. It is concluded that both these fears should be considered in the clinical assessment of musculoskeletal pain patients.

28B

INVESTIGATIONS OF FEAR OF PAIN AND FEAR OF FALLING AMONG SENIORS WITH AND WITHOUT DEMENTIA

Jaime Williams MA

Doctoral Student in Clinical Psychology, Department of Psychology and Centre on Aging and Health, University of Regina, Regina Saskatchewan

AIMS: The primary aim of this presentation is to outline recent findings from investigations of fear of pain and fear of falling among seniors with and without dementia.

METHODS: The research involving cognitively intact community dwelling seniors was laboratory based, involved the computerized presentation of pain and fall-related stimuli and was designed to assess attentional cognitive biases toward fall and pain-related information. Studies investigating seniors with dementia involved interviews and psychometric data collected from informal caregivers of such patients.

RESULTS: Our findings showed a trend for seniors with high levels of fear of pain to selectively attend to fall-related stimuli (which suggests increased vigilance). Our data involving caregivers of seniors with dementia showed clear evidence of widespread caregiver fears about the possibilities of pain and falls among care-recipients.

CONCLUSIONS: Two main conclusions can be drawn: a) attentional biases for fall-related stimuli among cognitively intact seniors do not appear to be pervasive (but are likely present among those with high levels of fear of pain); and b) caregivers of seniors with dementia demonstrate considerable fears and worries about the possibilities of falls among care-recipients. Such caregivers take a variety of precautions (some of which may hinder beneficial physical activity) to prevent falls. These findings along with their clinical implications will be discussed within the context of recent theoretical work.

28C

CHANGES IN ANXIETY AND BALANCE CONFIDENCE AFFECT BALANCE PERFORMANCE IN YOUNG AND OLDER ADULTS

Mark Carpenter PhD

Canada Research Chair and Assistant Professor, School of Human Kinetics, University of British Columbia, Vancouver, British Columbia

BACKGROUND AND AIMS: Fear of falling is a common element found among older adults and patients with different balance disorders. Although fear of falling has been frequently associated with poor balance performance and increased likelihood of falling, the mechanisms through which factors such as anxiety and balance confidence can influence balance control are not well understood. A series of studies was aimed at determining how changes in anxiety and balance confidence may influence balance performance in young and older adults during different postural tasks.

METHODS: Manipulations of support-surface height and stepping restrictions were used to examine anxiety-related changes in muscular, kinematic and kinetic variables during quiet standing, fall reactions and more clinically relevant postural tasks.

RESULTS: Standing on the edge of a high compared with low surface height induced significant changes in anxiety and balance confidence, as well as changes in postural control strategy. When standing under conditions that increased anxiety and decreased balance confidence, young and older adults adopted a 'stiffening' strategy during quiet stance. The same conditions were associated with increased muscle responses to an unexpected balance perturbation, altered anticipatory postural adjustments during a rise to toes task, and reduced performance during functional reach and one-legged standing tasks.

CONCLUSIONS: The findings highlight the potential for factors, such as anxiety, balance confidence and fear, to contribute to balance control deficits associated with age and disease. Furthermore, new treatment and rehabilitation programs need to be developed that will address both the physiological and psychological aspects of a specific balance disorder.

10:30 AM – WORKSHOP 118
PAIN ASSESSMENT IN VULNERABLE ELDERLY PEOPLE

29

Chair: Lucia Gagliese PhD

CIHR New Investigator, School of Kinesiology and Health Science, York University and Department of Anaesthesia, Behavioural Sciences and Health Research Division, University Health Network, Toronto, Ontario

Speakers: Lucia Gagliese PhD, Michèle Aubin MD MSc FCFP, Wendy Duggleby DSN RN

OVERALL AIMS: As the population ages, the number of elderly people requiring effective and safe pain management will grow. To meet this need, empirically based knowledge about pain assessment in the elderly is needed. This workshop brings together researchers with expertise in various approaches to assessment in the elderly, including self-report, observer ratings and mixed methods. Presentations will focus on surgical inpatients, advanced cancer patients at the end-of-life and those with cognitive impairment who are unable to provide self-report.

Learning Objectives:

1. *Participants will learn about the challenges of assessing pain across the adult life span and in vulnerable elderly people.*
2. *Participants will learn about different approaches to pain assessment and how each approach can be used with patients with special needs.*
3. *Participants will learn about the process of developing and validating different pain assessment strategies for elderly people.*

29A

ASSESSMENT OF POSTOPERATIVE PAIN IN THE ELDERLY

Lucia Gagliese PhD

CIHR New Investigator, School of Kinesiology and Health Science, York University; Department of Anaesthesia, Behavioural Sciences and Health Research Division, University Health Network, Toronto, Ontario

Elderly people make up the largest proportion of surgical patients. However, they are at higher risk than younger patients for unrelieved pain, inadequate analgesia and prolonged recovery. One factor contributing to this may be inadequate assessment of pain in elderly patients. Research into the psychometric properties of self-report measures for the assessment of postoperative pain across the adult lifespan has only recently begun to emerge. This talk will review the special challenges of assessing pain in elderly postoperative patients including the effects of acute opioid administration, recovery from general anaesthesia and the impact of comorbidities. The major focus of the talk will be a discussion of the utility, reliability and validity of some of the most commonly used pain tools for the assessment of pain in younger and older surgical patients, including Numeric Rating Scales, Visual Analogue Scales and the McGill Pain Questionnaire. Evidence-based suggestions for clinical use will be provided.

29B
PAIN ASSESSMENT IN THE ELDERLY WITH DEMENTIA

Michèle Aubin MD MSc FCFP
Research Centre in Geriatrics, Laval University, Québec City, Québec

Chronic pain is frequently found in the elderly, but, unfortunately, it is often underdiagnosed and undertreated. Pain management becomes even more problematic in seniors who have serious limitations in ability to communicate due to the presence of dementia. Undertreatment of pain among this population may be partly due to difficulties in ability to detect their pain. The aim of this presentation is to review the principles and challenges of pain assessment in seniors with dementia. As cognitive impairments progress, these individuals become unable to self-report pain. Health professionals must then rely on observational assessment procedures to detect pain. Different instruments have been developed to systematize observational pain assessment, but few have been well validated or are adapted to busy clinical settings. The Pain Assessment Checklist for Seniors with Limited Ability to Communicate (PACSLAC) has recently been developed and tested for validity. This presentation will review this evidence and will describe data regarding the clinical usefulness of the PACSLAC in long-term care facilities. Systematic pain observational assessment procedures, such as the PACSLAC, are necessary in patients with advanced dementia to counterbalance their inability to self-report their pain.

29C
ASSESSMENT OF ADVANCED CANCER PAIN IN OLDER ADULTS AT THE END OF LIFE USING MIXED METHOD APPROACHES

Wendy Duggleby DSN RN AOCN
College of Nursing, University of Saskatchewan, Saskatoon, Saskatchewan

Advanced cancer pain experienced by older adults at the end of life has many patterns, sites, causes, is both acute and chronic, and requires multiple treatment modalities for effective management. It is also experienced in the context of other symptoms and issues associated with the end of life. Effective management of this complex pain experience relies on the accurate assessment of pain. Evidence suggests that using quantitative and qualitative approaches in the assessment of cancer pain is appropriate for this population. The overall aim of this presentation is to describe the rationale for and the ways mixed method approaches (combining quantitative and qualitative) may be used to assess cancer pain in older adults at the end of life. The learning objectives for this portion of the workshop are that participations will be able to: 1) describe evidence suggesting mixed methods is an appropriate approach for research and practice in this population, 2) discuss ways to use mixed method approaches in research and practice, and 3) analyze benefits and limitations to these approaches. Content will include: a) overview of scientific literature on use of mixed method approaches in older adults with advanced cancer pain, b) description of mixed method approaches, c) presentation of benefits and limitations based on the literature and examples from the author's experience with these approaches, and d) audience discussion of the benefits and limitations.

12:30 PM – PFIZER CANADA INC SYMPOSIUM
NEUROPATHIC PAIN – AN INTERACTIVE APPROACH TO TREATMENT AND MANAGEMENT

30

Speaker: A John Clark MD FRCPC
Director, Chronic Pain Centre, Calgary Health Region and Clinical Professor of Anesthesia, University of Calgary, Calgary, Alberta

SESSION OVERVIEW: This session will include a brief overview of neuropathic pain before reviewing challenging patient cases in an interactive format.

2:00 PM – SYMPOSIUM 119
PAIN AND SLEEP

31

Chair: Saifee Rashiq BM BS MSc (Epid) DA(UK) FRCPC
Associate Professor, Director, Division of Pain Medicine, Department of Anaesthesiology and Pain Medicine, University of Alberta, Edmonton, Alberta
Speakers: Ralph Lydic PhD, Brian Cairns PhD RPh, Lucia Gagliese PhD

31A
NEUROCHEMICAL MODULATION OF SLEEP AND ANALGESIA

Ralph Lydic PhD
Department of Anesthesiology, University of Michigan, Ann Arbor, Michigan, USA

Learning Objectives:

1. *This presentation will review the interactions between acetylcholine, adenosine, hypocretin/orexin, and nitric oxide as endogenous brain molecules modulating nociception and states of arousal.*

Pain disrupts sleep, and sleep disturbances are a common complaint among pain patients. Opioids are effectively and widely used for pain management, but opioids also cause sleep disruption (Shaw et al, Sleep 2005;28:677). Sleep deprivation negatively impacts immune function, neuroendocrine control and quality of life. Many studies have shown that sleep loss also magnifies the subjective experience of pain (Moldofsky, Sleep Med Rev 2001;5:387). The foregoing relationships emphasize the need for developing pharmacological agents that can diminish nociception without disrupting states of sleep and wakefulness. One proven path for rational drug development involves mechanistic studies that are conducted with a translational focus (FitzGerald, Nat Rev 2005;4:815). This presentation will review new data concerning candidate neurotransmitter systems as potential targets for drugs aiming to treat pain without disrupting arousal states. Four endogenous molecules will be considered. 1) Cortical acetylcholine is essential for maintaining wakefulness and cognition, and morphine obtunds wakefulness by decreasing cortical acetylcholine release. 2) Adenosine promotes sleep and diminishes nociception, and opioids significantly decrease levels of adenosine in the basal forebrain. 3) Hypocretin-1 (orexin A) is antinociceptive and increases acetylcholine in pontine reticular formation regions regulating REM sleep. 4) Nitric oxide modulates nociception and is involved in regulating states of sleep and anesthesia. The complex interactions between multiple molecules and brain regions illustrate the challenge for efforts to achieve pharmacological pain management without sleep disruption.

31B
ALTERATIONS OF SLEEP QUALITY BY MEDICATIONS

Brian E Cairns PhD RPh
Faculty of Pharmacy, the University of British Columbia, Vancouver, British Columbia

Learning Objectives:

By the end of this talk:

1. *Participants should be able to describe the effect of select pain medications on sleep architecture.*
2. *Participants will be able to make more informed decisions on the choice of analgesic drugs for patients who are at risk for or suffering from a sleep disorder.*

The purpose of this talk is to provide an overview of the effects of various commonly employed pain medications on sleep architecture. It is apparent that ongoing pain significantly alters sleep architecture and those alterations can increase ongoing pain intensity in an apparent "vicious cycle". While it is assumed that analgesic drugs which decrease pain would help reverse pain-related changes in sleep architecture, the interaction between analgesic agents and pain-related changes in sleep architecture has received relatively little systematic study. Those few studies that have been undertaken have been limited, with a few notable exceptions, to investigation of acute pain in relatively small numbers of subjects. Further, the effect of many analgesic drug classes on sleep and wakefulness remains to be evaluated. Therefore, a second function of this talk is to draw attention to as yet understudied areas of analgesic/sleep interactions with the hope of stimulating new research directions within this field.

31C
PAIN AND SLEEP ACROSS THE LIFESPAN

Lucia Gagliese PhD
School of Kinesiology and Health Sciences, York University; Department of Anaesthesia, University Health Network, Toronto, Ontario

Learning Objectives:
1. *Participants will learn how sleep changes through the lifespan.*
2. *Participants will learn how acute and chronic pain and sleep disturbance impact on well being and quality of life at different ages.*

Age is an important factor in sleep requirements, architecture and disorders. Sleep disturbances are highly prevalent among children, and younger and older adults with acute and chronic pain. In this presentation, age-related variations in the relationship between pain and sleep will be described. In addition, the impact of pain-related sleep disturbance on various aspects of quality of life will be explored. Finally, implications of this research for a lifespan developmental approach to the study of pain and sleep will be considered.

2:00 PM – WORKSHOP 120
LESSONS LEARNED – ITERATIVE DEVELOPMENT ON AN INTERFACULTY PAIN CURRICULUM (IPC) DURING FOUR YEARS OF IMPLEMENTATION

32
Chair: Judith Hunter PT PhD
Department of Physical Therapy, Faculty of Medicine and University of Toronto Centre for the Study of Pain, University of Toronto, Toronto, Ontario
Speakers: Judith Hunter PT PhD, Michael McGillion RN PhD(c), Judy Watt-Watson RN PhD

Learning Objectives:
Participants will:
1. *Gain an understanding of the successes/benefits and challenges of developing a mixed model of uni-, multi- and inter-professional learning opportunities to promote evidence-based collaborative pain management relevant to six different health professions.*
2. *Learn the benefits and challenges of developing a relevant case-study assignment that promotes evidence-based IP collaborative patient-centred pain management.*
3. *Gain an understanding of the benefits and challenges evaluating an Interfaculty Pain curriculum for content and learning.*

32A
DEVELOPING THE IPC MODEL: AN ITERATIVE PROCESS

Judi Hunter PT PhD
Department of Physical Therapy, Faculty of Medicine and University of Toronto Centre for the Study of Pain, University of Toronto, Toronto, Ontario

The development of a teaching model for a pre-licensure IP pain curriculum was the challenge of the UTCSP – IPC faculty planning team; Iterative design and faculty collaboration were essential. This presentation will discuss the challenges of: a) integrating the evidence for best-practice pain management through curriculum design; b) developing goals and objectives for a pain curriculum in an IP context; c) meeting the learning needs of six different health professions; and d) covering content – the balance between large, didactic multi-professional sessions and small interactive inter-professional sessions. Interactive discussion will focus on the application of current IP education learning theories to the development of a pain curriculum.

32B
TEACHING COLLABORATION: THE SMALL-GROUP IP LEARNING SESSIONS

Michael McGillion RN PhD(c)
Faculty of Nursing and University of Toronto Centre for the Study of Pain, University of Toronto, Toronto, Ontario

A unique challenge of the UTCSP-IPC was the creation of a case-study assignment that met the learning needs of all six professions represented in the small IP groups. The ultimate goal of the case-study assignment was the development of a comprehensive pain management plan. This presentation will outline strategies used to develop and implement the small-group IP learning sessions. Key strategies presented will focus on learning activities to a) promote active group learning, and b) assist students to integrate pain curriculum components related to pain mechanisms, assessment and management of pain, unique professional roles and collaborative approaches to pain. These strategies include assigned individual preparation, instructions for self-directed small group facilitation, small group learning activities, discussion questions and small group presentations. The incorporation of student feedback into the implementation of these strategies is ongoing.

32C
EVALUATION METHODS

Judy Watt-Watson RN PhD
Faculty of Nursing and University of Toronto Centre for the Study of Pain, University of Toronto, Toronto, Ontario

Evaluation is crucial in assessing the effectiveness of a program and to ensure ongoing improvement of an educational initiative. This presentation will provide an overview of our evaluation methods, which included pre- and post-tests of students' pain knowledge/beliefs, qualitative and quantitative evaluation of process and content from students, faculty and clinician facilitators. The Comprehensive Care Plans, developed by each inter-professional student team, were also evaluated and contributed to our understanding of students' synthesis of the both the pain focus and the importance of their interprofessional collaboration.

2:00 PM – WORKSHOP 121
THE MANY FACES OF PAIN BEHAVIOUR: COMMUNICATION, PROTECTION AND SURVIVAL

33
Chair: Michael JL Sullivan PhD
Department of Psychology, University of Montreal, Montréal, Québec
Speakers: Kenneth D Craig PhD, Michael Sullivan PhD, Kenneth M Prkachin PhD

OVERVIEW OF SYMPOSIUM OBJECTIVES: Nearly 400 years ago, René Descartes proposed a model of pain perception that characterized pain as a purely physical and 'sensory' phenomenon; a conceptual perspective that continues to be reflected in current models of pain. Conspicuously absent from theoretical discussions on the mechanisms and functions of pain phenomena has been the role of pain behaviour. This symposium will provide an overview of recent research and theory on the behavioural dimensions of the pain system. The symposium will also make a case for construing pain as a multidimensional input-output system that includes behaviour as a central defining feature of the adaptive or survival value of the pain system.

Learning Objectives:
Participants will:
1. *Learn about recent developments in the conceptualization and assessment of pain behaviour in children and adults.*
2. *Be introduced to experimental protocols developed for the study of pain behaviour.*
3. *Learn about ways in which pain behaviour assessment can complement other methods of psychological evaluation.*
4. *Be introduced to issues currently being debated concerning the functional role of pain behaviour.*

33A
SOCIALIZATION OF PAIN COMMUNICATION IN EARLY CHILDHOOD

Kenneth D Craig PhD
Department of Psychology, University of British Columbia, Vancouver, British Columbia

AIM: To examine the dynamic relationship between verbal and nonverbal forms of pain communication in the first years of life.
METHODS: This presentation will summarize the results of recent studies examining children's acquisition of pain language and the relation between pain language and other dimensions of pain expression.
RESULTS: Newborn infants rely on a limited repertoire of behavioural strategies to communicate their pain. These typically include a variety of bodily movements, facial displays and cries. In the second year of life, the emergence of language dramatically expands the child's communication repertoire. The study of early language use to communicate the pain experience of children can provide useful insights into the phenomenology of the pain experience of young children, the cognitive and emotional correlates of pain, and the communicative dimensions of pain experience. A developmental perspective on the relations between linguistic and behavioural dimensions of pain expression can also elucidate the critical social forces that influence when, how and to whom pain will be expressed.
CONCLUSIONS: Discussion addresses issues concerning the developmental aspects of control or censorship of pain expression. Discussion also addresses how variations in the repertoire of pain communication strategies impact on observers' ability to accurately infer the nature of the child's pain experience.

33B
COMMUNICATION GOALS ASSOCIATED WITH THE DISPLAY OF PAIN BEHAVIOUR

Michael JL Sullivan PhD
Department of Psychology, University of Montreal, Montréal, Québec

AIM: To examine the communication functions of pain behaviour.
METHODS: This presentation will summarize recent findings from our laboratory addressing the relation between communication goals and the display of pain behaviour. Studies examine the influence of the experimental manipulation of communication context on pain behaviour and the degree to which individuals are aware of what they intend to communicate through their pain behaviour.
RESULTS: The term 'pain behaviour' is used to describe the various overt displays of distress and disability that might accompany pain experience. Little is currently known about the relation between communication goals and the expression of pain behaviour. Although there is intuitive appeal to the notion that pain behaviours serve a communicative function, few empirical investigations have provided unambiguous evidence that specific communication goals indeed underlie the expression of pain behaviour. The fact that observers make inferences about the internal state or limitations of an individual based on pain behaviour does not necessarily imply that the goal of that individual was to communicate his or her pain experience.
CONCLUSIONS: Discussion will address questions concerning the conscious and unconscious determinants of pain behaviour.

33C
A FUNCTIONAL PERSPECTIVE ON THE NATURE OF PAIN BEHAVIOUR

Kenneth M Prkachin PhD
Department of Psychology, University of Northern British Columbia, Vancouver, British Columbia

AIM: To examine the multiple functions of pain behaviour.
METHODS: This presentation will provide evidence of the differentiated nature of pain behaviour and highlight some of the pitfalls involved in interpretation of pain behaviours.
RESULTS: The concept of pain behaviour subsumes several phenomena. Traditionally, the differences among these phenomena have been ignored in favour of the notion that they are defined by the communication of information about pain. This failure to differentiate has hindered understanding of the determinants of pain behaviours and has led to unfortunate interpretive practices among clinicians with a stake in pain. In the absence of empirical evidence concerning the meaning or significance of different behaviours associated with pain, clinicians have relied on their intuitive inferences. In the domain of pain interventions, intuition-based practice has led to the frequent utilization of terms such as 'functional overlay', or 'symptom magnification'. These terms are often pejorative in nature and more often than not impede, as oppose to facilitate, the implementation of appropriate interventions.
CONCLUSIONS: Different dimensions of pain behaviour serve different functions, they are influenced by different internal and external contingencies, they have different correlates, and respond differentially to treatment interventions.

2:00 PM – WORKSHOP 122
ENHANCING ACCESS TO QUALITY CHRONIC PAIN MANAGEMENT SERVICES IN AN INTEGRATED HEALTH SYSTEM

34

Chair: Mary E Lynch MD FRCPC
Department of Psychiatry, Dalhousie University; Queen Elizabeth II Heath Sciences Centre, Halifax, Nova Scotia
Speaker: Valerie Wiebe BN MN
Director Regional Pain Program, Calgary Health Region, Calgary, Alberta
***Paul Taenzer PhD, Pain Specialist, Calgary Health Region Chronic Pain Centre**
***Ted Braun MD, Medical Director, Regional Pain Program, Calgary Health Region**

Learning Objectives:
Participants will:
1. *Be familiar with the redesign of services to enhance access and to better support community providers.*
2. *Be familiar with the processes to integrate chronic pain into the existing infrastructure of the Chronic Disease Management program.*

AIM: To report on system wide initiatives underway in the Calgary Health Region aimed at enhancing access to quality chronic pain services.
METHOD: The role of the Calgary Health Region's Regional Pain Program is to facilitate coordinated, integrated quality pain services across the continuum. A comprehensive planning process resulted in a strategic plan to enhance access to quality, evidence based pain services system wide. Implementation of specific initiatives is underway.
RESULTS: Initiatives in progress include the 1) redesign of services in the Chronic Pain Centre to better support community providers, the 2) integration of chronic pain as a specific disease entity into the Chronic Disease Management initiative and the 3) implementation of an educational strategy for providers.
CONCLUSIONS: Collaboration between providers in primary care, secondary and tertiary care provides opportunities for improving access. Innovative educational strategies further enhance access to quality chronic pain services.
*Co-authors not presenting during the workshop.

POSTERS PRESENTED ON FRIDAY, JUNE 16, 2006

P-1

A RANDOMIZED, DOUBLE-BLIND, CROSSOVER COMPARISON OF THE EFFICACY AND SAFETY OF ORAL CONTROLLED RELEASE TRAMADOL WITH PLACEBO IN PATIENTS WITH PAINFUL OSTEOARTHRITIS

Andre Beaulieu MD[1]*, Denis Callaghan MD[2], William O'Mahony MD[3], Carter Thorne MD[4], John Sibley MD[5], John Bartlett MD[6], Richard Knight MD[7], Gunnar Kraag MD[3], Ronald Akhras MD[8], John Eisenhoffer MD[9], Paula Piraino PhD[9], Zoltan Harsanyi MBA[9], Andrew C Darke PhD[9]*

[1]Centre de Rheumatologie St-Louis, Ste-Foy, Québec; [2]Hamilton; [3]Corunna Medical Research Centre, Corunna; The Ottawa Hospital, Ottawa, Ontario; [4]Ultra-Med Inc, Pointe-Claire, Quebec; [5]Royal University Hospital, Saskatoon, Saskatchewan; [6]London Road Diagnostic and Medical Centre, Sarnia; [7]The Arthritis Program Research Group Inc, Newmarket, Ontario; [8]Centre Médicale Acadie, Montréal, Québec; [9]Purdue Pharma, Pickering, Ontario

Patients with moderate or greater osteoarthritis pain were evaluated for efficacy, safety and quality of life while receiving CR tramadol (Zytram XL®) or placebo. Patients underwent washout from all analgesics 2 to 7 days before randomization to 150 mg daily of CR tramadol or placebo, and titrated to effect and tolerability weekly to 200 mg, 300 mg or to a maximum of 400 mg daily. After 4 weeks of treatment patients were crossed-over to the alternative treatment for an additional 4 weeks. Acetaminophen, 325 mg to 650 mg q4-6h prn was provided as rescue. One hundred patients were randomized and 77 were evaluable for efficacy (36 men, 41 women, mean age 59.4±9.6 years). CR tramadol resulted in significantly lower (P=0.0009) mean daily pain (37.4±23.9 vs 45.1±24.3; VAS). WOMAC subscale scores for pain (189.0±105.0 vs 230.0±115.4; P=0.0001) and physical function (632.4.0±361.3 vs 727.4±383.4; P=0.0205) were also significantly better with CR tramadol than with placebo, although stiffness was not (P=0.4093). The total pain and disability (22.8±14.5 vs 27.2±14.8; P=0.0004), and overall pain and sleep (104.7±98.0 vs 141.0±108.2; P=0.0005) scores were significantly lower for CR tramadol. SF-36 scores were also significantly better during CR tramadol treatment for the pain index (38.8±10.8 vs 35.6±9.0; P=0.0100), general health perception (46.5±11.2 vs 44.4±11.6; P=0.0262), vitality (43.1±13.2 vs 40.2±13.7; P=0.0255) and overall physical component score (40.8±8.9 vs 37.8±7.7; P=0.0002). CR tramadol treatment was preferred by 55.8% of patients (P=0.0005) compared with 20.8 % and 23.4% of patients that chose placebo or had no preference, respectively. CR tramadol is effective for the management of painful osteoarthritis.

Acknowledgement: This research was supported by Purdue Pharma, Canada.

P-2

A RANDOMIZED CONTROLLED STUDY OF SATIVEX, A CANNABIS-BASED MEDICINE, IN CENTRAL NEUROPATHIC PAIN DUE TO BRACHIAL PLEXUS AVULSION

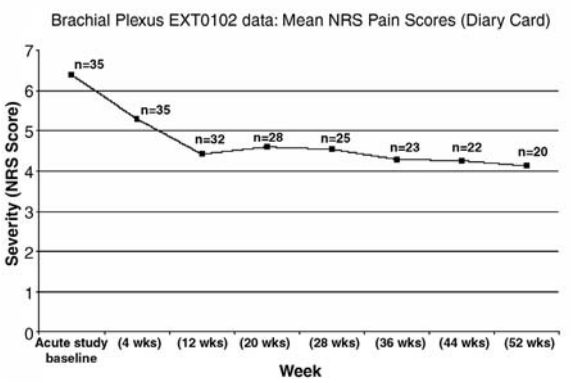
Berman JS MD[1], Bosworth TR BSc[2]

[1]Royal National Orthopaedic Hospital, Brockley Hill, Stanmore, Middlesex; [2]GW Pharma Ltd, Porton Down Science Park, Salisbury, United Kingdom

AIM: To assess the efficacy and tolerability of cannabis-based medicine (CBM) compared with placebo in relieving central neuropathic pain (CNP) due to brachial plexus avulsion injury (BPAI).

METHODS: The efficacy and tolerability of Sativex, a whole plant CBM containing Δ-9 tetrahydrocannabinol (THC) and cannabidiol (CBD), was investigated in a randomized, double-blind, crossover study of 48 BPAI patients with CNP. Each oromucosal spray of Sativex delivered 2.7 mg THC and 2.5 mg CBD, and was compared with placebo and with a CBM delivering 2.7 mg THC only (THC-CBM). During each of the three crossover periods, blinded medication was self-titrated and taken for two weeks; all existing analgesics were continued. At the end of the crossover study, patients were presented with the choice to enter an open-label long-term extension study where long-term safety and efficacy data was collected.

RESULTS: Forty-five patients completed the crossover study. Significant improvements in CNP were shown on the 11-point numerical rating scale (NRS), for both Sativex (P<0.005), and for THC-CBM (P<0.002). Thirty-seven patients (82%) entered the extension study. The mean duration of treatment at study end was 519 days, and 18 patients had taken more than 730 days of continuous treatment. Although 20 patients withdrew, one did so for adverse events and only three for lack of efficacy. Of the patients who completed the study, 94% felt they were still deriving benefit from the study medication, on a stable dose of medication.



CONCLUSION: CNP due to BPAI is difficult to treat but responds to Sativex. A meaningful proportion of patients derive benefit for over two years without troublesome side effects.

P-3

DEVELOPMENT OF A MODULAR PATIENT TRIAGE QUESTIONNAIRE FOR THE CHRONIC PAIN CENTRE, CALGARY HEALTH REGION

Alexander J Clark MD FRCPC, Colleen Miller PhD, Geoffrey Schultz PhD, Paul Taenzer PhD, Christopher Spanswick MBChB FRCA

Chronic Pain Centre, Calgary Health Region, Calgary, Alberta

AIM: To develop a comprehensive, interdisciplinary data collection questionnaire for triaging patients to clinical services and for outcome evaluation using a flexible, modular approach. Secondary aims were to: facilitate common data collection across Canadian pain centres, incorporate existing information, identify patient issues and be computer scanable for ease of data entry.

METHODS: An interdisciplinary committee was formed. Questionnaires from Canada (Calgary, Alberta and Halifax, Nova Scotia), the United States (Wisconsin) and the United Kingdom (Salford) were reviewed. A literature review of valid standard assessment and outcome measures (ie, CESDR, BPI, SF36v2) was undertaken. National pain database developers were consulted to ensure commonalities. Input was solicited from all stakeholders and successive versions were circulated for comment and revision. Overlap and outlier questions were negotiated with stakeholders and the final version will be trialed for patient suitability.

RESULTS: A modular triage package consisting of a series of questionnaires common to all teams providing care and specific to the NMSK, pelvic and headache teams has been developed. The questionnaires can be scanned for data management and audit. Computerized scoring provides summaries of critical items and reports can be tailored to individual and/or team care planning and the development of decision support algorithms.

CONCLUSION: A diverse, interdisciplinary care team can develop modular triage questionnaires that meet the perceived needs of clinicians and program evaluators and targets the needs of a diverse patient population and does not focus on "medical" information alone. This is an inclusive model for health care providers and a holistic model from the patient's point-of-view.

P-4
COPING WITH FIBROMYALGIA, IS IT REALLY POSSIBLE? – RESULTS OF ONE-YEAR FOLLOW-UP AFTER INTERACTIONAL SCHOOL OF FIBROMYALGIA

Juliana Barcellos de Souza* MSc[1], Edith Normand[1], Nancy Julien MSc[2], Michelle Provencher MEd[2], Jacques Charest PhD[2], Serge Marchand PhD[1,2]
[1]Université de Sherbrooke; [2]Université du Québec en Abitibi-Témiscamingue, Quebec; *Student with a CAPES Scholarship (Brazilian Governmental Foundation)

Fibromyalgia (FM) is characterized by complex clinical manifestations including diffuse and persistent pain. Various treatments have been studied, but with inconclusive results. Our objective was to apply the principle of our Interactional Low Back Pain School (Charest et al, 1996) program (creating a therapeutic alliance to facilitate the learning and application of strategies for self-management of symptoms), to FM patients, thus developing the Interactional School of Fibromyalgia (ISF). The ISF consists of nine group sessions spread over a period of 11 weeks. The ISF considers the participants as experts of their FM symptoms and addresses nine different themes aimed at improving strategies for coping with FM symptoms. The participants (15 women with FM) were evaluated before, immediately after, 16 weeks and one year after ISF. Dependent variables were: pressure pain threshold of tender points, fibromyalgia impact questionnaire (FIQ), multidimensional pain inventory (MPI), ratings of clinical pain and physical energy, physical (PSF36) and mental (MSF36) quality of life, and self-management of FM symptoms (SMFM). At one-year follow-up the results were: reductions: 57% for pressure pain threshold of tender points ($P<0.02$), 36% for FIQ ($P<0.01$), 30% for MPI ($P<0.05$), 25% for clinical pain ($P<0.05$); increases: 30% for physical energy ratings ($P<0.01$), 21% for PSF36 ($P<0.02$), 16% for MSF36 (nonsignificant) and 43% for SMFM ($P<0.01$). These results corroborate the importance of the therapeutic alliance (the development of a collaborative relationship) between the individual members and the group therapists in increasing FM self-management strategies.

P-5
THE ROLE OF PAIN ANXIETY AND HYPERVIGILANCE IN VULVAR PAIN

Geneviève Desrochers BSc[1], Sophie Bergeron PhD[1], Samir Khalifé MD[2], Marie-Josée Dupuis MD[3], Mélanie Jodoin BSc[1], G Mailloux BA[1]
[1]Université du Québec à Montréal (UQAM); [2]Montreal Jewish General Hospital; [3]Centre Hospitalier de l'Université de Montréal – Pavillon Saint-Luc, Montreal, Quebec

OBJECTIVE: The present study aimed to determine whether pain anxiety and hypervigilance could predict changes in levels of pain during intercourse and in global sexual functioning in women with vulvar vestibulitis syndrome.

METHODOLOGY: Data were obtained from 45 participants who took part in a gynecological examination, a structured interview and standardized questionnaires focusing on pain anxiety, hypervigilance, state-trait anxiety, catastrophization and pain during intercourse.

RESULTS: The results of hierarchical regression analyses revealed that pain anxiety ($F=3.96$; $P=0.05$) and hypervigilance ($F=4.15$; $P=0.05$) predicted the intensity of pain during intercourse. Higher levels of pain anxiety and hypervigilance to pain were both associated with more intense pain during intercourse. Results also showed that these factors predicted the severity of pain symptoms reported by these women even if the effect of state-trait anxiety and catastrophization was controlled, ($F=5.95$; $P<0.05$) for pain anxiety and ($F=5.78$; $P<0.05$) for hypervigilance. Therefore, higher levels of these variables were both related to more severe pain. Moreover, only cognitive pain anxiety was a predictor of global sexual functioning after controlling for catastrophization ($F=4.61$; $P<0.05$). Higher cognitive pain anxiety was related to increased sexual impairment. Finally, it was found that state anxiety mediated this relation.

CONCLUSION: These results suggest that affective factors (pain anxiety and hypervigilance) are good predictors of pain intensity in women with vulvar vestibulitis syndrome. Finally, these results are consistent with a cognitive-behavioural model of chronic pain and they may be important components to consider for pain management with this population of women.

P-6
CHRONIC PAIN'S EFFECTS ON COGNITIVE FUNCTION AND QUALITY OF LIFE

Bruce D Dick PhD RPsych, Saifudin Rashiq MB MSc(Epid) FRCPC
Department of Anesthesiology and Pain Medicine, University of Alberta and Multidisciplinary Pain Centre, University of Alberta Hospital, Edmonton, Alberta

AIMS: First, we investigated the effect of attentional disruption by chronic pain on quality of life. Second, we explored whether short-term pain relief improved performance on attentional tasks.

METHODS: Twenty-three participants (M age 48.04, SD 10.38; range 29 to 73 years; 17 women) with chronic pain for six months or more took part in this study. Participants who were scheduled to receive an invasive analgesic procedure (eg, epidural injection, sympathetic blockade or somatic nerve blockade) as part of their ongoing treatment were recruited. A variety of demographic and pain-related factors were recorded including quality of life (SF-36), pain intensity (Numerical Rating Scale) and qualities of pain (McGill Pain Questionnaire). Participants' cognitive function in the areas of attention and working memory were assessed using the Test of Everyday Attention (TEA) on separate days before and after participants' medical procedures.

RESULTS: We found that individuals reporting higher levels of pain tended to have poorer overall attentional function on the TEA. Participants with poorer overall scores on the TEA reported poorer quality of life. Short-term analgesic procedures reduced pain intensity but did not improve TEA scores.

CONCLUSIONS: It appears that significant but short-term analgesia does not free up attentional resources utilized during cognitive tasks. Chronic pain negatively impacted cognitive function and cognitive disruption was associated with poorer quality of life in these participants. Future studies may be warranted that investigate whether attentional training will help chronic pain patients improve their cognitive function and thereby their quality of life.

P-7
NOCICEPTIVE FLEXION REFLEX THRESHOLD AND PARENTAL HISTORY OF HYPERTENSION PREDICT LONGITUDINAL CHANGES IN BLOOD PRESSURE

Christopher France PhD[1], Mustafa al'Absi PhD[2], Janis France PhD[1], Angie Harju BS[2], Lorentz Wittmers MD PhD[2]
[1]Ohio University, Athens, Ohio; [2]University of Minnesota School of Medicine, Duluth, Minnesota

This study examined an objective measure of nociceptive responding, the nociceptive flexion reflex (NFR) threshold, as a predictor of longitudinal change in blood pressure in individuals with and without a parental history of hypertension. Eighty-three men and women completed a standardized NFR threshold assessment, wherein electromyographic activity was recorded from the biceps femoris muscle during repeated ascending and descending trials of electrocutaneous sural nerve stimulation. Parental history of hypertension was confirmed via written communication with biological parents. Participant seated, resting blood pressure levels were measured annually for four years. Regression analyses revealed that the change in systolic blood pressure over the three-year follow-up was predicted by a combination of initial (ie, year 1) resting systolic blood pressure and the interaction between NFR threshold and parental history of hypertension ($R^2=0.47$, $F[2,80]=11.46$, $P<0.000$). Specifically, after controlling for initial blood pressure, higher NFR thresholds were associated with smaller increases in systolic blood pressure in participants with a parental history of hypertension, whereas the reverse was true for those without a parental history of hypertension. These findings suggest that individual differences in nociceptive responding differentially predict blood pressure increases, and possibly risk for hypertension, in those with and without a family history of hypertension.

P-8

FEAR AVOIDANCE BELIEFS IN CHRONIC PAIN PATIENTS: A PSYCHOMETRIC ASSESSMENT OF THE ORIGINAL TAMPA SCALE FOR KINESOPHOBIA (TSK)

Douglas J French PhD[1], Christopher R France PhD[2], François Vigneau PhD[1], Julie A French MAP¨s[1], R Thomas Evans MD[3]
[1]École de psychologie, Université de Moncton, Moncton, New Brunswick; [2]Department of Psychology, Ohio University, Athens; The Atlantic Pain Clinic, Moncton, New Brunswick

The Tampa Scale for Kinesophobia (TSK) was developed to measure fear of movement/(re)injury in chronic pain patients. Although studies of the Dutch adaptation of the TSK have identified fear of movement/(re)injury as an important predictor of chronic pain, pain-related avoidance behaviour and disability, surprisingly little data on the psychometric properties of the original English version of the TSK are available. The present study examined the reliability, construct validity and factor structure of the TSK in a sample of chronic pain patients (n=200) presenting for an interdisciplinary functional restoration program. Consistent with prior evaluations of the Dutch version of the TSK, the present findings indicate that the TSK possesses a high degree of internal consistency and is positively associated with related measures of fear-avoidance beliefs, pain catastrophizing, pain-related disability and general negative affect. The TSK was not related to individual differences in physical performance testing as assessed using standardized treadmill and lifting tasks. Confirmatory factor analyses suggest that the TSK is best characterized by a three-factor trait method model that includes all 17 of the original scale items and takes into account the distinction between positively and negatively keyed items. The results of the present study provide important details regarding the psychometric properties of the original English version of the TSK and suggest that it may be unnecessary to remove the negatively keyed items in an attempt to improve scale validity.

P-9

MEASURING PAIN-RELATED DISABILITY: A COMPARATIVE ANALYSIS OF COMPETING QUESTIONNAIRES

Douglas J French PhD[1], Julie A French MAPs[1], François Vigneau PhD[1], R Thomas Evans MD[2]
[1]École de psychologie, Université de Moncton; [2]The Atlantic Pain Clinic, Moncton, New Brunswick

A large number of self-report questionnaires have been developed to assess pain-related disability. Recent studies have highlighted the need for direct psychometric comparisons to guide both clinicians and researchers faced with choosing an appropriate instrument. The present study examined and compared the reliability, construct validity and factor structure of the Oswestry Low Back Pain Disability Questionnaire (OSW), the Million Visual Analog Scale (MVAS) and the Quebec Back Pain Disability Scale (QBDS) in a sample of chronic pain patients (n=200) presenting for an interdisciplinary functional restoration program. The present findings indicate that the all three disability measures possess a high degree of internal consistency. All questionnaires were positively associated with measures of fear-avoidance beliefs, pain catastrophizing and general negative affect. The QBDS most strongly related to the physical functioning scale of the SF-36 and a standardized maximal lifting task. Factor analyses replicated four factors of the original 7-factor solution for the QBDS but failed to replicate the published 2-factor structure of the OSW suggesting that the dimensionality of the latter measure remains unclear. There were no previous factor-analytic studies of the MVAS; however, a 3-factor solution was obtained in the present study comprising a unique pain-related factor, which sets this measure apart from the other disability scales tested. While all questionnaires examined may be considered psychometrically sound, the QBDS demonstrated generally higher correlations with the criterion measures and has the advantage of having validated versions in both English and French making it particularly well-suited for use in a Canadian population.

P-10

PAIN THRESHOLD DOES NOT VARY ACROSS DIFFERENT MODALITIES OF NOCICEPTIVE STIMULATION

L Gagliese PhD[1,3], W Ellis RN[3], J Katz PhD[2,3], D Snijedelaar MD[4], G Koren MD[5], V Chan MD[3]
[1]Kinesiology and Health Science, York University; [2]Department Psychology, York University, Toronto, Ontario; [3]Department of Anaesthesia and Pain Management, University Health Network, Toronto, Ontario; [4]Department of Anaesthesia, University Medical Centre, Nijmegen, The Netherlands; [5]Department of Pharmacology, Hospital for Sick Children, Toronto, Ontario

AIM: Variability in pain threshold across different modalities of stimulation remains controversial. Differences that exist may be due not only to processing of nocioceptive stimuli but also to psychological and demographic factors. We compared pain thresholds for heat, cold, pressure and mechanical stimuli and assessed the contribution of age, anxiety, response style and pain expectations.

METHODS: Male patients (n=18; age 62.44±4.9), recruited from the University Health Network, underwent Quantitative Sensory Testing (QST) of thermal pain threshold measured using a thermode stimulator (TSAII, Medoc); pressure threshold measured in kg/cm^2 (Algometer, Somedic); and mechanical threshold (von Frey hair, 0.12 mm to 1 mm diameter, Somedic). Patients completed the mental health inventory (MHI), a pain response style scale, measuring perceived intensity of painful procedures, and pain expectations on an 11-point Numeric Rating Scale (NRS).

RESULTS: Mean anxiety score was 68.60±13.17 and mean expected post-operative pain intensity was 6.8±2.8. Mean pain response style (5.3±2.17) was not correlated with pain expectation, anxiety or age. Threshold values (average of 3 trials) were converted to standardized scores. ANCOVA with modality (heat, cold, pressure and mechanical) as the repeated measure, and age, anxiety and expectations as the covariates was carried out. Effect of modality and covariates were not significant (all P≥0.50).

CONCLUSION: These preliminary data suggest that pain threshold is highly consistent across four modalities of stimulation. Future research will examine changes in pain sensitivity for each modality in response to acute surgical trauma and throughout recovery.

P-11

VALIDITY OF THE BRIEF PAIN INVENTORY FOR CANCER PAIN ASSESSMENT ACROSS AGE GROUPS

Lucia Gagliese PhD[1,2], Andrew Walsh MA[2], Camilla Zimmermann MD[2], Jennifer Jones PhD[2], Anne Rydall MA[2], Gary Rodin MD[2]
[1]Kinesiology and Health Science, York University; Anesthesia and Pain Management, University Health Network; [2]Psychosocial Oncology and Palliative Care, University Health Network, Toronto, Ontario

AIM: The Brief Pain Inventory (BPI), a widely used measure of cancer pain intensity and interference, has been well validated for younger patients. However, its psychometric properties for use with elderly patients have not been documented. This analysis compares the validity and reliability of the BPI in midlife and elderly cancer patients.

METHODS: Outpatients with stage IV gastrointestinal or stage III/IV lung cancer were recruited from Princess Margaret Hospital, Toronto, Ontario. Patients completed the BPI as part of a large longitudinal study of physical and psychological distress in cancer patients.

RESULTS: Patients were divided into a midlife (n=75; M=52.6, SD=6.5) and older (n=75; M=69.1, SD=6.2) group based on a median split. Reliability was excellent and similar in both groups. Cronbach's alpha for the intensity ratings was 0.89 in older and 0.91 in midlife patients. For the Interference subscale, Cronbach's alpha was 0.91 in older and 0.96 in midlife patients. Validity was examined using principal component analysis with a promax rotation. For each group, a 2-factor solution was identified which explained 82% of the variance in the midlife group and 70% in the elderly group. Although the same items loaded on each factor across age groups, inconsistent item loadings were evident for 'worst' pain intensity, and interference with 'sleep', 'mood' and 'life enjoyment'.

CONCLUSION: There may be age-related patterns in the factor structure of the BPI. Further research is needed to examine this possibility and to identify the most effective pain assessment tool for use across the lifespan.

P-12
VALIDATION OF A FRENCH-CANADIAN VERSION OF THE PAIN DISABILITY INDEX

Nathalie Gauthier BSc[1], Pascal Thibault BSc[2], Heather Adams BSW[3], Ève Montpetit OT[4], Michael JL Sullivan PhD[5]

[1]Department of Psychology, Université de Montréal; [2]Department of Psychology, Université du Québec à Montréal, Université de Montréal; [3]Department of Psychology, Université de Montréal; [4]AAPP Clinic; [5]Department of Psychology, Université de Montréal, Montréal, Québec

OBJECTIVE: To examine the factor structure, internal consistency and construct validity of a French translation of the Pain Disability Index (PDI) in a population of chronic pain patients.

METHODS: A total of 151 francophone patients completed the PDI and other pain-related questionnaires. In addition to filling the questionnaires, one-third of the participants performed a lifting task designed to elicit pain behaviours.

RESULTS: The results support a two-factor solution for the PDI corresponding to voluntary activities (eg, occupational, recreational and social) and obligatory activities (eg, activities of daily living, eating and sleeping) like the original English version. Internal consistency of the seven-item factor as assessed by Cronbach's alpha was 0.84. Item-total correlations ranged from 0.42 to 0.71. Regarding construct validity, results indicated that the PDI was significantly related to pain intensity, pain catastrophizing, fear of pain and re-injury, depressive symptoms and different aspects of pain behaviours.

CONCLUSIONS: The French-Canadian version of the PDI has acceptable validity and internal consistency.

P-13
RELATIONSHIPS BETWEEN UNMITIGATED COMMUNION AND UNPAID DOMESTIC WORKLOAD AND ADJUSTMENT TO CHRONIC PAIN

Heather Getty PhD, Allan Shapiro PhD, Pat Morley-Forster MD, Robert Teasell MD, Manfred Harth MD, Janet Pope MD

Research suggests that gender differences in the development of and adjustment to chronic pain conditions are largely influenced by psychosocial variables. The present study examined the influence of the gender role-related variables of unmitigated communion and unpaid domestic workload on adjustment to chronic pain conditions. Unmitigated communion, or the tendency to put the needs and concerns of others ahead of one's own, has been associated with poor adjustment in normal samples, and with poor adherence to medical advice and poor adjustment in medical samples. In addition, women's unpaid domestic workload has been increasingly highlighted in recent theories of the development of chronic upper extremity pain. Four-hundred and fifty-five outpatients from physical medicine and rehabilitation, anaesthesia and rheumatology pain clinics completed questionnaires assessing unmitigated communion, unpaid domestic workload, pacing of physical activity and adjustment. Results show that unmitigated communion and number of children under the age of 14 (one aspect of unpaid domestic workload) are related to poor emotional adjustment in the context of chronic pain. These variables are also linked to poor pacing of physical activity, something that is central to clinical pain management programs. In addition, these variables also moderate relationships between a variety of risk factors and measures of pain intensity and pain-related disability. Clinical implications of these findings are discussed.

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Information: Hospital/Institution Affiliation: St Joseph's Health Care London, Allan.Shapiro@sjhc.london.on.ca, telephone 519-646-6000 ext 61047 or 519-439-8861

P-14
DISTINCT PATIENT SUBGROUPS AT RISK FOR DYSFUNCTION SECONDARY TO PAIN: REPLICATION IN A RHEUMATOID ARTHRITIS SAMPLE

H Getty PhD, A Shapiro PhD, P Morley-Forster MD, M Harth MD, J Pope MD, R Teasell MD

A small percentage of patients with persistent pain, those most disabled and distressed, account for an unusually large percentage of costs (medical, disability) associated with pain. Our previous research with outpatients from rehabilitation and anesthesia clinics identified, on the basis of personality traits, distinct patient subgroups at risk for dysfunction secondary to pain. The present study aimed to replicate these findings in a very different pain sample consisting of outpatients with rheumatoid arthritis. Two-hundred and forty-two individuals (mean age 58, 77% female, mean duration of pain 12 years) were asked to complete questionnaires assessing pain and personality variables. Findings from the heterogeneous pain sample were replicated in this sample. Cluster analysis identified an "obsessive-perfectionistic" cluster 1, distinguished by high scores on traits descriptive of the obsessive personality and perfectionism/type A; a "pain-anxious" cluster 2 characterized by high scores on fear of and emotional reactivity to pain; and a "low" cluster 3, which scored lower than clusters 1 and 2 on all personality dimensions. Cluster 1 and 2 patients reported greater dysfunction secondary to pain than cluster 3 patients, even when physicians' assessments of RA disease activity were controlled. While more research is needed, results highlight the need to assess and intervene with pain patients at greatest risk for dysfunction due to pain.

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Information: Hospital/Institution Affiliation: St Joseph's Health Care London, Allan.Shapiro@sjhc.london.on.ca, telephone 519-646-6000 ext 61047 or 519-439-8861

P-15
IMPROVING PAIN MANAGEMENT IN LONG-TERM CARE FOR VETERANS: ON COMMON GROUND

Maggie Gibson PhD[1], Maryse Savoie RN MScN[2], Sylvie Le May PhD[3], M Gail Woodbury PhD[4], Maureen Gorman PhD[5], Jan Gunness RN/BN RPN MSA[6], Sarah Brown MN[6], Nicole Tupper CNS[7], Doug Wilson[7]

[1]St Joseph's Health Care, London, Ontario; [2]St Anne's Hospital, Ste-Anne-de-Bellevue, Quebec; [3]University of Montreal, Quebec; [4]Lawson Health Research Institute, London, Ontario; [5]Queen Elizabeth II Health Sciences Centre, Halifax, Nova Scotia; [6]Deer Lodge Centre, Winnipeg, Manitoba; [7]Veterans Health Unit, Fredericton, New Brunswick

AIM: Inadequately controlled pain is a source of excess disability and undue suffering for older adults. This multi-site collaboration will advance clinical knowledge, values, beliefs and behaviours to improve pain control for veterans and other older adults in long-term care facilities.

METHODS: (a) Care-provider focus groups established knowledge, values and beliefs about pain on one site (Savoie and Le May, 2005); (b) A survey was developed based on these findings; (c) Surveys were administered on four other sites (N=87); (d) Pain assessments were completed as part of a longitudinal study on one site (Gibson et al, 2005); (e) Assessments were repeated on the other sites (N=21).

RESULTS: Focus group findings were replicated in the survey results; pain profiles were similar across sites (modal response: discomforting, somatic pain, aching/sharp, responsive to medication, exacerbated by physical factors; onset in later life).

CONCLUSIONS: The common baseline and demonstrated collaboration will support the development of a multi-site project to address pain management in this sector.

P-16
CHANGING PRACTICE IN LONG-TERM CARE FACILITIES: A DEMONSTRATION PROJECT USING THE "READINESS FOR CHANGE" MODEL

Maggie Gibson PhD[1,2,3], Kim Hay RN[1], M Gail Woodbury PhD[2,3]
[1]St Joseph's Health Care; [2]Lawson Health Research Institute; [3]University of Western Ontario, London, Ontario

AIM: To align pain assessment and management practices with best practice recommendations in three programs that provide combined residential care and health care for older adults (long-term care, chronic care and veterans care), using the "Readiness for Change" model (Prochaska and DiClemente, 1998).

METHODS: This two-year project supported a one-half-time resource nurse who worked with stakeholders in each program (3 programs; 9 care delivery units; 781 beds) to assess and remediate gaps between current practice patterns and best practice recommendations. The resource nurse utilized the three organizing constructs of the Readiness for Change model (stages, processes and levels of change) to facilitate the implementation of sustainable change.

RESULTS: 1) Chart audit indicated increased congruence between recommended and documented pain assessment and management practices. 2) On average, the resource nurse spent 3.6 hours/month/unit in direct contact with care providers (focus groups, inservices, planning sessions and teachable moments), representing approximately $100 per unit per month in staff time.

CONCLUSIONS: The project outcome is an educational toolkit that can be used to support other best practice-focused change initiatives in facilities that care for older adults.

Acknowledgements: Project funding was provided in part by the New St Joseph's Health Care Foundation

P-17
LUMBAR ZYGAPOPHYSIAL JOINT RADIOFREQUENCY DENERVATION – TARGETING THE BEST PRACTICE

Michael Gofeld MD FIPP, Gil Faclier MD FRCPC
Pain Management Program, Department of Anesthesia, Sunnybrook and Women's College Health Sciences, Toronto, Ontario

AIM: To describe simple and useful technique of lumbar zygapophysial joint denervation.

METHODS: Staged presentation of the technique.

RESULTS: Practical recommendations manual.

CONCLUSIONS: Adherence to uniform anatomically proven technique may help practitioners and become the standard of care.

Zygapophysial joint radiofrequency denervation is one of the most frequently performed procedures for chronic low back pain. Several studies have shown considerable efficacy of the procedure.

However, none of controlled trials adhered to surgical anatomy of applied nerve supply.

Three primary techniques have been utilized for years.

1. *European technique infers* straight electrode placing under "tunnel fluoroscopic view" to reach the target point perpendicular to its pathway. Therefore, lesion size is not adequate.
2. *North American technique* utilizes tangential insertion of a curve-tipped electrode parallel to nerves under uniplanar fluoroscopic view. It mainly depends on the operator's experience of three-dimensional depth and direction.
3. *Australian technique* utilizes an anatomical approach, based on the concept of a "declined view". This technique is yet to be described in detail.

The combination of the accumulated data fulfills all provisos for a successful lumbar facet radiofrequency denervation. We believe the technique employing "tunnel vision" with anatomically proven electrode placement and the utilization of large bore, curved needles with a 10 mm active tip, may improve the results of radiofrequency procedure.

Because denervation of lumbar facet joints is the most commonly performed radiofrequency procedure, detailed guidelines will be invaluable for those commencing interventional pain careers.

P-18
THE SEVEN STAGES OF OPIOID PRESCRIBING

Allan S Gordon MD
Neurologist and Director, Wasser Pain Management Centre, Mount Sinai Hospital, Toronto, Ontario

The past 10 years have seen a significant increase in the prescribing of strong opioids for chronic noncancer pain. There are a number of reasons for this including recognition of the need for recognition and treatment of CNCP, an increase in studies showing both effectiveness and underprescribing of opioids, recognition by industry of a new and important market and a number of concerted educational programs aimed at potential prescribers. But this has all come with some cost.

After being an active participant and promoter of the pain movement, and based on his experience, the author describes seven stages of opioid prescribing. Many reading this will identify with these stages.

1 Opioid naïve
2 Opiophobia
3 Opioiphilia
4 Opioid expert
5 Opioid catastrophe
6 Acquired opiophobia
7 Opioid balance: Weighing benefit versus risk

P-19
COPING STRATEGIES AS MEDIATORS BETWEEN COGNITIVE APPRAISALS AND ADJUSTMENT TO CHRONIC PAIN: A STUDY OF OLDER ADULTS

Sheryl M Green MA, Thomas Hadjistavropoulos PhD
University of Regina, Regina, Saskatchewan

AIMS: Although pain is highly prevalent among seniors, research examining adjustment to chronic pain has focused, almost exclusively, on young and middle-aged adults. Such research has emphasized a variety of theoretical approaches to stress and coping (eg, Lazarus and Folkman, 1984). Our goal was to complement previous investigations by studying the complex interrelationships among cognitive appraisals, coping strategies and adjustment to chronic pain within the unique context of seniors.

METHODS: One hundred eight community dwelling seniors (mean age=75.3, SD=8.80; 88 women), with at least one chronic pain condition, completed a variety of questionnaires designed to assess pain beliefs/appraisals (including beliefs about pain in old age), daily stressors, coping strategies and adjustment to pain.

RESULTS: Mediation analyses (Baron and Kenny, 1986) revealed that a set of coping strategies (namely guarding, resting, asking for assistance, seeking social support, coping self statements and emotional support) mediated the relation between cognitive appraisals/beliefs and adjustment to pain in seniors.

CONCLUSIONS: Many of our findings were consistent with the pre-existing literature involving younger adults. Some findings, however, were specifically relevant to seniors (eg, specific coping strategies were found to mediate beliefs about pain in old age and adjustment to chronic pain).

P-20
ROLE OF NITRIC OXIDE SYNTHASE IN PAIN AND INFLAMMATION AT THE CENTRAL AND PERIPHERAL LEVEL IN A CARRAGEENAN INDUCED MODEL OF JOINT INFLAMMATION

Javeria Ali Hashmi MSc[1]*, John Ciriello PhD[1], Kiran Yashpal PhD[2], James I Henry PhD[2]
[1]Department of Physiology and Pharmacology, University of Western Ontario, London; [2]Health Sciences Centre, McMaster University, Hamilton, Ontario

Nitric oxide (NO) is an important mediator of nociceptive changes observed in inflammatory conditions; the role of this free radical in inflammatory joint disease is not completely understood. We investigated the involvement of NOS (nitric oxide synthase) in inflammatory joint disease at the peripheral and central levels in the carrageenan induced joint

inflammation model. At the peripheral level, we observed the effect of NOS inhibitors on parameters of pain and inflammation. For this purpose a selective nNOS (neuronal NOS) inhibitor 7-nitroindazole (7-NI), a highly selective iNOS (inducible NOS) inhibitor 1400W and a nonselective NOS inhibitor L-NAME (N^G-nitro-L-arginine methylester) and their respective vehicles were administered ip 30 minutes before carrageenan induction to separate groups of rats. 7-NI (50 mg/kg) and L-NAME (100 mg/kg) prevented the increase in ankle circumference, and decreased plasma extravasation and edema compared to vehicle treatment whereas 1400W (2 mg/kg) had no effect on these parameters of inflammation. In terms of pain sensitivity, the vehicle treated rats demonstrated allodynic responses and thermal hyperalgesia after carrageenan induction. These effects related to pain sensitivity were prevented from developing in rats treated with 7-NI and L-NAME. In addition, 1400W was also effective in preventing pain sensitivity. At the central level we assessed the role of NOS by observing expression of nNOS by using Western blots and by investigating nNOS activity with NADPH diaphorase staining. Western blots demonstrated a time dependent increase in nNOS expression. Pre-administration of 7-NI reduced spinal nNOS expression ($P<0.01$) whereas L-NAME had no effect ($P>0.05$). NADPH-diaphorase activity was observed to be significantly high in carrageenan injected rats in lamina II of the lumbar spinal dorsal horn. These results indicate that both nNOS and iNOS contribute to joint pain and nNOS expression and activity is upregulated after joint inflammation.

Key words: Animal models; Carrageenan; Inflammation; Pain

P-21
USE OF SATIVEX TO TREAT CHRONIC PAIN

Helen Hays MD, Mary Ann Woodroffe BScN
Associate Clinical Professor, Department of Family Medicine, University of Alberta, Edmonton, Alberta

AIM: This presentation will review the use of Sativex in a group of patients with chronic pain, focusing on effectiveness, benefits and side-effects.

Sativex is a cannabinoid analgesic, which has recently been approved by Health Canada as adjunctive therapy for the relief of neuropathic pain in multiple sclerosis (MS) in adults. The principal active ingredients include delta-9-tetrahyrocannabinol (THC) and cannabidiol (CBD).

METHODS: Approximately 30 referred patients who have chronic pain not responding to commonly used analgesic medications will be offered a trial of Sativex. It is delivered by the buccal route via a spray, should be self-titrated and is usually used approximately 5 times daily. Sites should be rotated from under the tongue to either side of the inside of the cheeks. Each vial provides approximately 56 sprays.

RESULTS: Results to date are preliminary. Two patients with MS who have tolerated opioids poorly have reported good pain control. Several others with different chronic pain syndromes have reported varying degrees of benefit.

Patients have complained of the stinging sensation at the application site and also the bad taste after administering the drug. No severe side-effects have been reported. Sativex is not covered by some insurance plans and the cost is prohibitive to some patients. One vial costs approximately one hundred and forty-two dollars ($142.00).

CONCLUSIONS: This cannabinoid analgesic may be a useful adjunctive agent for treating chronic pain. Its mode of administration is acceptable and easy to use. More research is needed to determine its effectiveness in long-term use for various pain states and risk/benefit profile.

P-22
CHRONIC PAIN PATIENTS WITH SYRINX FOLLOWING MOTOR VEHICLE ACCIDENT: A CASE SERIES

R Allen Hooper MD FCFP
Clinical Assistant Professor, University of Calgary, Director Clinical Services, Advanced Spinal Care Centre, Calgary, Alberta

AIM: The development of syrinx following spinal cord injury with paralysis is well recognized. The literature is very limited regarding the development of syrinx following motor vehicle accident (MVA) not involving paralysis. This report documents ten cases of syrinx and chronic spine pain following high-speed motor vehicle accident.

METHOD: Eight hundred twenty-five consecutive chronic spine patients were seen during a 72-month period from 1999 to 2005 at a private outpatient clinic. Patients completed visual analogue scales before treatment and through to discharge. Patients were referred for MRI when clinically indicated or to further assess areas of ongoing pain.

RESULT: Three hundred eighty-eight (47%) of the patients had trauma related injuries. There were no patients identified with syrinx in the non-trauma group. Ten cases of syrinx were identified following whiplash. All cases involved high-speed impacts over 50 km/h. These patients did not respond well to conservative treatment or various diagnostic and therapeutic injections.

CONCLUSION: The presence of syrinx after high-speed impact appears to be associated with poor outcome and chronic pain. More research is needed to determine the prevalence of asymptomatic syrinx in the general population and if high speed MVA leads to the development of syrinx. This would help determine if routine MRI following high speed MVA has a role in the assessment and management of these patients.

P-23
COMPARISONS BETWEEN CHINESE AND CAUCASIAN CANADIANS IN CATASTROPHIZING AND PAIN RESPONSES

Annie Y Hsieh BA, Dean A Tripp PhD
Department of Psychology, Queen's University, Kingston, Ontario

Considered to be the most prominent cognitive factor in acute and chronic pain reports, catastrophizing cognitions about pain are associated with greater pain intensity and emotional distress in both clinical and acute pain settings (eg, Sullivan et al, 2001). Catastrophizing refers to an exaggerated negative mental set brought to bear during the pain experience (Sullivan et al, 1995). Catastrophizing is theorized to increase emotional reactivity to pain, thereby amplifying its experience (Sullivan et al, 2001). While catastrophizing has been repeatedly associated with experimental acute pain response (Sullivan et al, 2001), little is known about the sociocultural determinants of catastrophizing and pain behaviour. The proposed study will investigate differences in acute pain experience between Chinese and Caucasian Canadians in catastrophizing, pain threshold, tolerance, intensity and unpleasantness. We hypothesize that difference in these variables exist between the two cultural groups. The study will provide a better understanding of the underlying mechanism of pain perception in different cultural groups.

Fifty Caucasian and fifty Chinese undergraduate students underwent the cold pressor (CP) task. Pain catastrophizing scale was administered before the CP task. Participants provided pain intensity rating (Numerical Rating Scale) during the CP task and pain unpleasantness (SF-McGill; Melzack, 1987) after the task. ANOVA will be conducted to examine pain responses and pain catastrophizing between the two groups. Clinical implications will be discussed.

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P-24
COMPARISON OF PAIN BEHAVIOUR PATTERNS BETWEEN PATIENTS WITH MUSCULOSKELETAL AND FIBROMYALGIA CONDITIONS

Dorothée Ialongo Lambin BSc[1], Véronique Jarry-Boileau[1], Pascal Thibault BSc[2], Michael JL Sullivan PhD[1]
[1]Department of Psychology, Université de Montréal; [2]Department of Psychology, Université du Québec à Montréal, Montréal, Québec

OBJECTIVE: This study examines the differences in pain behaviour in patients with musculoskeletal conditions versus patients with fibromyalgia.

METHODS: Thirty patients (24 to 74 years) suffering from a musculoskeletal condition and 27 patients (34 to 74 years) suffering from

fibromyalgia participated in a protocol designed to elicit pain behaviour. Patients were videotaped while engaging in the task and pain behaviour was coded by trained observers. Scores were computed to derive indices for three types of pain behaviour (communication, avoidance and protection). Indices of each type of pain behaviour for patients with musculoskeletal disorder and patients with fibromyalgia were compared.
RESULTS: Results revealed that there is no significant difference between patients suffering from the musculoskeletal condition and fibromyalgia patients on any types of pain behaviour. No difference was found either in the total number of pain behaviour.
CONCLUSION: Theoretical implications for the absence of difference between pain behaviour of patients with the musculoskeletal condition compared to patients with fibromyalgia are discussed in regard to studies that had already investigated similar questions.

P-25
ENHANCING KANGAROO CARE EFFICACY THROUGH MULTIPLE SENSORY MODALITIES

C Celeste Johnston RN DEd[1], Francoise Filion RN MSc[1,2], Marsha Campbell-Yeo RN MSc NNP[1,3], Kathryn McNaughton BScN2[1], Dominique Walker PhD[1], Anne Monique Nuyt MD FRCP[2], Allen Finley MD FRCP[3], Celine Goulet RN PhD[2], Linda Bell RN PhD[4]
[1]McGill University, Montreal; [2]University of Montreal, Montreal, Quebec; [3]IWK Children's Hospital, Halifax, Nova Scotia; [4]University of Sherbrooke, Sherbrooke, Québec

AIM: Earlier studies have demonstrated the efficacy of maternal kangaroo care to decrease pain response and facilitate recovery from the frequent and invasive clinical procedure of heel lance for blood sampling in both full term and preterm neonates. It is thought that tactile stimulation is the primary modality in which kangaroo care works. The purpose of this study is to determine if the addition of vestibular stimulation (rocking), auditory stimulation (talking and singing) and gustatory stimulation (sucking) would enhance the efficacy of kangaroo care.
METHODS: Infants born between the ages of 32 and 36 weeks gestational age and younger than two weeks of life were studied in a randomized, crossover trial to compare pain response and time to recovery following a heel lance. The Premature Infant Pain Profile, a composite measure of behavioural indicators of pain (facial actions) and physiological indicators of pain (heart rate, oxygen saturation) is the primary outcome.
RESULTS: A required sample of 64 babies has been recruited. Preliminary results on 21 infants shows significant decrease in the behavioural indicator of pain and a nonsignificant trend in the physiological indicators.
CONCLUSIONS: The effectiveness of kangaroo care in preterm neonates may be further enhanced by additional stimulation by the mother.

P-26
KANGAROO CARE IN VERY PREMATURE NEONATES

C Celeste Johnston RN DEd[1], Francoise Filion RN MSc[1,2], Marsha Campbell-Yeo RN MSc NNP[1,3], Kathryn McNaughton BScN2[1], Dominique Walker PhD[1], Anne Monique Nuyt MD FRCP[2], Allen Finley MD FRCP[3], Celine Goulet RN PhD[2], Linda Bell[4]
[1]McGill University; [2]University of Montreal, Montreal, Quebec; [3]IWK Children's Hospital, Halifax, Nova Scotia; [4]University of Sherbrooke, Sherbrooke, Quebec

AIM: Following studies that have demonstrated the efficacy of maternal kangaroo care to decrease pain response and facilitate recovery from the frequent and invasive clinical procedure of heel lance for blood sampling in both full term and preterm neonates, this study was undertaken to determine if maternal kangaroo care could be efficacious in infants younger than 32 weeks gestational age.
METHODS: Infants born between the ages of 28 and 32 weeks gestational age and younger than two weeks of life were studied in a randomized, crossover trial to compare pain response and time to recovery following a heel lance. The Premature Infant Pain Profile, a composite measure of behavioural indicators of pain (facial actions) and physiological indicators of pain (heart rate and oxygen saturation) is the primary outcome.
RESULTS: A sample of 52 babies is sought and as of October 8, 2005, 38 babies have been recruited. Preliminary results on 12 infants shows significant decrease in the behavioural indicator of pain and a nonsignificant trend in the physiological indicators.
CONCLUSIONS: Even premature neonates born before the last trimester of gestation may benefit from the analgesic effect of maternal kangaroo care.

P-27
THE EXPERIENCE OF CANCER-RELATED PAIN ACROSS THE ADULT LIFESPAN: A QUALITATIVE STUDY

Melissa Jovellanos BSc MSc(c)[1,2], Gary Rodin MD[2,3,4], David Warr MD[2,3,4], Cindy Shobbrook RN[2], Malcolm Moore MD[2,3,4], Frances Shepherd MD[2,3,4], Camilla Zimmermann MD[2,3,4], Wendy Ellis RN[2], Lucia Gagliese PhD[1,2,3,4]
[1]York University; [2]University Health Network; [3]University of Toronto; [4]Ontario Cancer Institute, Toronto, Ontario

AIMS: To examine cancer pain and its consequences across the adult lifespan using qualitative research methodology.
METHODS: Four younger (45.0±4.5 yo; 39-51 yo) and four older (73.5±10.3 yo; 65-86 yo) advanced cancer patients experiencing pain were recruited from outpatient clinics at Princess Margaret Hospital, Toronto, Ontario. Patients participated in one-on-one semistructured interviews exploring factors related to cancer pain characteristics, perceived meaning, life impact, coping and perceived barriers to adequate pain management. All interviews were audiotaped and transcribed verbatim. Constant comparative analysis was used to identify themes within age groups. Purposive sampling will determine the final sample size or saturation point.
RESULTS: Important age-related themes are apparent. Younger patients emphasized pain as functionally maladaptive and taking complete control over their lives, whereas older patients were more likely to accept and adapt to living with cancer pain. Both younger and older patients reported that it is easier for older than younger people to accept or tolerate pain. Younger patients viewed health care workers as understanding and responsive to pain control needs. Interestingly, elderly patients also felt that younger patients receive more prompt or better quality care. Younger but not older patients reported pain medications as adequately relieving pain.
CONCLUSIONS: These preliminary data suggest that important age-related patterns exist in the interpretation and life impact of cancer pain and the perception of health care. Future interviews will explore these issues further. The results of this study will be essential to the development of interventions to improve pain management and alleviate suffering across the adult lifespan.

P-28
PREDICTORS OF HIGH POSTOPERATIVE PAIN AND TOTAL MORPHINE INTAKE

Melissa Jovellanos BSc MSc(c)[1,2], Lucia Gagliese PhD[1,2,3,4], Vincent Chan MD[2,3], Wendy Ellis RN[2], Nataly Weizblit BSc[1,2]
[1]York University; [2]University Health Network; [3]University of Toronto; [4]Ontario Cancer Institute, Toronto, Ontario

AIMS: To identify significant demographic, biomedical and surgical predictors of high pain intensity, pain quality and total morphine consumption among postoperative pain patients.
METHODS: Two hundred forty-six postoperative patients receiving morphine via IV patient-controlled analgesia (PCA) at Toronto General and Mount Sinai Hospitals (Toronto, Ontario) were investigated. 24 hours following surgery, participants completed measures including the McGill Pain Questionnaire (MPQ) to assess pain quality and the Numeric Rating Scale (NRS) for pain intensity. Morphine amount (mg) self-administered by PCA pump was recorded. Medical and surgical information was extracted from the medical chart. Multivariate, logistic regression was used to derive a stable prediction model.
RESULTS: Significant, independent predictors of higher MPQ scores (>10 words) were female sex (adj OR 2.24, 95% CI 1.18 to 4.28) and younger age (adj OR 0.41, 95% CI 0.21 to 0.82); the predictor of higher pain intensity (>5 NRS) was female sex (adj OR 2.10, 95% CI 1.10 to

4.02); and predictors of higher total morphine consumption (>30 mg) were younger age (adj OR 2.47, 95% CI 1.43 to 4.29) and previous experience with IV PCA (adj OR 2.24, 95% CI 1.06 to 4.75).

CONCLUSIONS: Identifying groups of surgical patients who remain at risk for high-postoperative pain despite patient-controlled analgesia is fundamental to studying postoperative pain and management. Future investigations should examine the effects of psychosocial factors on postoperative pain and morphine use. These data would help to enhance our understanding of the multidimensional postoperative pain experience, guide clinicians in tailoring individual analgesic treatment and management, and assist high-risk patients with coping and control.

P-29

ARE ALL CHRONIC PAIN EXPERIENCES THE SAME? A COMPARISON OF CHRONIC UPPER EXTREMITY PAIN WITH CHRONIC LOW BACK PAIN IN A COMMUNITY PHYSIOTHERAPY CLINIC

Shane S Kachur* BMR (PT), R Nicholas Carleton MA, Gordon JG Asmundson PhD
Anxiety and Illness Behavior Laboratory, University of Regina, Regina, Saskatchewan

Pain as a personal sensory emotional experience is impacted by biological, social and psychological factors (Turk and Flor, 1999; Waddell et al, 1993; Asmundson et al, 1999; Vlaeyen and Linton, 2000). Nevertheless, to date there has been little research done to examine whether different regional diagnoses affect the overall chronic pain experience. Anecdotally, it is reasonable to expect that chronic upper extremity pain (eg, hand, elbow or shoulder) would have a different impact on quality of life than chronic low back pain. To investigate such possibilities, 53 chronic low back pain patients (34% women; M_{Age}=40.7, SD=9.8) were compared with 42 chronic upper extremity pain patients (43% women; M_{Age}=45.1, SD=10.7) on several self-report measures. All participants completed the Dallas Pain Questionnaire (DPQ; Lawlis et al, 1989) and McGill Pain Questionnaire (MPQ; Melzack, 1975). Those with low back pain completed the Revised Oswestory Questionnaire (ROQ; Fairbank et al, 1980), while those with upper-extremity pain completed the Upper Extremity Functional Scale (UEFS; Pransky et al, 1997). The results of an ANOVA showed no significant demographic differences (eg, age, gender, wage and education) between the two groups; however, significant differences ($P<0.05$) were noted regarding pain intensity, perceived disability and pain experience. Patients with chronic low back pain reported higher pain intensity, higher perceived disability and further reduction to their quality of life than those with chronic upper extremity pain. Clinical implications and directions for future research are discussed.

P-30

UTILITY OF THE DALLAS PAIN QUESTIONNAIRE FOR ASSESSING CHRONIC UPPER EXTREMITY PAIN

Shane S Kachur* BMR(PT), R Nicholas Carleton MA, Gordon JG Asmundson PhD
Anxiety and Illness Behaviour Laboratory, University of Regina, Regina, Saskatchewan

Upper extremity injuries have been associated with increased disability and financial expense (Feuerstein et al, 1998). Prevalence estimates of chronic upper extremity pain have been similar to that of chronic low back pain, up to 25% in some populations (Gummesson et al, 2005). Although several factors have been shown to correlate with disability and pain intensity (eg, anxiety and depression; Henderson et al, 2005), most upper extremity disability questionnaires (eg, Upper Extremity Functional Scale, UEFS; Pransky et al, 1997) focus solely on physical disability. In functional rehabilitation settings, the Dallas Pain Questionnaire (DPQ; Lawlis et al, 1989) assesses both physical and psychosocial factors. The DPQ was developed and validated to assess the impact of chronic back pain on daily activities, work/leisure activities, anxiety-depression and social interest. The present study examined the efficacy of a modified DPQ for impact assessment of upper extremity pain. A total of 51 participants (43% women; M_{Age}=43.8, SD=10.7) referred to a government-sponsored rehabilitation program because of upper extremity pain completed a modified DPQ, where back pain references were substituted with participant-specific pain. The McGill Pain Questionnaire (MPQ) and the UEFS were administered for convergent validity. Subsequent correlational analysis suggested that the modified DPQ provided a valid measure of upper extremity pain ($P<0.01$; MPQ) and dysfunction ($P<0.05$; UEFS). This supports the use of the DPQ for individuals with back or upper extremity pain. Clinical implications and directions for future research are discussed.

P-31

NONDERMATOMAL/MYOTOMAL SYMPTOM REPORTING MAY INDICATE SUBTLE AND SIGNIFICANT PSYCHOLOGICAL DISTRESS

Shane S Kachur* BMR (PT), R Nicholas Carleton MA, Gordon JG Asmundson PhD
Anxiety and Illness Behavior Laboratory, University of Regina, Regina, Saskatchewan

Chronic pain presentations are typically associated with fear, anxiety and depression (Asmundson, Vlaeyen and Crombez, 2004). The method used to address these psychological components of pain depends, in part, on the degree to which they impair patient recovery. While self-report evaluations provide measures of emotive intensity, they are not intended to describe subsequent levels of physical impairment. Waddell et al (1992) suggested evaluation of medically unexplained symptoms (ie, inappropriate symptoms) may indicate the effects of psychological variables on physical disability. Nevertheless, because of clinician misinterpretation and a lack of inter-rater and test-retest reliability, disagreement exists regarding inappropriate symptom presentation based on physical examinations (Fishbain et al, 2003). However, little research has been done on Waddell's proposed self-report measures of inappropriate symptoms. The Inappropriate Symptoms Questionnaire (ISQ) was administered to 59 chronic low back pain suffers (34% women; M_{Age}=41.1, SD=10.4) in a sponsored multidisciplinary treatment program, along with the Dallas Pain Questionnaire (DPQ), the Revised Oswestory Low Back and Disability Questionnaire (ROQ), and the McGill Pain Questionnaire (MPQ). Results of correlational analyses identified significant positive correlations ($P<0.01$) between the ISQ and the ROQ, and all components of the DPQ and MPQ. This suggests that the ISQ may provide a useful indication of the magnitude of effect psychological variables have on perceived disability, presentations of physical disability, and pain perception in chronic pain populations. Clinical implications and directions for future research are discussed.

P-32

EVALUATION OF THE IMPLEMENTATION OF PAIN BEST PRACTICE GUIDELINES: EXPERIENCE IN AN ACUTE CARE MEDICAL SETTING

Rosemary Kohr RN PhD(c) ACNP
Nurse Practitioner/Clinical Nurse Specialist, London Heath Sciences Center; Assistant Professor, Faculty of Health Sciences (Nursing), University of Western Ontario, London, Ontario

The Medical Care Advanced Practice Nurses (APN) Research Group developed an evaluation of the implementation of the Registered Nurses of Ontario (RNAO) Best Practice Guidelines on the Assessment and Treatment of Pain within an acute medical program.

AIM: To assess changes in practice amongst the interdisciplinary team regarding pain assessment and management following the implementation of the BPG for pain.

METHOD: Intervention was an educational program tailored to the learning needs of staff, developed with input from staff. Sequential chart reviews of 100 patients pre/post intervention; questionnaires to staff pre/post intervention regarding attitudes and knowledge transfer.

RESULTS: Increased documentation regarding pain assessment. Improved management strategies and better understanding of medications and alternative treatment options.

CONCLUSION: Effective educational interventions with input from staff were useful to change practice to improve patient outcomes regarding pain management.

P-33
PERIPHERAL NERVE INJURY INDUCES SYMPATHO-SENSORY SPROUTING: WHICH SENSORY NEURONS ARE TARGETTED BY INVADING SYMPATHETIC AXONS?

Karmen M Krol MSc, Michael D Kawaja PhD
Department of Anatomy and Cell Biology, Queen's University, Kingston, Ontario

Postganglionic sympathetic axons are known to sprout into and throughout sensory ganglia in rodent models of peripheral nerve injury. These axons course through the ganglionic neuropil and surround a subpopulation of sensory neurons in a plexus of fibres. The remarkable formation of sympathetic perineuronal plexuses has been reported in certain human neuropathies, as well as rodent models of neuropathic pain. This sympathosensory coupling has been suggested as an anatomical substrate for sympathetically maintained pain, and can be reduced or eliminated following disruption of the sympathetic nervous system. While the number of sensory neurons in injured dorsal root ganglion (DRG) targeted by sympathetic axons tends to be small, this interaction may be a potent source of ongoing peripheral sensory dysfunction following nerve injury. We hypothesize that sympathosensory sprouting is mediated in sensory ganglia a mechanism involving nerve growth factor (NGF), and that the sensory neurons targeted by sympathetic axons are themselves NGF sensitive. The phenotype of the sensory neurons involved is elusive since most neurochemical markers are dramatically downregulated following peripheral nerve injury. The purpose of this work is to demonstrate that sympathetic perineuronal plexuses form around neurons that have a predictable somatic nociceptive phenotype-NGF sensitive and peptidergic. We paired immunohistochemistry with each of in situ hybridization and laser-capture microdissection to examine the phenotype of the sensory neurons distinguished by a plexus. Our data will reveal, with more clarity, the neurochemical phenotype of the sensory neurons which, to date, has mainly been described only on the basis of size.

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P-34
CHARACTERIZATION OF FEMALE PATIENTS DIAGNOSED WITH CHRONIC PELIVC PAIN AT A MULTIDISCIPLINARY PAIN CENTRE

A Sano BSc PT, J Kulpa, R Dolman MAp Sc, M Galonski RN, P Peng MD FRCPC(C), A Gordon MD FRCPC(C)
Wasser Pain Management Centre, Mt Sinai Hospital, Toronto, Ontario

Chronic pelvic pain (CPP) is an enigmatic condition, reported in 15% to 20% of women. Despite its high prevalence, many patients are misdiagnosed due to the complexity of their symptoms. CPP continues to be poorly defined. There is currently no characterization of female patients with CPP attending a multidisciplinary pain centre.

AIM: The objective of this study is to provide an overall characterization of female patients presenting to a multidisciplinary pain centre with CPP (demographics, medical hx, Dx, pain/psychosocial scores, sexual functioning and Tx).

METHOD: Data was retrospectively collected from the admission notes of female pelvic pain patients (1999 to 2005) using a standardized form.

RESULT: One hundred forty-eight charts were included. Mean age was 45.4 yo (range 18 to 83). 58.1% are married. Mean VAS=6.1 (1.25 to 10), mean Beck Depression Inventory=18.1 (1 to 57) and mean McGill Pain PRI=32.1 (4 to 71). Mean age for pelvic pain onset is 34.5 yo (0 to 78). 45.9% reported onset between 19 and 35 yo. 13.5% reported onset at an age ≤18 yo. 20.3% reported pain duration of 2 to 5 yrs, while 27.7% reported pain ≥10 yrs. 34.5% reported abuse. 62.8% reported being sexually active with 55% as having pain-free intercourse. 81.1% had a gynecological Dx: endometriosis (33.8%), ovarian cysts (30.4%), VVS (19.6%). PMHx included depression (46.6%), MSK pain (44.6%) and IBD (32.4%). 55.4% had some surgical procedure for treatment. Only 2.7% had tried Botox.

CONCLUSION: Further characterization of CPP patients will assist to create a clearer description of this perplexing and debilitating condition. This will lead to more accurate diagnosis and management.

P-35
SEX DIFFERENCES IN NEONATAL PAIN

Janice Lander PhD[1], Barbara Brady-Fryer PhD[2], John Van Aerde MD[2]
[1]University of Alberta; [2]Stollery Children's Centre, Capital Health, Edmonton, Alberta

AIM: To assess the effect of sex on pain response and analgesic response. By studying neonates in the first few hours of life, we can control (learned) psychosocial factors that make the investigation of sex differences so difficult when adults or children are studied.

METHODS: The analgesic agent used was sucrose. Using an RCT design, 98 male and 98 female newborn infants were randomly assigned to receive sucrose or sterile water (placebo) before having a vitamin K injection. The primary outcome measures were infant behaviour (recorded by video tape) and heart rate (HR) (continuously recorded at a rate of 1 reading per second). Measures were obtained during the following five phases: baseline, solution administration, wait-time, injection and recovery.

RESULTS: HR change from baseline to wait-time, injection and recovery were compared using a two-factor, repeated measures ANOVA (for independent variables of sex, solution and phase). Latency to cry and percentage of time crying were measured for the injection phase. Significant interactions were observed for sex, solution and phase.

CONCLUSIONS: This study is important for the field since neonatal pain research has a gender bias to it (more males have been studied than females). The results of this study suggest the existence of biological differences in infant responses to sucrose and painful stimuli. The implications of these findings for future research will be discussed.

P-36
PREVALENCE OF DYSPAREUNIA IN AN ADOLESCENT POPULATION: PRELIMINARY FINDINGS

Tina Landry BSc PhD Candidate, Sophie Bergeron PhD
Université du Québec à Montréal (UQAM), Montréal, Québec

AIM: Dyspareunia, or painful intercourse, is one of the most common, yet under-investigated, urogenital pain problems in women. Although recent data suggest that dyspareunia frequently begins during adolescence (Berglund, Nigaard and Rylander, 2002), a large scale epidemiological study has yet to be conducted with this population. Thus, the present ongoing study aimed to determine the prevalence of pain during intercourse in an adolescent population.

METHOD: With written informed consent, data were obtained from 1089 girls (aged 12 to 19 years) attending five French Montreal high schools. Questionnaires focusing on gynecological history, physical and sexual abuse, anxiety, depression, attitudes toward sexuality and social support were administered in classrooms during regular school hours.

RESULTS: Preliminary analyses revealed that 21.8% of sexually active girls (N=257) reported having regular pain during penile penetration located at the vaginal opening, inside the vagina and/or in the abdominal region. At this preliminary stage, no differences were found between dyspareunic and nondyspareunic girls. Nonetheless, prevalence results are consistent with estimates found in adult women of younger than 30 years of age (Laumann et al, 1999).

CONCLUSION: These results suggest that dyspareunia is highly prevalent among adolescent girls and that this distressing pain problem requires further clinical and scientific attention.

P-37
CHANGES IN PAIN PERCEPTION AND DNIC START AT MIDDLE AGE IN HEALTHY ADULTS

Marianne Larivière MSc[1], Philippe Goffaux MSc[2], Serge Marchand PhD[1,2], Nancy Julien MSc[1]
[1]Département des Sciences de la Santé, Université du Québec en Abitibi-Témiscamingue, Rouyn-Noranda, Québec; [2]Chaire en Douleur, Faculté de Médecine, Université de Sherbrooke, Sherbrooke, Québec

AIM: Previous studies have shown a reduction of diffuse noxious inhibitory controls (DNIC) in elderly individuals (Edwards et al, 2003; Washington et al, 2000). The aims of the present study were to better characterize the

time course of these changes by adding a middle-aged group, and to assess the role of expectations and perceived pain reduction in DNIC recruitment.

METHODS: Nociceptive and non-nociceptive thermal perceptions of 20 young (mean age 25.4 years, range 20-35), 20 middle-aged (mean age 47.0 years, range 40-55) and 20 elderly (mean age 68.1 years, range 60-75) healthy volunteers were assessed through the application of a thermode on volunteers' calf before, during and after a cold pressor task (7°C).

RESULTS: DNIC recruitment, as measured by pain threshold (PT) proportionalized difference (before versus during the immersion of the hand in cold water), was diminished by middle age (P<0.001). Thermal PT increased with age (P<0.0001), but a plateau was reached by middle age. Similarly, thermal perception diminished with age (P=0.009), and reached a plateau by middle age. Expectations and perceived pain reduction were both positively correlated with the strength of the DNIC response.

CONCLUSIONS: Significant changes in DNIC recruitment, PT, and thermal perception in general, are already present by middle age. These results suggest that changes in pain perception and endogenous pain modulation arrive earlier than previously suggested. Studies on aging and pain should include a middle-aged group when comparing pain perception across ages.

P-38

PAIN MANAGEMENT PRACTICES IN A PEDIATRIC EMERGENCY ROOM (PAMPER): IMPLICATION OF PARENTS AND NURSES (PRELIMINARY RESULTS)

Sylvie Le May RN PhD[1], Celeste Johnston RN DEd[2], Manon Choinière PhD[1], Denise Kudirka RN MSN[3], Isabelle Hubert BSN[3], Alexis Nolan BSN[3], Louise Murray RN MSN(cand)[3], Dominic Chalut MD[3]

[1]University of Montreal, Montreal; [2]McGill University, Montreal; [3]Montreal Children's Hospital, Montreal, Quebec

BACKGROUND: Children's pain in emergency departments (ED) is not well managed. Medical doctors tend to underprescribe analgesics and nurses tend to underevaluate and undermedicate children's pain (Kim et al, 2003).

OBJECTIVE: Verify the efficacy of tailored interventions with nurses and parents, on nurses' knowledge-practices and on parents' beliefs, regarding pain management, and also on children's pain scores.

METHODS: Retrospective and prospective (6-phase) study with a pre-post design (nurses) and RCT (parents/children dyads-PCD). Setting: Pediatric ED of a university hospital. Samples: Review of 150 charts of children who presented with either acute abdominal pain, fracture, sprain, deep lacerations or burns. All nurses of the unit (55), 68 PCD in each group (control and experimental). Children 4-15 yo with one of diagnoses precited. Interventions: Capsules on pain (nurses), booklet and bookmark (PCD). Instruments: Pain Management Experience Evaluation for chart reviews, Pediatric Nurses Knowledge and Attitudes Survey (PNKAS) on pain, Bieri or NRS for child's pain + distress levels, and Pain Barriers Questionnaire for parents' beliefs.

RESULTS: Only 35% of children (53 of 150) received an analgesic. 58% (87 of 150) of them had their pain documented, but nurses rated intensity on 3% (3 of 87). 78% nurses responded and had mean PKNAS score of 71.7%±12.5%. Average level of pain and distress were similar between both groups. No significant statistical difference on parents' beliefs.

CONCLUSIONS: Preliminary results show that nurses' knowledge on pain is moderately low, and that children's pain is still under-reported and undermedicated. Also, interventions with parents were not effective at this phase of the study.

P-39

A PSYCHOPHYSICAL INVESTIGATION OF THE FACIAL ACTION CODING SYSTEM AS AN INDEX OF PAIN VARIABILITY AMONG SENIORS WITH AND WITHOUT ALZHEIMER'S DISEASE

Amanda C Lints BSc[1], Thomas Hadjistavropoulos PhD[1], Stephen J Gibson PhD[2], Bruce Barber PhD[2]

[1]Centre on Aging and Health, University of Regina, Regina, Saskatchewan; [2]National Ageing Research Institute, Melbourne, Australia

AIM: The utility of the Facial Action Coding System (FACS) as an index of pain among seniors with dementia has been demonstrated in clinical contexts. Nonetheless, there is a lack of systematic laboratory investigations (involving specific and measured stimulus intensities) aimed at assessing its ability to differentiate among different levels of pain in these populations. Our goal was to study persons with and without a diagnosis of dementia and to assess the ability of FACS to differentiate among different levels of pain intensity in a laboratory context.

MEASURES: Following all appropriate ethics clearances, seniors with a diagnosis of early Alzheimer's disease and healthy, age-matched controls were administered a series of mildly discomforting stimulus intensities. Facial reactions (assessed using the FACS) and self-report responses were recorded.

RESULTS: Our results showed significant differences in facial responses as a function of stimulus intensity. There were no significant differences as a function of dementia diagnosis.

CONCLUSIONS: Our data provide strong support for the utility of the FACS as an index of pain intensity among seniors with and without Alzheimer's disease.

P-40

ETHNOCULTURAL CHARACTERISTICS OF PATIENTS ATTENDING A TERTIARY CARE PAIN CLINIC IN TORONTO

Angela Mailis-Gagnon MSc MD FRCPC[1,2,3], Balaji Yegneswaran MBBS[1], Marios Papagapiou MSc[1], Keith Nicholson PhD Psychol[1,3]

[1]Comprehensive Pain Program, Toronto Western Hospital; [2]Krembil Neuroscience Centre, Toronto Western Hospital; [3]University of Toronto Centre for the Study of Pain, Toronto, Ontario

AIM: Ethnocultural variables greatly affect pain perception and expression. Emerging literature is documenting racial and ethnic differences in pain access and care. The present study attempted to define the ethnocultural characteristics of patients attending a tertiary care university affiliated pain clinic in Toronto, Ontario.

METHODS: Data was collected through retrospective chart review of 1242 consecutive patients seen over a 3-year period at the Comprehensive Pain Program (CPP), in downtown Toronto. The data was compared with 2001 Census Canada data.

RESULTS: 1) Canadian born patients constituted 58.7 of the CPP population (similar to Toronto 2001 Census data); 2) Chinese and South Central Asian (Indopakistani) groups were highly under-represented, while Southern Europeans were over-represented; 3) Canadian born and newer immigrants after 1990 were very well educated, similar to Toronto/Ontario average; 4) While women significantly outnumbered men, they presented in general with lower levels of physical pathology; 4) While the average age of Canadian, South Central Asian and Caribbean born patients was 46 years, patients from Europe were older by 10-15 yrs and had much higher incidence of physical/medical disorders.

CONCLUSIONS: Ethnocultural differences seem to be important in determining referrals and types of complaints to pain clinics. Understanding such factors will help to design prospective studies to detect disparities in pain care access in general; understand the role of both patients and physicians' ethnicity in pain management decision making; examine racial and ethnic differences in pain perception and expression, and develop culturally sensitive tools/models for assessing/ treating pain and evaluating pain management outcomes.

P-41
PREDICTING WORK CONDITIONING OUTCOMES IN SUBACUTE INJURED WORKERS: THE ACUTE LOW BACK PAIN SCREENING QUESTIONNAIRE

Douglas Margison BSc MD MBA[1], Douglas J French PhD[2]
[1]Workplace Health, Safety, and Compensation Commission of New Brunswick; [2]École de psychologie, Université de Moncton, Moncton, New Brunswick

Psychosocial factors have been identified as important determinants of pain and pain-related disability following workplace injury. Attention has begun to focus increasingly on the early identification of individuals at risk for prolonged disability through targeted assessment of known risk factors. Identifying individuals likely to fail traditional first line biomedical therapies should lead to more effective patient triage and case management. The goal of the present study was to examine the extent to which patient scores on a brief psychosocial screening questionnaire could predict clinical discharge status (fit to return to work; not fit for return to work) following a six-week active physical therapy program developed for subacute injured workers. The Acute Low Back Pain Screening Questionnaire (ALBPSQ; Linton and Hallden, 1998), a 24-item questionnaire assessing pain, fear-avoidance beliefs, general negative affect and subjective disability, was administered to a derivation sample of 243 injured workers presenting for work conditioning in one of 11 participating physiotherapy clinics across the province of New Brunswick. Using SPSS Answer Tree, a clinical cut-off score of 147 (range of possible ALBPSQ scores: 0 to 210) was derived and subsequently tested in a second validation sample comprising 125 injured workers (75 French, 50 English; 97 soft-tissue injuries, 28 nonsoft-tissue injuries). The ALBPSQ was able to correctly identify the discharge status of 89% of soft-tissue claimants and 93% of nonsoft-tissue claimants. These results suggest that the ALBPSQ can facilitate clinical decision making by identifying individuals who may benefit from more complete biopsychosocial treatment.

P-42
THE LANGUAGE OF PAIN: CHRONIC PAIN, COGNITIVE SKILLS AND THE MPQ

Michelle M Martin PhD, Lucia Gagliese PhD CPsych
University Health Network, Toronto, Ontario

AIM: The McGill Pain Questionnaire (MPQ) is a widely-used measure of pain quality comprising 78 pain descriptors divided into 20 categories. Patients endorse the words that best describe their pain. To serve as an effective pain assessment tool, factors involved in completing the MPQ must be understood. The present study was designed to investigate how cognitive skill and the presence of chronic pain differentially contribute to one's understanding of pain-related words.

METHODS: Participants with and without pain completed assessments of working memory, receptive vocabulary and cognitive flexibility. Then, using tasks adapted from Reading et al (1982), participants were asked to group the 78 words from the MPQ into categories based on the kind of pain they describe.

RESULTS: Twenty-two participants (age 30.0 years, SD=8) with pain and 22 participants (age 50.2 years, SD=14) without pain participated. Analyses show little difference in how people with and without pain categorize pain descriptors from the MPQ. The mean number of categories created (pain-free group 9.9, people with pain 8.0) was significantly lower than the 20 currently on the MPQ. Furthermore, working memory and vocabulary were significantly positively related to the number of categories created.

CONCLUSIONS: Cognitive factors, but not pain status, affect one's approach to pain language, and may influence how one completes the MPQ. Future research using the MPQ should control for these factors.

P-43
THE VASOACTIVE INTESTINAL PEPTIDE RECEPTOR ANTAGONIST VIP6-28 REDUCES THE MECHANOSENSITIVITY OF AFFERENT NERVE FIBRES IN AN ANIMAL MODEL OF OSTEOARTHRITIS

Niklas Schuelert PhD, Jason J McDougall PhD
Department of Physiology and Biophysics, University of Calgary, Calgary, Alberta

AIM OF THE STUDY: The present study examined whether the vasoactive intestinal peptide (VIP) antagonist VIP6-28 could modulate joint nociception in an animal model of osteoarthritis (OA).

METHODS: OA was induced in male Wistar rats by intraarticular injection of 3 mg sodium monoiodo-acetate with a recovery period of 14 days. Animals were deeply anesthetised with ethyl carbamate (urethane; 2 mg kg^{-1} ip). Electrophysiological recordings were made from normal and OA rat knee joint primary afferents in response to normal rotation and noxious hyper-rotation of the joint both before and following close intra-arterial injection of different doses of VIP6-28 (10^{-12} to 10^{-9} mol).

RESULTS: The conduction velocities for the recorded fibres ranged from 1.3 to 11.1 m/s and their mechanical threshold ranged from 2 to 9 mNm. Application of VIP6-28 caused afferent firing rate to be significantly reduced during normal rotation (up to 45% $P<0.05$; n=17) and during hyper-rotation (up to 34% $P<0.01$; n=15) of the OA knee joint. This desensitizing effect was found to be maximal 3 min after VIP6-28 injection and was dose-dependent ($P<0.05$). Close intra-arterial administration of VIP6-28 into normal knee joints had no significant effect on nerve fibre mechanosensitivity.

CONCLUSION: These findings indicate that VIP is tonically released into OA knee joints causing nerve sensitization and potentially joint pain. OA-induced sensitization of knee joint afferents was inhibited by local administration of VIP6-28 indicating that blockade of peripheral VPAC receptors attenuates sensory input from OA joints to the CNS. As such, VIP6-28 may prove to be a beneficial agent for the treatment of arthritis pain.

P-44
EFFECTS OF SEROTONIN ON MASTICATORY MUSCLE NOCICEPTORS

David Sung BSc Pharm[1], Xudong Dong BDS PhD[1], Malin Ernberg DDS PhD[2], Brian E Cairns PhD[1]
[1]Faculty of Pharmaceutical Sciences, University of British Columbia, Vancouver, British Columbia; [2]Institute of Odontology, Karolinska Institutet, Huddinge, Sweden

AIMS: Human clinical evidence suggests a relationship between intramuscular serotonin (5-HT) levels and masticatory muscle pain. Human experimental pain studies have demonstrated that injection of 5-HT into the masticatory muscles causes pain and mechanical sensitization, and that these effects are likely due to a peripheral receptor mechanism. However, it is not known what types of muscle afferent fibres 5-HT excites or sensitizes. We tested the hypothesis that injection of 5-HT into the rat masticatory muscles would evoke reproducible afferent discharge and reduce the mechanical threshold of rat masseter and temporalis nociceptors.

METHODS: Putative muscle nociceptors were recorded in the trigeminal ganglion and identified by their response to mechanical stimulation of the temporalis or masseter muscle and projection to the caudal brainstem. Two injections of 5-HT (10 mM) or buffered isotonic saline (control) were made at an interval of 30 min into the appropriate masticatory muscle to evoke nociceptor discharge. The second response was divided by the first to yield relative nociceptor discharge. An electronic Von Frey Hair (IITC Model 1601c) was used to measure nociceptor mechanical threshold before the initial and 10 min after the second intramuscular injection.

RESULTS: 5-HT significantly increased nociceptor discharge in comparison to control ($P<0.05$, Mann-Whitney rank sum test). The mean relative nociceptor discharge was 1.02±0.62. 5-HT also caused a prolonged (>30 min) decrease in nociceptor mechanical threshold.

CONCLUSIONS: Intramuscular injection of 5-HT evokes relatively reproducible nociceptor discharge and results in a prolonged mechanical sensitization of masticatory muscle nociceptors.

POSTERS PRESENTED ON SATURDAY, JUNE 17, 2006

P-50
STUDY OF NEUROIMMUNE RESPONSES TO NOCICEPTIN/ORPHANIN FQ USING JOINT PAIN BEHAVIOURAL TESTS

Jason J McDougall PhD, Sarah EM Larson BSc
Department of Physiology & Biophysics, University of Calgary, Calgary, Alberta

AIM OF THE STUDY: Nociceptin/orphanin FQ (N/OFQ) is an opioid-like peptide that has been shown to sensitize joint primary afferents. The present study examined whether peripheral administration of N/OFQ causes joint pain and to determine if synovial mast cells contribute to these responses.

METHODS: Under isoflurane anesthesia, male Wistar rats received a single intra-articular injection of N/OFQ (10^{-8} mol; 0.1 ml bolus) into the right knee and were then allowed to recover. Hindlimb weight bearing and von Frey hair algesiometry in which plantar withdrawal thresholds in response to a punctate mechanical stimulus were used to assess pain behaviour at 10, 30, 60, 120 and 180 min after injection of the peptide. In a separate group of animals, synovial mast cells were stabilized by pretreatment with cromolyn (20 mg/kg sc) before N/OFQ injection.

RESULTS: Compared with saline control, N/OFQ caused a significant weight bearing deficit in ipsilateral hindlimbs. Similarly, paw withdrawal thresholds were reduced by about 30% in N/OFQ treated joints with the maximal effect occurring 30 min after injection. N/OFQ-induced changes in hindlimb weight bearing and von Frey hair withdrawal thresholds were unaffected by cromolyn treatment.

CONCLUSIONS: Intra-articular administration of N/OFQ causes pain sensations in the injected joint and secondary hyperalgesia in the ipsilateral hindpaw. Synovial mast cells do not contribute to these responses although other immunocytes could be involved.

P-51
WITHDRAWN

P-52
A PSYCHOEDUCATION TRIAL FOR PEOPLE WITH CHRONIC STABLE ANGINA

Michael McGillion RN PhD(c)[1], Judy Watt-Watson RN PhD[1], Bonnie Stevens RN PhD[1], Sandra LeFort RN PhD[2], Peter Coyte PhD[1]
[1]University of Toronto, Toronto, Ontario; [2]Memorial University of Newfoundland, St John's, Newfoundland

AIM: Chronic stable angina (CSA) is a cardinal symptom of coronary artery disease (CAD) and has a major negative impact on health-related quality of life (HRQOL) including general health status, and ability to self-manage. Current secondary prevention approaches lack adequate scope to address CSA as a multidimensional persistent pain problem. This trial evaluated the impact of a low-cost 6-week angina psychoeducation program (CASMP) on HRQOL, self-efficacy and resourcefulness to self-manage symptoms, and CSA-related costs.

METHODS: Patients (n=130) were randomized to the CASMP or 3-month wait-list control; 117 completed the study. Measures were taken at baseline and 3 months.

RESULTS: The mean age of participants was 68, 80% were male. Repeated measures ANOVA of change scores yielded significant improvements in treatment group physical functioning (F=11.75 [1,114], P=0.008), bodily pain (F=4.56 [1,114], P=0.03), general health (F=10.94 [1,114], P=0.001) and physical-combined scores (F=7.93 [1,114], P=0.006) of the MOS SF-36. Angina frequency (F=5.57 [1,115], P=0.02), angina stability (F=7.37 [1,115], P=0.008) and self-efficacy to manage disease (F=8.45 [1,115], P=0.004) were also significantly improved at 3 months. The CASMP did not decrease or increase cost of illness. Societal costs for angina were determined to be $19,000 per person per annum.

CONCLUSION: These data indicate that the CASMP was effective for improving physical functioning, pain, and symptom stability at 3 months, and provide prefatory data for long-term evaluation of the CASMP.

P-53
CORRELATES OF INSOMNIA IN CHRONIC PAIN

Lachlan A McWilliams PhD[1], Keith G Wilson, PhD[2], Joyce L D'Eon PhD[2]
[1]Acadia University, Wolfville, Nova Scotia; [2]The Rehabilitation Centre, Ottawa, Ontario

AIMS: Several studies have found that patients with chronic pain frequently report sleep difficulties, and that these sleep difficulties are associated with depressed mood and pain severity ratings. However, this body of research has tended to rely on self-reports of nonspecific sleep problems rather than the presence of insomnia as a distinct disorder. Therefore, the primary objectives of this study were to estimate the prevalence and correlates of insomnia in a tertiary chronic pain sample.

METHODS: A total of 296 patients attending a tertiary chronic pain program completed a pain history questionnaire that included a series of items designed to assess the DSM-IV diagnostic criteria for insomnia. Participants also completed the Beck Depression Inventory (BDI), the McGill Pain Questionnaire (MPQ) and the Multidimensional Pain Inventory (MPI).

RESULTS: A majority of patients (60.1%) met diagnostic criteria for insomnia. Those with insomnia reported greater levels of pain on the MPQ and the MPI than those without insomnia. On the MPI, those with insomnia also reported significantly lower levels of control over their lives, greater levels of distress and more punishing responses from their partners. In addition, those with insomnia had significantly higher BDI scores than those without insomnia.

CONCLUSIONS: Consistent with earlier studies that assessed nonspecific complaints of poor sleep, insomnia as defined by formal diagnostic criteria is highly prevalent among chronic pain patients. The correlates of insomnia are also similar to the correlates of sleep difficulties identified in previous research.

P-54
RELATIONSHIPS BETWEEN ATTACHMENT DIMENSIONS AND SELF-REPORTS OF NEGATIVE PAIN-RELATED APPRAISALS

Lachlan A McWilliams PhD[1], Michel R Thomas PhD[2]
[1]Acadia University, Wolfville, Nova Scotia; [2]University of Manitoba, Winnipeg, Manitoba

AIM: Attachment theory has been used as a framework for investigating a range of clinically relevant outcomes. Studies have suggested that insecure attachment is a risk factor for the development of chronic pain and contributes to increased distress and disability among those with chronic pain. The aim of this study was to investigate the hypothesis that those with insecure attachment make more negative pain-related appraisals than those with secure attachment.

METHODS: A large university student sample (N=281) free of chronic pain completed the Experiences in Close Relationships Questionnaire. This measure assesses adult romantic attachment and includes a Model of Self scale (ie, anxiety regarding rejection based on beliefs of personal unworthiness), and a Model of Others scale (ie, mistrust and discomfort with interpersonal closeness). Negative pain-related appraisals were assessed using the Fear of Pain Questionnaire, the Pain Catastrophizing Scale and the Pain Vigilance and Awareness Questionnaire.

RESULTS: Multiple regression analyses indicated that the Model of Self attachment dimension was positively associated with each of the negative pain-related appraisal variables. The Model of Others dimension was not significantly associated with the pain-related appraisals.

CONCLUSIONS: The findings supported the hypothesis that those with insecure attachment make more negative pain-related appraisals than those with secure attachment and indicated that the attachment dimension of Model of Self was most salient when considering such appraisals. Further research investigating a statistical model in which negative pain-related appraisals mediate the association between insecure attachment and negative outcomes (eg, increased disability) is warranted.

P-55
OFTEN MISSED TREATABLE COMORBIDITIES IN PATIENTS WITH TREATMENT-RESISTANT CHRONIC PAIN: CASE STUDIES

Janice J Montbriand BA[1], M Montbriand MD[2]

[1]University of Northern British Columbia, Prince George, British Columbia; [2]Lakeshore Medical Clinic, Regina, Saskatchewan

AIM: To present several often missed comorbidities in patients with treatment-resistant chronic pain through case studies in a general medical practice, and to highlight the need for further investigation in these areas. Due to recent advances, some contributing comorbidities in chronic pain are becoming more detectable, leading to management.

METHODS: Sleep apnea, bipolar disorder and occult vitamin deficiencies were investigated in patients with treatment-resistant chronic pain in a general medical practice. Bipolar disorder was measured with the Mood Disorder Questionnaire and detailed current and retrospective interviews. Pernicious anemia is virtually nonexistent in Canada due to folic acid supplementation in flour, leading to undiagnosed cases of leg pain related to vitamin levels. Testing B_{12} and 25-OH vitamin D levels could be helpful in treatment. Sleep apnea was investigated using in-home nocturnal oximetry. Case studies and possible treatments are presented.

RESULTS: A proportion of cases with treatment-resistant chronic pain showed missed diagnoses of either BP, vitamin deficiencies and/or sleep apnea, and some patients have improved with treatment.

CONCLUSIONS: Bipolar spectrum, vitamin deficiencies and sleep apnea may be over-represented in patients with treatment-resistant chronic pain in general practice. Knowledge of these diagnoses may substantially change the recommended treatment, and benefit may be derived from altered treatment in these subgroups. Further research is warranted.

P-56
LONG-ACTING OPIOIDS FOR TREATMENT OF POSTOPERATIVE PAIN AFTER TOTAL HIP AND TOTAL KNEE REPLACEMENT SURGERY

Shirley L Musclow RN MN, Tabatha Bowers RN MN, Hanna Vo BScPh, Thong Nguyen BScPT, Mark Glube MD FRCP

The Scarborough Hospital, Toronto, Ontario

AIM OF INVESTIGATION: Uncontrolled pain after total joint replacement surgery interferes with joint rehabilitation. The coordination of PRN administered analgesia and physiotherapy treatment is not always well managed. We hypothesized that long-acting opioids (LAO) would benefit this patient population.

METHODS: A double-blinded, randomized controlled trial of 200 patients scheduled for total hip replacement or total knee replacement surgery was initiated in March 2004. Patients were followed during hospitalization for a maximum of 7 days. All patients received routine postoperative analgesia (PCA until day two after surgery, an NSAID, and Oxycodone 5mg + acetaminophen 325 mg PRN after discontinuation of PCA). The treatment group received an additional 30 mg of long-acting morphine q12h × 3 days starting on the first day after surgery while the control group received placebo capsules. Pain scores, adverse effects, sleep ratings, acute confusion, improvement in function, use of analgesia and patient satisfaction data was collected.

RESULTS: In an interim analysis of 101 patients, a trend of lower pain scores was reported for the treatment group. However, no statistical significance was found between both groups for satisfaction with pain control. Although the treatment group showed a trend toward higher side effects, there was no statistical difference in adverse effects between the two groups. There was no statistical difference between groups for acute confusion. Patients in the treatment group reported less interference with sleep due to pain compared with the control group (P=0.0373). The treatment group was directionally slower to ambulate after surgery (P=0.0878). However, the treatment group showed evidence of a shorter length of stay in acute care by 1.4 days.

CONCLUSIONS: LAOs are a safe and effective treatment for postoperative pain of total hip and total knee replacement surgery. Patients may have improved sleep, improved pain and potentially a shorter length of stay without risk of increased confusion while using LAO. However, consideration may need to be given to potential side effects.

P-57
INTERNET HEALTH INFORMATION SEEKING AMONG CHRONIC PAIN PATIENTS: A PILOT STUDY

Katherine Ower MD FRCPC[1], Patricia Morley-Forster MD FRCPC[2], Jana Moulin[2]

[1]Assistant Professor; [2]Associate Professor, Department of Anesthesiology and Perioperative Medicine, St Joseph's Health Care Centre; University of Western Ontario Interdisciplinary Pain Program; [3]Clinical Assistant, Department of Anesthesiology and Perioperative Medicine, University of Western Ontario, London, Ontario

AIM: Use of the Internet as a health care tool is growing. In a 2000 survey of Americans, 41% used Internet resources to answer health questions[1]. Barriers to access include lower income, lower levels of education and older age[2], which are common among pain clinic patients. We performed this survey to compare the frequency of Internet usage among chronic pain patients with patients in settings such as cancer clinics.

METHODS: Over a three-month period, every fifth patient attending a follow-up appointment at our pain clinic was invited to fill out a questionnaire detailing their ability to access the Internet. Patients were asked what sources they used to obtain information about their condition, and ranked their usefulness.

RESULTS: Fifty patients were approached, 45 completed the survey. 69% had Internet access at home. 40% used the Internet to find health information frequently. 54% would like their physician to provide a list of reliable Internet resources. 63% stated that they would use Internet access if provided in the clinic. Barriers to use included cost (18%), physical limitations (36%) and privacy issues (27%). The most frequently used resource was the pain specialist (75%). This resource was rated as very useful by 78% of respondents. In contrast, the Internet was rated as a very useful by 41%.

CONCLUSIONS: Despite accessibility barriers, the Internet is commonly used. Patients are interested in accessing Internet health resources. Physicians should be prepared to discuss information from the Internet, and may assist their patients by providing a list of reliable Internet resources.

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P-58
USE OF ULTRASOUND FOR PUDENDAL NERVE BLOCK FOR PATIENT WITH PUDENDAL NEURALGIA

Philip Peng FRCPC, Vincent Chan FRCPC, Colin McCartney FRCPC, Ayman Rofaeel MD

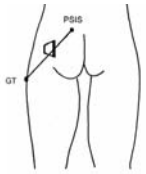
Toronto Western Hospital, University Health Network, University of Toronto, Toronto, Ontario

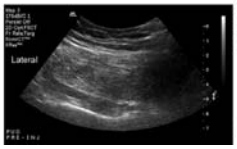
BACKGROUND AND OBJECTIVES: Pudendal neuralgia is a debilitating condition characterized by chronic perineal pain. Pudendal nerve block is crucial to the diagnosis and provides guidance for treatment. Use of ultrasound (US) for the performance of pudendal nerve block has not been described.

We reported a case series of 3 patients with the ultrasonographic imaging of the pudendal nerve and the surrounding structures.

METHODS: The patient was put in prone position. At the midpoint of a line drawn to join the posterior inferior iliac spine and the greater trochanter, the ultrasound probe was placed in the parasagittal and transverse plain to visualize the ischial spine and pudendal artery (Figure 1). A 22 G needle was inserted directly to the vicinity of pudendal artery. The position of the needle was confirmed with image intensifier. Ultrasound images were taken before and after the injection of local anesthetic and steroid. The patient was then assessed in the postanesthetic care unit (PACU) for the sensory changes to pinprick and cold in the perineal area. The posterior aspect of thigh was also test for the possible block of the posterior cutraneous nerve of thigh, a branch of sciatic nerve.

RESULT: In all patients, the pudendal artery could be easily identified (Figures 2 and 3). However, pudendal nerve could not be reliably identified before the injections in all patients. The pudendal nerve, however, was seen after injection in 2 patients. All patients developed diminished sensation pinprick and cold in PACU following the block.
CONCLUSION: Pudendal nerve block at ischial spine level can be reliably performed under ultrasound guidance.





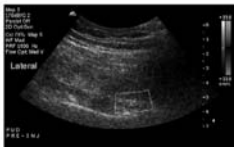


Figure 1 **Figure 2** **Figure 3**

P-59
CHARACTERIZATION OF MULTIDISCIPLINARY PAIN TREATMENT FACILITIES (MPTF) IN CANADA: STOPPAIN PROJECT-STUDY II

Philip Peng FRCPC[1], Manon Choiniere PhD[2], Dominique Dion MD[2], Chelsea Maddock BSc[1], May Ong FRCPC[3], Saifee Rashiq FRCPC[4], Gregg Tkachuk PhD[5], Howard Intrater FRCPC[6], Yves Veillette FRCPC[7], Mary Lynch FRCPC[8], Sandra Lefort PhD[9], STOPPAIN Investigators Group
[1]Wasser Pain Management Centre, Toronto, Ontario; [2]Montreal Heart Institute, Pain Treatment Centre, Montreal, Quebec; [3]Vancouver St Paul's Hospital, Vancouver, British Columbia; [4]Multidisciplinary Pain Centre, Edmonton Health Science Centre, Edmonton, Alberta; [5]Chronic Pain Centre, Saskatoon Health Region, Saskatoon, Saskatchewan; [6]Health Science Centre Pain Clinic, Winnipeg, Manitoba; [7]Clinique Anyi-douleur, Montréal, Québec; [8]Pain Management Unit, Queen Elizabeth II Health Sciences Centre, Halifax, Nova Scotia; [9]School of Nursing, Memorial University, St John's, Newfoundland

OBJECTIVE: To describe the services currently offered in public and private MPFT in Canada.
METHOD: We define a MPTF as a clinic that (1) advertises specialized multidisciplinary services for the diagnosis and management of patients with chronic pain and (2) has a minimum of 3 different health care disciplines (including at least one medical speciality) whose services are available and integrated within the facility.
The search method included approaching all hospital administrators in Canada, the Insurance Bureau of Canada, the Workman and Safety Board or similar body in each province and several large drug companies for their knowledge of pain clinics. Pain clinics were also identified using Internet searches. Designated investigators were responsible for identifying true MPTF from this preliminary list in their provinces. MPTF administrators completed the questionnaire about the 1) organisational structure, 2) staff composition and availability, 3) clinical activities such as number of patients new and follow up visits/year, waiting list, types of pain problems treated, treatment modalities offered and/or available within the institution, 4) the teaching and research activities, and 5) the type of funding.
RESULT: The preliminary results from 5 provinces are presented below. The response rate was 95%. At least 60% of MPTF are located in major urban centres. The waiting time in most provinces is more than 1 year.

Province	Clinics (n)	New consultations in the past 12 months (n)	Follow-up visits in the past 12 months (n)	Average waiting delay (months)	Most frequent chronic pain syndrome
British Columbia	6	171 (13–1056)	265 (13–9875)	2 (1–15)	LBP
Alberta	10	450 (173–612)	68 (0–784)	14 (1–37)	LBP
Ontario	35	581 (181–600)	9666 (1200–10,000)	26 (4–21)	LBP
Manitoba	1	1500	1300	33	LBP
Québec	12	440 (300–795)	3000 (2231–6618)	39 (12–61)	LBP

Data presented as median and interquartile range. LBP Low back pain

CONCLUSION: There is a significant maldistribution of MPTF within different provinces with most of them concentrated in downtown areas and more than 50% of MPTF in Canada are in Ontario.

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EVALUATION OF AN INTERFACULTY PAIN CURRICULUM FOR STUDENTS FROM SIX HEALTH SCIENCE FACULTIES

Lalitha Raman-Wilms BSc(Phm) PharmD FCSHP, Judith Hunter BSc(PT) MSc PhD, Judy Watt-Watson RN PhD, Lynn Cockburn MEd OT, Glenn Regehr PhD, Rosemary Waterston MEd, Leila Lax BA BSc AAM MEd, Larry Librach MD CCFP FCFP, Peter Pennefather PhD
University of Toronto Centre for the Study of Pain (UTCSP), Toronto, Ontario

AIM: Effective pain management requires health professionals to understand pain assessment and management and to have a commitment to work together. The UTCSP organized an Interfaculty Pain Curriculum Committee to develop, implement and evaluate an integrated pain curriculum for students from six faculties/departments. The evolving model has been implemented over four years.
METHODS: Students from six faculties/departments participated in an integrated 20-hour pain curriculum in March 2002 (n=540), 2003 (n=565), 2004 (n=698) and 2005 (n=751). Learning occurred through presentations, patient panel, small group work, and use of standardized patients or cases. Group work was facilitated by clinicians representing all participating professions (n=63 2002, n=78 2003, n=84 2004 and 2005). Students were assessed in a pre- post-test design on knowledge and beliefs about pain and their understanding of interdisciplinary roles. A paired Student's *t* test was used to compare pre- and post-test student scores. Daily surveys on process and content were also completed.
RESULTS: Each year from 2002 to 2005 the change in correct scores from the pre-test to the post-test was between 15% to 17%. The difference in the mean each year ranged from 5.9 to 6.5 ($P<0.05$). Most responders (85% to 95%) agreed or strongly agreed that the interfaculty pain curriculum was relevant and informative.
CONCLUSION: The interfaculty pain curriculum was effective in increasing students' knowledge of pain assessment and management and their awareness of related health professional roles in all three years. This program will be offered again in March 2006.
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DEMOGRAPHIC AND HEALTH CORRELATES OF CHRONIC PAIN IN THE CANADIAN NATIONAL PUBLIC HEALTH SURVEY (NPHS)

Saifudin RASHIQ MB Msc(Epid) FRCPC, Bruce D DICK PhD Cpsych
Multidisciplinary Pain Centre, Department of Anesthesiology and Pain Medicine, University of Alberta, Edmonton, Alberta

BACKGROUND: Existing epidemiological studies of chronic pain in Canada are of limited scope. We determined the strengths of traditionally recognized and other plausible associations with chronic pain in a large population-based sample.
METHOD: The NPHS asks Canadians about demographics, health status, health behaviour, attitudes to health and health care utilization. It includes questions about the presence of usual pain/discomfort, its severity and the degree to which it interferes with life. We constructed logistic regression models to estimate the independent risks for daily pain attributable to each of a series of known and plausible risk factors using the responses of adult 1996 NPHS respondents who were asked the full range of health questions (n=70,715).
RESULTS: 14% reported usual pain or discomfort. Associations were found between pain and increasing age, female gender, low income, less education, social isolation, being overweight, daily smoking, depression, mental distress and physical inactivity. Several categories of chronic medical conditions were also associated with pain, including conditions such as COPD and thyroid disease that are not traditionally thought of as painful.

Most of these associations grow stronger as the severity of and interference from pain increases.

CONCLUSION: The observation that so many nonmedical factors are independently correlated with chronic pain further calls into question the power of the biomedical model to explain and treat it. The finding of increased risks of pain amongst those with chronic medical illnesses argues for the inclusion of the biopsychosocial pain management model as part of the care for these conditions.

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HEALTH CARE RESOURCE UTILIZATION (HCRU) BY PERSONS WITH CHRONIC PAIN: RESULTS FROM A LARGE, CANADIAN POPULATION HEALTH SURVEY

Saifudin RASHIQ MB MSc(Epid) FRCPC[1], Bruce D DICK PhD CPsych[1], Paul Taenzer PhD CPsych[2], Donald Schopflocher PhD[3]

[1]Multidisciplinary Pain Centre, Department of Anesthesiology and Pain Medicine, University of Alberta, Edmonton; [2]Calgary Chronic Pain Centre, Calgary; [3]Health Surveillance, Alberta Health and Wellness, Edmonton, Alberta

BACKGROUND: Persons with chronic pain are known to access health care resources at a greater rate than those without pain. Is this an intrinsic property of the chronic pain experience or is chronic pain merely a marker for another factor or factors that promote greater HCRU?

METHOD: We extracted self-reported health resource use data from adult 1996 National Public Health Survey Respondents who were asked the full set of health-related questions (N=70,715) . We compared HCRU in those without 'usual pain or discomfort' with those whose pain was described as mild, moderate and severe. Outcomes of interest were the comparative odds in the previous 12 months of (i) having visited any health care provider, (ii) having seen a family doctor more than the median number of times, (ii) having seen any doctor more than the median number of times, (iii) having received home care and (iv) having seen an alternative medicine provider. We used logistic regression to obtain outcomes and to correct for potential confounding by age, gender, income, education, urban vs rural domicile, province or region of residence, obesity, physical inactivity, smoking, alcohol consumption, depression, mental distress, medication use and a number of comorbid illnesses such as diabetes, heart disease and COPD.

RESULTS: Odds ratios for HCRU by pain severity category compared with no pain are shown. **Bold** indicates P<0.05

		Pain intensity		
HCRU type	**Any**	**Mild**	**Moderate**	**Severe**
Saw any provider	**1.78**	**1.25**	**2.07**	**1.97**
Saw any doctor	**2.29**	**1.62**	**2.21**	**3.12**
Saw family doctor	**2.29**	**1.58**	**2.19**	**3.22**
Got home care	**2.14**	1.15	**1.91**	**2.03**
Saw alternative practitioner	**2.22**	**1.57**	**1.92**	**2.28**

CONCLUSION: Even after correcting for a large number of confounding factors, chronic pain is independently associated with increased odds of HCRU of all types. As pain intensifies, so does the propensity for increased HCRU.

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HYPERTENSION AND CHRONIC PAIN ARE ASSOCIATED IN THE ADULT CANADIAN POPULATION

Saifudin Rashiq MB Msc(Epid) FRCPC[1], Bruce D Dick PhD Cpsych[1], Christopher France PhD[2]

[1]Multidisciplinary Pain Centre, Department of Anesthesiology and Pain Medicine, University of Alberta, Edmonton, Alberta;

[2]Department of Psychology, Ohio University, Athens, Ohio

BACKGROUND: The relationship between hypertension and pain is complex. Hypertension is associated with hypoalgesia in experimental models. Clinically, hypertensives have less angina and experience more silent myocardial infarctions. In contrast, known hypertensives report more somatic complaints and health concerns than normotensives or hypertensives who are unaware of the fact.

METHOD: We estimated the risk of reported pain in hypertensives using data from adult 1996 respondents to the Canadian National Public Health Survey. (N=70,715). It asks 'are you usually free of pain and discomfort' and a supplementary question about pain severity if needed. It also asks if the respondent has had 'high blood pressure diagnosed by a health professional'.

RESULTS: 12.2% of the sample was hypertensive. Their incidence of reporting usual pain (of any severity) was 26.3%, compared with 12.7% in normotensives. We corrected for numerous confounding factors using logistic regression (age, gender, marital status, income, education, social isolation, obesity, smoking, alcohol consumption, use of NSAIDs/Tylenol, use of opiates, depression, mental distress, physical inactivity, cardiac illness and several other categories of chronic medical conditions). The resulting odds ratios for pain are shown below. Hypertensives are more likely to report usual pain, and this association becomes stronger with increased pain severity.

CONCLUSION: Our results are not consistent with laboratory evidence of hypertensive hypoalgesia. However, they agree with a recent finding of higher day-to-day pain in individuals who are aware of their hypertension diagnosis compared to those who believe themselves to be normotensive.

Pain severity	Odds ratio	95% CI
Any	1.289	1.211 to 1.374
Mild	1.109	0.996 to 1.234
Moderate	1.254	1.160 to 1.354
Severe	1.280	1.126 to 1.454

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QT INTERVAL AND T-WAVE DISPERSION ASSOCIATED WITH CHRONIC METHADONE THERAPY

Ayman Rofaeel MD, Philip Peng FRCPC, Ihab Louis MD, Lilian Iskander BSc

Wasser Pain Management Centre, Mount Sinai Hospital, University of Toronto, Toronto, Ontario

BACKGROUND: Torsades de pointes has been reported in patients receiving high doses of methadone. It is believed that a prolonged QT interval leads to the development of torsades. Current literature also suggests that widen T-wave dispersion correlate better with the risk of torsades. The objective of this study is to determine the prevalence of QT prolongation and transmural dispersion of repolarization (TDR) across the myocardial wall as measured by T wave dispersion in chronic pain patients receiving either chronic methadone or opioid therapy.

METHODS: It is a prospective study in which 200 chronic pain outpatients currently taking methadone (group M) and other opioids (control group C) were recruited. For all patients, an ECG before and 2 months after the start of the opioid therapy were collected. The measured corrected QT interval (QTc) was estimated as QT Interval (msec) divided by the square root of the preceding R-R interval (sec). A QTc ≥500 msec was considered to be prolonged. TDR was measured in leads II and V5 as the time interval between the peak and the end of the T wave (Tp-e). Other collected variables included age, sex and the use of concomitant medications.

RESULTS: Preliminary results of the 2 months follow up ECG are presented here. There is a significant prolongation of Tp-e V5 in group M compared with group C (P<0.05).

CONCLUSION: In monitoring patient on chronic methadone therapy, both QT interval and TDR should be used as a marker of increase risk for torsades.

Patient demographics and ECG findings. Data are expressed as mean ± SD

	Control (opioid) group (n=12)	Methadone group (n=12)
Age (y)	50.7±14.5	55.3±11.8
Gender (M/F)	4/8	3/9
Daily dose (mg)	142±121	76±57
QTc (ms)	406±29	425±22
Tp-e II (ms)	74.5±12.9	80±17.1
Tp-e V5 (ms)	69.6±10.1	83±18.7*
Concomitant Medications		
Anticonvulsants (%)	25	8.3
Antidepressants (%)	41.7	66.7

**P<0.05*

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COST-EFFECTIVENESS OF PREGABALIN FOR THE MANAGEMENT OF NEUROPATHIC PAIN (NeP) ASSOCIATED WITH POSTHERPETIC NEURALGIA (PHN) IN CANADA

Catherine Rousseau MSc[1], Allan Gordon MD FRCPC[2], Montserrat Vera-Llonch MD MPH[3], Ellen Dukes PhD[4], Jean-Eric Tarride PhD[5]

[1]Pfizer Canada Inc, Kirkland, Québec; [2]Mount Sinai Hospital, Toronto, Ontario; [3]Policy Analysis Inc (PAI), Brookline, Massachusetts; [4]Pfizer Global Pharmaceuticals, New York, New York; [5]Formerly Pfizer Canada Inc, Kirkland, Quebec; Since March 2005, McMaster University, Hamilton, Ontario

AIM: Currently many Canadian patients are suffering from NeP after an episode of herpes zoster. The objective is to examine the cost-effectiveness of pregabalin, the first approved drug for the management of NeP associated with PHN.

METHODS: The analysis uses a previously published stochastic simulation Markov model to estimate the impact of pregabalin (150-600 mg) versus gabapentin (900-3600 mg). The model simulates treatment strategies on a hypothetical cohort of 1000 patients with PHN and assesses their pain experience over time on a daily basis. The estimates of health benefits were based on the results of two, randomized, clinical trials of pregabalin and gabapentin, respectively. Utility values and resource utilization were estimated from 126 Canadian patients and 80 Canadian physicians, respectively. The analyses are expressed in terms of incremental cost per day with no or mild pain and in terms of incremental cost per quality-adjusted life-year (QALY) gained.

RESULTS: Treatment with pregabalin (compared with gabapentin) results in 6 additional days with no or mild pain and an additional 0.0064 QALYs gained for the 12-week period. The incremental average medical savings of treating with pregabalin are estimated to be $62.39 per patient for the 12-week period. Consequently, pregabalin is the dominant strategy (more effective and less expensive) over gabapentin (95% CI first analysis: dominant to $0 per day with no or mild pain; 95% CI second analysis: dominant to $158/QALY). Sensitivity analyses are supportive of findings from base case analyses.

CONCLUSION: Compared with gabapentin, pregabalin therapy is cost-saving in the management of NeP associated with PHN.

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DEVELOPMENT AND VALIDATION OF A MEASURE OF PERCEIVED VICTIMIZATION IN THE EXPERIENCE OF CHRONIC PAIN AND DISABILITY: PRELIMINARY ANALYSIS

André Savard MPs[1], Michael JL Sullivan PhD[1], Simon Laliberté PhD[2], Richard Catchlove MD[3]

[1]Département de psychologie, Université de Montréal; [2]Programme des lésions musculo-squelettiques, Centre de réadaptation Lucie-Bruneau; [3]Directeur, Centre de traitement de la douleur de Montréal, Montréal, Québec

AIM: To develop a reliable self-report measure of victimization for individuals with chronic pain and disability and to explore the underlying structure of the instrument.

METHODS: A 12-item self-report measure, the Injury Experiences Questionnaire (IEQ) has been developed and administered to 20 individuals who have sustained injuries that have resulted in a chronic pain condition. The item content was rationally derived based on several sources of information: philosophical and social theory related to the concept of injustice, clinical practice in the treatment of individuals with chronic pain conditions, and focus group discussions of clinician's descriptions of the thought processes associated with perceived victimization. Preliminary analyses were performed to assess internal consistency reliability and explore the underlying structure of the IEQ.

RESULTS: Global Cronbach's alpha met the criteria for research applications (α=0.83). Principal component analysis yielded a 4-component solution after rotation. Seven items loaded mainly on the first component, whereas the remaining 5 were distributed among three other components. These items could be removed or their formulation reworked, as they do not appear to be related to the principal component. Moreover, three of these items showed nonsignificant correlation to total score, indicating that they might not be related to the main construct and therefore could be deleted.

CONCLUSIONS: Results suggest that perceived victimization can be measured using self-report and conceptualized as an unidimensional construct.

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SUBGROUPS OF PATIENTS AT DIFFERENTIAL RISK FOR DYSFUNCTION SECONDARY TO CHRONIC PAIN: EVIDENCE OF PERSISTING DYSFUNCTION?

A Shapiro PhD, H Getty PhD, Teasell MD, P Morley-Forster MD, R Horrill K MScN, K Sequiera MD

St Joseph's Health Care, London, Ontario

A small percentage of patients with persistent pain, those most disabled and distressed, account for an unusually large percentage of costs (medical, disability) associated with pain. Our previous research with outpatients from rehabilitation and anesthesia clinics identified, on the basis of personality traits, three distinct patient subgroups at risk for dysfunction secondary to pain. These clusters included an "obsessive-perfectionistic" cluster 1, an "avoidant-pain-anxious" cluster 2 and a "low-scoring" (on measures of personality) cluster 3. Cluster 1 and 2 patients reported greater dysfunction secondary to pain than Cluster 3 patients. The present study examined whether patients originally classified as members of greatest risk subgroups continued to show greatest dysfunction at one-year follow-up. One hundred twenty-five participants (66% female, mean age 44, mean education 13.5 years, mean duration of pain 6.65 years) from our initial study of coping with pain mailed self-report data on pain, personality and adjustment one year following intial contact. Preliminary results suggest that members of clusters 1 and 2 continued to show poorer adjustment than members of cluster 3 at one-year followup. While more research is needed, results highlight the need to assess and intervene with pain patients at greatest risk for dysfunction due to pain.

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Information: Contact Allan.Shapiro@sjhc.london.on.ca, telephone 519-646-6000 ext 61047 or 519-439-8861

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NIGHT PAIN HAS AN ADVERSE EFFECT ON WELL-BEING IN RHEUMATOID ARTHRITIS

Y Shir[2], M Ware[2], D Da Costa[3], M Fitzcharles[1,2]

[1]Division of Rheumatology, McGill University; [2]McGill Pain Centre, McGill University; [3]Department of Medicine, McGill University, Montreal, Quebec

Night joint pain in patients with rheumatoid arthritis (RA) may cause disturbed sleep. Poor sleep may in turn impact on global health and well-being. Current measures of disease status in RA do not include night pain as a variable. The purpose of this study was to examine factors associated with self-report of night pain in patients with RA.

A cross-sectional study of consecutively attending RA patients was conducted. Patients were questioned about the occurrence of night pain. Night pain was categorized as present if patients reported that pain occurred at least nightly or repeatedly during a single night, and not present if it occurred less often than each night. Measures of disease status included: joint swelling (JS), HAQ, DMARD and steroid use. Measures of distress included: depression and anxiety on the relevant subscales of the AIMS questionnaire, McGill pain questionnaire (MPQ), patient global assessment (PTG) on a 10 cm VAS, and report of distress caused by pain on a 4-point Likert scale.

Sixty RA patients (54 female) mean age 57 years (±13), and positive rheumatoid factor 42 (70%) were studied. RA disease characteristics for the whole group were as follows: disease duration 15±13 yrs, JS 8±6, HAQ 1.14±0.74, currently on DMARD 54 (93%), and use of >3 DMARDS 23 (39%), and on steroids 20 (33%). Twenty-nine (49%) patients reported at least nightly occurrence of pain. The group with night pain compared with those without night pain had more depression 4.1 vs 3.1 (P=0.05), scored higher on the MPQ 23 vs 12.5 (P<0.001), reported more distress due to pain 2.9 vs 1.9 (P<0.001), rated global disease status higher 5.5 vs 2.4 (P<0.001), and had a higher HAQ 1.4 vs .85 (P=0.002). There were no differences between the groups for measurements of joint swelling, DMARD or steroid use, or measurements of anxiety.

Night pain is significantly associated with distress in patients with RA and shows less related to standard measures of disease activity. Reduction in night pain may greatly improve overall well-being in RA patients.

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SEX DIFFERENCE IN PAIN INHIBITORY MECHANISMS DURING THE INTERPHASE OF THE FORMALIN TEST

Marie-France Spooner MSc[1], Isabelle Gaumond PhD(c)[2], Patricia Robichaud BSc[1], Serge Marchand PhD[1,2]

[1]Université de Sherbrooke, Faculté de Médecine et des sciences de la santé, Sherbrooke; [2]Université du Québec en Abitibi-Témiscamingue, Département des sciences de la santé, Rouyn-Noranda, Québec

INTRODUCTION: Sex differences in pain perception are well established. We previously demonstrated with rats that sex hormones are responsible for this divergence (Gaumond, 2005). Furthermore, many chronic pain conditions are more prevalent in women than in men and endogenous pain inhibitory mechanisms seem to be implicated.

OBJECTIVES: To verify the role of opioids and sex hormones in pain inhibitory mechanisms.

METHODS: Formalin tests have been done using a nonselective opioid antagonist (naloxone, 0.5 to 10 mg/kg ip) on healthy and gonadectomized Sprague-Dawley rats of both sexes. Pain behaviours were measured for 60 min.

RESULTS: The interphase of the formalin test represents an active endogenous pain inhibitory mechanisms. We observed that the interphase was almost completely blocked by naloxone for female rats, but with only one dose (2 mg/kg). No dose of naloxone had an effect on male rats. Furthermore, the interphase was partially blocked in gonadectomized males and females with every dose.

CONCLUSION: Opioids are implicated in this pain inhibitory mechanisms and regulated by sex hormones concentration. Testosterone seems to inhibit the opioid mechanism during the interphase and could activate another pain inhibitory mechanism. Moreover estrogen and/or progesterone could modulate the expression of the opioids receptors (mu, kappa or delta) implicated in the interphase and switch off another mechanism. A better characterisation of the difference between male and female endogenous pain inhibitory mechanisms could allow to understand the greater prevalence of some chronic pain conditions in women.

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PAIN SEVERITY LEVELS. WHICH PERSPECTIVE: PATIENT OR PHYSICIAN?

J-E Tarride PhD[1], J-P Collet PhD[2], M Choinière PhD[3], C Rousseau MSc[4], A Gordon MD FRCPC[5]

[1]Formerly Pfizer Canada Inc, Kirkland, Quebec; Since March 2005, McMaster University, Hamilton, Ontario; [2]Jewish General Hospital, Montreal, Quebec; [3]Montreal Heart Institute, Montreal, Quebec; [4]Pfizer Canada Inc, Kirkland, Quebec; [5]Mount Sinai Hospital, Toronto, Ontario

AIM: To assess the impact of using physicians' or patients' perception of pain severity in evaluating health-related quality of life (HRQoL) and resource utilization associated with neuropathic pain (NeP).

METHODS: A cross-sectional, observational study was conducted at primary care sites across three Canadian provinces among NeP patients. Data were collected through patient self-administered questionnaires to measure HRQoL and investigator chart review to collect resource utilization. Patients' pain severity levels were assessed through the self-administered Modified-Brief Pain Inventory. Physicians were asked to classify their perception of their patients' pain as mild, moderate or severe.

RESULTS: One hundred twenty-six subjects were enrolled. Severe pain was reported more often by subjects (33%) than by physicians (22%). Overall, the two definitions of pain did not change the HRQoL results (ie, decreased HRQoL with increased pain severity). However, the number of GP visits over the three-month period before study visit increased with pain severity (mild 1.1, moderate 2.3 and severe 3.0) when using physicians' assessment of patient's pain severity. Conversely, the number of GP visits was independent of pain severity (mild 2.1, moderate 2.2 and severe 2.2) when using patients' assessment of their pain severity. Other discrepancies were observed regarding the number of specialist visits and the use of diagnostic tests.

CONCLUSIONS: Subjects and physicians have different perceptions of pain severity. Patient assessment of pain severity should be used for HRQoL assessment. As physicians are the main drivers of medical resource use, physicians' assessment of pain intensity should be used for identification of medical resource utilization per pain severity level.

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CANADIAN ECONOMIC EVALUATION OF PREGABALIN FOR THE MANAGEMENT OF NEUROPATHIC PAIN (NeP) ASSOCIATED WITH DIABETIC PERIPHERAL NEUROPATHY (DPN)

Jean-Eric Tarride PhD[1], Allan Gordon MD FRCPC[2], Montserrat Vera-Llonch MD MPH[3], Ellen Dukes PhD[4], Catherine Rousseau MSc[5]

[1]Formerly Pfizer Canada Inc, Kirkland, Quebec; Since March 2005, McMaster University, Hamilton; [2]Mount Sinai Hospital, Toronto, Ontario; [3]Policy Analysis Inc (PAI), Brookline, Massachusetts; [4]Pfizer Global Pharmaceuticals, New York, New York; [5]Pfizer Canada Inc, Kirkland, Quebec

AIM: To examine the cost-effectiveness of pregabalin, a new treatment approved in Canada for the management of NeP associated with DPN, versus gabapentin.

METHODS: A published stochastic simulation Markov model was used to determine the 12-week cost-effectiveness of pregabalin versus gabapentin. Based on patient-level data from randomized clinical trials of pregabalin (150 to 600 mg) and gabapentin (900 to 3600 mg), the model simulated the daily pain experience of a hypothetical cohort of 1000 DPN patients to generate the expected mean numbers of days with no or mild, moderate, and severe pain over a 3-month time period as well as quality-adjusted life-years (QALYs). Resource utilization per levels of pain severity was identified through a 2004 survey amongst 80 Canadian generalists and specialists treating DPN patients. The economic analysis was expressed in terms of incremental cost per day with no or mild pain and incremental cost per QALYs.

RESULTS: Compared to gabapentin, treatment with pregabalin saved $19 per patient over the 12-week period. In addition, treatment with pregabalin (compared to gabapentin) resulted in 6 additional days with no or

mild pain and an additional 0.0047 QALYs. Therefore, pregabalin was the dominant strategy as it was less expensive and more effective than gabapentin (95% CI first analysis: dominant to $13 per day with no or mild pain; 95% CI second analysis: dominant to $15,708 per QALY). Sensitivity analyses are supportive of the robustness of model findings.
CONCLUSION: Pregabalin therapy for patients with NeP associated with DPN is cost-saving (saves money and more effective) when compared with gabapentin.

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CATASTROPHIZING AND FEAR OF MOVEMENT AS DIFFERENTIAL PREDICTORS OF PAIN BEHAVIOURS AND AVOIDANCE

Pascal Thibault BSc, Simon Racicot, Michael JL Sullivan PhD
Department of Psychology, Université du Québec à Montréal, Université de Montréal, Montréal, Québec

OBJECTIVES: This study was designed to assess whether pain catastrophizing and fear of movement are associated with different types of pain behaviour. Theoretical and empirical research on these variables suggest that catastrophizing may be associated more with communicative behaviour, while fear of movement may be associated more with protective and avoidant behaviour.
METHODS: Sixty-four pain patients (29 men and 35 women) with a mean age of 45.2 years were asked to complete the Pain Catastrophising Scale (PCS, Sullivan et al, 1995) and the Tampa Scale of Kinesophobia (TSK, Kori et al, 1990) and to participate in a protocol designed to elicit pain behaviour. The protocol included two conditions, one in which participants reported the weight of paint cans, and the other in which they reported their level of pain while performing the exact same task. Video records were independently coded by two assistants trained to code pain behaviour.
RESULTS: Correlations were calculated between scores on PCS, TSK, and the different pain behaviour. Results showed that catastrophizing is significantly associated with communicative, protective and avoiding behaviour, but only in the condition where participants reported their level of pain. On the other hand, fear of movement is associated uniquely with protective and avoidant behaviour, in both conditions.
CONCLUSION: The pattern of findings suggests that for high catastrophizers, pain behaviour may be triggered by the demand to focus on pain, while high level of fear of movement led to constant active and passive protective behaviour. Theoretical implications of the findings are discussed.

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PERSONALITY SCORES THAT RELATE TO FREQUENT MUSCLE PAIN IN UNIVERSITY STUDENTS

Michael R Thomas PhD, Erin Warwick, Julia Berestiansky BA, Ranjan Roy ADSW
Department of Psychology University of Manitoba, Winnipeg, Manitoba

AIM OF INVESTIGATION: Compared muscle pain and personality features as well as coping scores and disability level in university men and women.
METHODS: Participants were of 180 young adult men and 180 young adult women who reported their frequency of muscle pain. These participants were divided into four groups 1) high pain, males, 2) high pain, females, 3) low pain, males and 4) low pain, females. All participants filled out a questionnaire that included demographic questions on frequency, severity and level of disability related to their muscle pain and a number of personality features such as the Optimism/Pessimism Scale, the Life Orientation Scale, Beck Depression Index, Beck Anxiety Index, BEM, Daily Hassles Scale and the Pain Coping Scale. Participants were recruited from first year university students.
RESULTS: The responses for the four groups were compared statistically. There were significant differences in pain behaviour across the four groups. High pain male participants reported less severe disability ratings than the other groups. In comparison the high pain female participants reported highest pain severity and frequency ratings. Low Coping Scores were significantly correlated with sex, depression scores and gender role. Other significant differences are reported between the four groups.
CONCLUSIONS: Muscle pain is highly correlated with fibromylgia in pain literature. Possible personality correlates with early detection of fibromylgia vulnerability is discussed. Implications regarding disability and coping are also discussed.

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CHRONIC PAIN, KINESOPHOBIA AND DEPRESSION: THE MEDIATING ROLE OF CATASTROPHIZING

Gregg Tkachuk PhD, Phil Carverhill PhD, Kate Fast BSCPT, Peggy Olson OT Reg, Anna Power-Horlick RN, Loren Regier BSP, Shannon Sigfusson BSCPT, Sherri Wagenhoffer BSCPT
Chronic Pain Centre, Saskatoon Health Region, Saskatoon, Saskatchewan

The Fear Avoidance Model proposes that a tendency toward catastrophically misinterpreting the implications of pain results in increased fear of movement/reinjury, disability and depression. Conversely, a propensity toward noncatastrophic cognition is assumed to result in better adaptation to pain. This study attempted to determine whether pain catastrophizing mediated the relationship between pain severity, kinesophobia, and depression in a sample of 49 individuals (75% women, mean age of 43, 73% musculoskeletal pain) who completed the Multidimensional Pain Inventory (MPI), Pain Catastrophizing Scale (PCS), Tampa Scale of Kinesophobia (TSK) and Beck Depression Inventory-II (BDI-II) upon admission to a chronic pain treatment program. Path analyses revealed that pain catastrophizing fully mediated the association between pain severity (MPI) and fear of movement/reinjury (TSK) (Z=2.72, P=0.007). Pain severity, catastrophizing and gender accounted for 42% of the variance in fear of movement/reinjury. Pain catastrophizing was also found to partially mediate the relationship between pain and depression (R^2=0.45, Z=2.47, P=0.014). Fear of movement/reinjury did not predict depression, after controlling for pain severity and catastophizing. These results provide partial support for the Fear Avoidance Model and suggest that the reduction of pain catastrophizing is a key treatment target for improving overall adjustment to chronic pain.

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A MEDIATIONAL MODEL OF PAIN-RELATED DEPRESSION IN MOTOR VEHICLE ACCIDENT SURVIVORS

Gregg Tkachuk PhD[1], Bruce McMurtry PhD[2], John Marshall MScPT[2], Annalyn Mercado PhD[2]
[1]Chronic Pain Centre, 2FIT for Active Living Program, Saskatoon, Saskatchewan

Previous research has shown that perceptions of pain-related interference and life control individually mediate the relationship between pain and depression in chronic pain patients. This study attempted to replicate and extend this research by proposing and testing a path model predicting depression from pain intensity, pain-related interference and life control in a sample of 97 motor vehicle accident survivors (61% women, mean age 40 yrs, 54% whiplash-associated disorder diagnosis) who completed the Multidimensional Pain Inventory, McGill Pain Questionnaire, and Beck Depression Inventory-II upon admission to a tertiary rehabilitation program. Path analyses and Sobel tests revealed that pain-related interference (R^2=0.30, Z=2.52, P=0.01) and life control (R^2=0.37, Z=2.83, P=0.005) partially mediated the relationship between pain and depression and further that life control partially mediated the relationship between pain-related interference and depression, while controlling for pain (R^2=0.42, Z=2.36, P=0.02). Thus, the impact of pain intensity was reduced, but not eliminated, by these cognitive mediators. The results provide partial support for the proposed directional model and suggest that depression may be reduced by treatments that not only target pain-related disability and perceptions of personal control, but also adequate pain relief.

P-76
PAIN REPORTING IN RHEUMATOID ARTHRITIS MAY BE A CHARACTERISTIC OF INDIVIDUAL PAIN SENSIBILITY RATHER THAN DISEASE STATUS

MA Ware[2], M-A Fitzcharles[1,2,3], D Da Costa[3], Y Shir[2]
[1]Division of Rheumatology, McGill University; [2]McGill Pain Centre, McGill University; [3]Department of Medicine, McGill University, Montreal, Quebec

Patients' report of pain intensity (PTP) as recorded on a visual analogue scale is an important component of measurement of disease status in rheumatoid arthritis (RA). It is possible that PTP may be more closely aligned with generalized pain hypersensibility rather than with disease activity. The purpose of this study was to explore factors correlating with PTP in patients with RA.

A cross-sectional study of consecutively attending RA patients was conducted. The following variables were measured: duration of disease, age, joint swelling (JS), joint tenderness (JT) (68 joint count), patient global assessment (PTG), health assessment questionnaire (HAQ), ESR, DMARD and steroid use. Additional pain measures were: PTP, tender point count (TP) and the McGill pain questionnaire (MPQ). Depression and anxiety were measured on the relevant subscales of the AIMS questionnaire.

Sixty RA patients (54 female), mean age ± SD 57±13 yrs and positive rheumatoid factor 42 (70%) were studied. RA disease characteristics were as follows: disease duration 15±13 yrs, JS 8±6, HAQ 1.14±0.74, currently on DMARDs 54 (93%), use of >3 DMARD's 23 (39%), and on steroids 20 (33%). PTP was significantly correlated with JT ($P=0.001$), PTG ($P<0.001$), TP ($P=0.01$), HAQ ($P<0.001$), and the total MPQ ($P<0.001$), as well as the evaluative, sensory and affective subcategories of the MPQ, but not with duration of disease, age, JS, ESR, DMARD or steroid use, or the depression and anxiety subscales of the AIMS.

The pain reported by patients with RA might, therefore, more closely represent a specific characteristic of pain sensibility as unique to an individual patient, rather than being a reflection of RA disease or psychological status. Further study should address objective measures of pain to better clarify the weight given to pain report in global assessment of RA status.

P-77
NEUROPATHIC PAIN: A SYSTEMATIC REVIEW OF ORAL ANALGESICS

CPN Watson, Mary Chipman
University of Toronto, Toronto, Ontario

AIM: A systematic review of oral analgesics for neuropathic pain.

METHODS: This was carried out of randomized controlled trials (RCTs) in neuropathic pain (NP) in English from 1966 to 2005. These were subjected to the quality criteria of Jadad.

RESULTS: Fifty-two RCTs were identified of antidepressants, anticonvulsants and opioids in neuropathic pain. Five of the studies were comparative trials of different analgesics and 6 compared different antidepressants. Of all trials, 27 were of antidepressants, 16 of anticonvulsants and 9 of opioids. A total of 40 of 52 of the trials were carried out in postherpetic neuralgia, painful diabetic neuropathy or in both disorders. Forty-seven of the 52 were favourable for the study drug. Of antidepressant trials 13 were in painful diabetic neuropathy, 7 in postherpetic neuralgia and 7 in other NP (HIV neuropathy 2, neuropathic pain 2, central pain 1, spinal cord injury 1 and cisplatinum neuropathy 1). Anticonvulsant trials involved gabapentin (7), pregabalin (6), lamotrigine (3) and carbamazepine (1). There were 9 opioid RCTs (tramadol ×3, oxycodone ×3, morphine ×2 and levorphanol ×1).

CONCLUSIONS: Good quality RCTs support the use of the older antidepressants, the anticonvulsants gabapentin and pregabalin, and several opioids in neuropathic pain. Clinical meaningfulness data suggest a modest effect at best. Because of poor external validity it is probable that these drugs work less well in clinical practice. There is little comparative data allowing a determination of relative efficacy or subgroup responsivity.

P-78
INCIDENCE OF URINARY RETENTION IN PATIENTS RECEIVING THORACIC PATIENT CONTROLLED EPIDURAL ANALGESIA (PCEA)

Salima Ladak RN BScN MN-ACNP[1],
Meredith Muscat RN BScN MN-ACNP[1], Nahed al Baba RN BScN MN-ACNP[1], Monakshi Sawhney RN BScN MN-ACNP CNS/NP[2]
[1]Acute Pain Service, Toronto General Hospital; [2]Acute Pain Service, North York General Hospital, Toronto, Ontario

AIM: Thoracic patient controlled epidural analgesia (TPCEA) is a routine for patients undergoing major surgery. Urinary retention (600 ml or greater) is an adverse reaction to lumbar PCEA (incidence 0% to 100%). The incidence in TPCEA is unknown; however, clinical experience suggests that the risk is no greater. This study will determine whether early removal of a urinary catheter results in urinary retention in patients receiving TPCEA, document patients' perceptions of catheter removal, and evaluate whether drug class, dosage or level of the epidural catheter is related to the incidence of urinary retention. This poster describes the methodology and clinical outcomes for patients who underwent thoracic surgery.

METHOD: A quantitative descriptive design is being used to answer the research questions: what is the incidence of urinary retention when the urinary catheter is removed within 48 hours postoperatively in patients receiving TPCEA; does drug class, dosage and level of epidural catheter influence the incidence of urinary retention; and how do patients describe early removal of their urinary catheter? Participants who signed consents approved by a Research Ethics Board were assessed for urinary retention four hours postcatheter removal using bladder palpation and bladder ultrasound. They also completed a questionnaire.

RESULTS AND CONCLUSIONS: So far, 29 of 100 participants have completed the study. One male experienced urinary retention, 21% felt physical discomfort from the urinary catheter, 14% felt self-conscious and 50% felt more comfortable after its removal. Interim data suggests a re-evaluation of in-dwelling urinary catheter clinical practice guidelines to improve patient comfort, and possible practice changes in males receiving TPCEA.

P-79
THE INCIDENCE OF SUICIDAL THOUGHTS IN CHRONIC PAIN POPULATION

Mary Lynch MD MRCGP[1], Chelsea Maddock, Manijeh Ryan MD[1], Jon Hunter MD, Peter Moran MD[1], Doug Gourlay MD[1], Allan S Gordon MD FRCPC[1]
[1]Wasser Pain Management Centre, Mount Sinai Hospital, Toronto, Ontario

AIM: Chronic pain is a complex problem, affecting a large percentage of our population.

Research has shown that the chronic pain population have an increased incidence of depression, suicidal thoughts and completed suicide. The aim of this study was to assess the incidence of suicidal thoughts in our chronic pain population and to assess the possible associated factors.

METHODS: We looked at the pre-entrance questionnaires of 200 charts in our out patient Chronic Pain clinic. These included self reported pain scales and inventories, including the Beck Depression Inventory. Question 9 of the Beck Depression Inventory was used to assess suicidal ideation. Relationships between risk factors and suicidal ideation were assessed using ANOVA analyses where appropriate.

RESULTS: At entry to the clinic, the total number of patients expressing suicidal ideation of any type was 27.5%. The prevalence of passive and active suicidal ideation was 24.5% and 3%, respectively. A significant proportion of the patients were depressed.

CONCLUSIONS: Depression is strongly linked with chronic pain and as has been shown in our study this population have an elevated rate of suicidal ideation. The majority of patients had passive suicidal thoughts, which is consistent with literature. Overall we found that depression, higher levels of pain, current cigarette smokers, patients on long-term disability, with a family history of depression and those with an elevated CAGE score were at increased risk of having suicidal ideation.

P-80
DEFINING DISABLING CHRONIC PAIN

AL Dewar[1], J Lander[2], M White[3], K Prkachin[4]
[1]School of Nursing; [2]School of Nursing, University of Alberta, Edmonton, Alberta; [3]Canadian Institute for the Relief of Pain and Disability; [4]Department of Psychology University of Northern British Columbia, Prince George, British Columbia

Defining disabling chronic pain is a challenge. Many aspects of chronic pain have been discussed in literature but there are few descriptions of the most disabling aspects of chronic pain. Eighteen individuals aged 40 to 65 who had chronic pain from various causes were interviewed. Most participants had been in pain for more than 10 years, with a time range of 4 to 30 years. The purpose of the research was to describe the aspects of chronic pain that participants found most troublesome and outline how they used the health care system. Data were also collected from five health care professionals as well as four family members. Transcribed interviews were analyzed by qualitative methods. For the participants, the process of seeking relief was perceived as an ongoing series of challenges. For participants there are many dilemmas, and managing chronic pain is a series of balancing acts. For example, the benefits of medications had to be balanced against the side effects, exercise was helpful but exacerbated symptoms, receiving a medical diagnosis provided knowledge of a health problem but meant being labelled. Accepting that the pain was chronic meant relinquishing the search to be cured. Searching for a cure was expensive and time consuming, and chronic pain had direct and indirect costs. Strategies varied but most participants made substantial life changes to accommodate their pain. Some health professionals suggested that traditional approaches that push individuals towards overdoing recovery may not be as helpful as a supportive empowering approach.

P-81
PAIN PREVALENCE IN SCHOOLCHILDREN

Adam van Dijk BSc[1], Patricia A McGrath PhD[2,3], William Pickett PhD[1], Elizabeth Van Den Kerkhof RN DrPH[1,4]
[1]Department of Community Health and Epidemiology, Queen's University, Kingston; [2]Divisional Center of Pain Management and Pain Research, Hospital for Sick Children; [3]Department of Anesthesiology, University of Toronto, Toronto; [4]Department of Anesthesiology, and School of Nursing, Queen's University, Kingston, Ontario

BACKGROUND: Despite significant progress in obtaining accurate estimates of the prevalence and incidence of chronic pain in adults, relatively little is known about pediatric pain in North America.
OBJECTIVE: We conducted a population-based study to assess pain prevalence in a sample of 9- to 13-year-old school children in Eastern Ontario.
METHODS: Children completed the Pain Experience Interview – Short Form to provide data on the lifetime and point prevalence of different types of acute and chronic pain. The questionnaire was completed in class or at home.
RESULTS: A majority of the 495 children in the study (96.4%) had experienced acute pain during the previous month. Headache (77.5%) was the most frequently reported. The lifetime prevalence for some acute pains was significantly higher for boys than girls ($P<0.05$). Fifty-seven per cent of the children reported at least one recurrent pain, while 6.3% were identified as had or currently having chronic pain.
CONCLUSIONS: Self-administered school surveys are an efficient means of capturing epidemiological data on pain in children. The prevalence estimates obtained in this North American cohort are comparable with population-based estimates of specific pain in children in international studies (ie, headache). Pain related to minor childhood events is common; however, a large portion of children also report frequent and disabling pain. The Pain Experience Interview – Short Form can be used to assess the level of self-reported pain in 9- to 13-year-olds, and may be useful as a screening tool to identify children at risk of developing or maintaining chronic pain conditions.

P-82
PROLOTHERAPY (REGENERATIVE INJECTION THERAPY) IN CHRONIC PAIN – A REVIEW OF LITERATURE AND CLINICAL EXPERIENCE

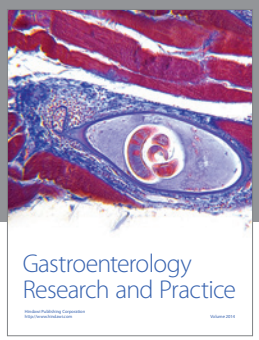
Robert Banner MD CCFP FRCP
University of Western Ontario Multidisciplinary Pain Clinic, Department of Anesthesia and Perioperative Medicine, London, Ontario

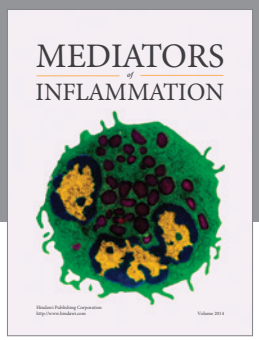
AIM: The use of prolotherapy or regenerative injection therapy to treat chronic musculoskeletal pain related to connective tissue pathology is largely unknown in conventional medicine, but is used by a small group of allopathic and osteopathic physicians. It is important for those who look to treat pain to be aware of alternative or complementary therapies. Such treatments require scrutiny and scientific evaluation before being accepted and or recommended for patients with chronic musculoskeletal pain.
METHODS: The history of prolotherapy, proposed mechanism(s) of action, contraindications, indications, treatment protocols, solutions and clinical trials evidence will be reviewed. Video of patient treatments will be observed.
CONCLUSIONS: A "complementary therapy" such as prolotherapy may be useful for some chronic pain patients. Future research should consider collection of outcomes after standardized treatment to develop criteria for who would be appropriate for this therapy. Such exploratory cohort studies would then require further testing to determine the validity of these findings. What factors indicate a high chance of success with prolotherapy and what is the most appropriate treatment approach could be answered with a mixed model design.

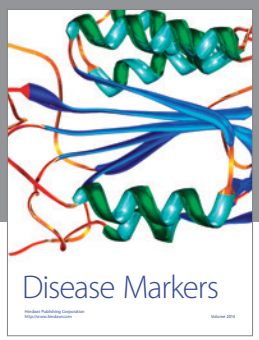
P-83
LONG-TERM FOLLOW-UP OF CHRONIC OPIOID THERAPY IN CHRONIC NON-CANCER PAIN

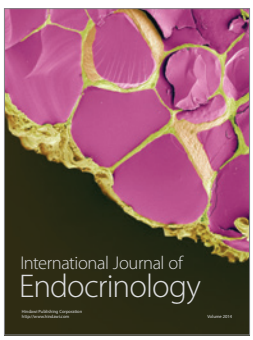
C Peter N Watson, Judith H Watt-Watson, Mary Chipman
University of Toronto, Toronto, Ontario

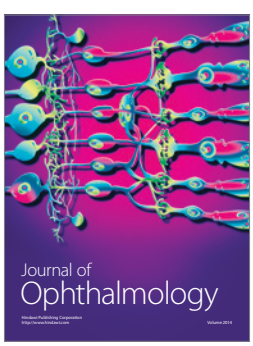
AIM: The use of opioids for chronic non-cancer pain (CNCP) remains somewhat controversial. Despite a number of randomized controlled trials showing efficacy and safety in the short-term, issues such as tolerance, the risk of psychological dependency, quality of life and long-term safety remain concerns. This study reports the long-term results of treating CNCP with these drugs.
METHODS: Basic demographic data were obtained from 145 patients with CNCP treated with opioids. Most of the data is derived from a detailed questionnaire administered to a group of 78 patients actively followed about every 3 months. Pain severity (0-10), quality of life (Brief Pain Inventory), adverse effects, mood (Hospital Anxiety and Depression Scale), drug(s) and doses were documented.
RESULTS: Most patients continued to obtain significant pain relief, had tolerable side effects, stable mood and many had an improved quality of life for a median of 8 years (range 1-26 years) follow-up with a median 8 years. Major problems with psychological dependency, tolerance and physical dependency were not apparent.
CONCLUSIONS: Few studies of this nature are available particularly in recent years and these data are sorely needed to support the increasing number of courageous clinicians who are prescribing these drugs for these patients. Chronic opioid therapy is safe and effective over the long-term.

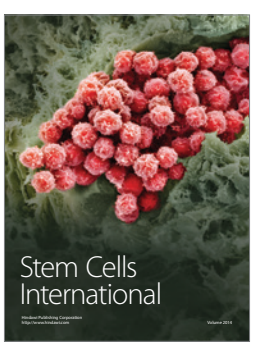


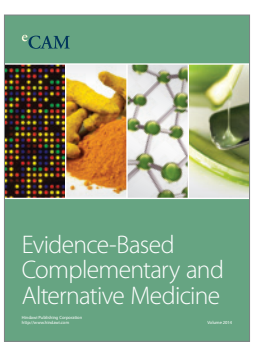


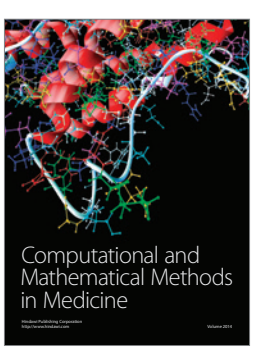


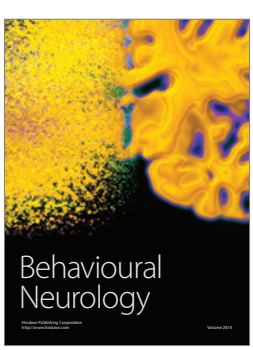


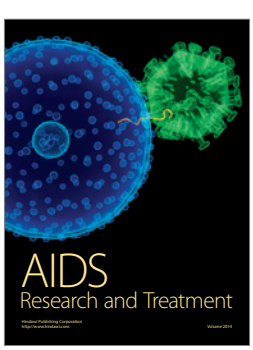


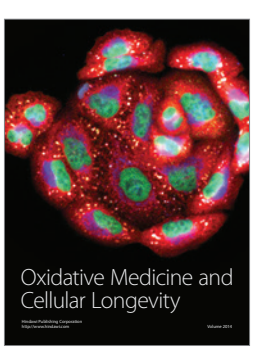












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