



CAPM NEWSLETTER

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EDITORIAL

BY GLORIA GILBERT, PT, MSC, CAPM EDITOR

Advertising the fact that among your services, you can provide “*Pain Management Programs*” seems to be a new ‘selling point’.

Programs are being provided by health professionals of all disciplines, by non-health (?) providers, through out-patient clinics, hospitals, support groups, different organizations and institutions etc. ad infinitum.

What is meant when we say “Pain Management Program”?

What elements/modalities/techniques need to be included in these programs?

Can they be administered/taught by only one type of health professional or should they all be multi-disciplinary?

Are pain management programs more effective if they are ‘cause or disease’ specific?

How do we measure ‘success’ (outcomes)?

Members of the Academy were recently asked their opinions, thoughts, musings on this subject.

A quick response from Dr. Geoffrey Purdell-Lewis at McMaster provided some thoughts as well as challenges to this ‘process’ (of providing truly multi-disciplinary pain programs). Factors such as cost (do we treat only people who can pay?), human resources, organizational structure, and remuneration to physicians (i.e. MOHLTC in Ontario) - are only a few items to consider.

Dr. Purdell-Lewis noted that he attended a session at the Montreal IASP meeting, where the possibility of providing ‘multi-modal care’ was discussed. Why can’t a physician also provide pain management counselling (even though it may be somewhat different than counselling provided by a psychologist). Why can’t an OT, PT or chiropractor learn to ‘counsel’ (beyond their usual scope of practice)?

This newsletter will provide Academy members with some added information on Pain Management Programs (and a very cursory literature review that can be easily accessed yourself through googlescholar.com). Although it is doubtful we will come to any consensus, we will perhaps have a better appreciation of the ‘scope’ of the dilemma.

Continuing our focus to provide health professionals of all disciplines with information/resources on ‘pain’, several lead articles are featured.

Dr. Kate Partridge, psychologist in London has provided us with an ‘Introduction’ to Mindfulness Meditation - a therapy that has proven extremely valuable to the patient (and the health practitioner) population to better manage chronic pain (symptoms).

Toronto-based, Dr. Dennis Marangos, DDS and Founding President of the American Academy of Craniofacial Pain has précised an Article on ‘Temporomandibular (TMJ) Disorder Pain After Whiplash Trauma: a systematic review’.

Dr. Richard Nahas, a family physician who practices Integrative Medicine (www.seekerscentre.com) in Ottawa has written a second article for the CAPM newsletter on Scalp Acupuncture (*Thank you Richard!*)

Dr. Philip A. Baer, MDCM, FRCPC, FACR and Chair, OMA Section of Rheumatology spoke recently at a meeting of the Interdisciplinary Pain Program at Western. Your newsletter editor has précised highlights from his lecture entitled - “Osteoarthritis Pain - New Understanding and Revised Guidelines on Management.”

Members are reminded that these newsletters provide not only useful information, but also many resources that can assist you in providing the most effective ‘pain management’ plan for your patients.

Consider printing the newsletters and keeping them as a ‘reference/resource’ binder. Please continue to send in your ideas for future newsletter articles as well as your comments on the contents of any of the newsletters.

Hope to see some Members of the Academy in May at the Canadian Pain Society Meeting in Quebec City.

Stay tuned for the date and location of the annual meeting of the Canadian Academy of Pain Management which will be held in the Fall.

For those of us who treat people who have sustained injuries in motor vehicle accidents (MVA), we are often faced with OPINIONS of other health professionals who may not agree with an ongoing treatment approach. This newsletter will NOT address that other ‘clinical problem’ at this time.

Information in this newsletter is based on published peer-reviewed journals and documents, as well as some clinical questions.

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PAIN MANAGEMENT PROGRAMS (PMP) BY GLORIA GILBERT, PT, MSC, CAPM EDITOR

A quick review of the literature (www.google scholar.com)...and our own clinical experience will remind us that treating people with persistent pain symptoms is a challenging task.

I would ask Academy members to consider using the 'vocabulary' and definitions provided in the last few newsletters. This 'orientation' may assist us in being able to look at the 'pain problem and PMPs more objectively - and 'find' or 'develop' the one needed to help each person.

Since pain is subjective, how do we know what and how our patients are feeling - unless we ask them to 'describe' their feelings in physical and emotional words?

How do we know if they are experiencing 'other' symptoms related to trauma or illness that they cannot explain - and thereby use the word 'pain' to describe these feelings. (nausea, dizziness, disequilibrium, worry, stressed)?

How do we know what situational, functional or emotional problems they are experiencing - unless we ask them those questions - and not just prescribe medication?

How can we schedule appointments to be able to spend the time needed to both identify and provide guidance about 'the 'real' problems?

As health providers we have to assist our patients in appreciating the 'different' sensations they are experiencing as different 'messages'... (and which we know - may be resultant from 'different physiologic mechanisms', and thereby have different emotional or physical effects).

A person with neck pain post trauma may be experiencing headaches, neck pain and dizziness which affects their ability to work as a machinist (*all that movement and all that vibration!*)

A person with an insidious onset of neck pain may be experiencing headaches, neck pain, sleep disturbance, upper and lower back pain which affects their ability to work as a manager in their university department.

Can both these people benefit from the same 'PMP'?

It is evident from the articles, books, citations published about 'PMP' that, with information attained from previous research studies, many of the programs share/include elements (modalities) that are 'similar', i.e. pacing, scheduling, cognitive behavioral ways of 'changing' the way people think about the problem, exercise, goal setting and measuring outcome results, etc...

On the other hand, it is increasingly evident that a PMP initiated by a psychologist must include information on exercise - and that a PMP directed by a physiotherapist, must include a cognitive behavioral orientation to improve outcomes.

Not everyone will benefit from a program which appears 'too general' for them - some people may be unable or not be ready to change their 'perception' of their problems - some people can only think in terms of 'how I was before' and that is 'how I want to be'.

A few interesting articles to review:

1. **Effects of cognitive-behavioural pain management programs.** Johansson

C, Dahl J et al. Behaviour Research & Therapy. Vol.36. Issue 1.Oct.1998.: A 4 week in patient treatment program. Modalities in the program included education, goal setting, graded activity training, pacing, applied relaxation, cognitive techniques, social skills training, drug reduction methods, contingency management of pain behaviours, planning or work return. (*Whew! Great stuff!*)

Who benefited from which part of the program?

2. **Acceptance-based Interventions for the Treatment of Chronic Pain:** A Systematic Review and Meta-Analysis. Oskam MJ, Veehof MM et al. Published on line at researchgate.net. Main outcome measures were pain intensity and depression. Anxiety, physical well-being and quality of life were also extracted.

The results of this extensive (well done) review- "The data suggests that acceptance-based interventions are at least as effect as CBT for chronic pain patients". (*what is a chronic pain patient? editors note*)

3. **Out-patient cognitive behavioural pain management programs.** Turner-Stokes L, Erkeller-Yaksel F et al. Arch.PM&R.Vol.84 Issue 6, June 2003.Modalities included education, relaxation, cognitive coping skills, pacing, exercise.

4. **Effectiveness of an Inter-disciplinary pain management program for women with chronic pelvic pain.** Kames L, Rapkin et al. Pain.Vol.41 Issue 1, April 1990.

5. **The use of the Canadian Occupational Performance measure.** Carpenter L et al, Canadian Journal of Occupational Therapy. Feb.2011.Vol 68.No.1 (Measure of patients perception of their own performance).

Pain management programs - and review articles may share many elements. But some are stratified by age (young, old) or diagnosis (cancer, rheumatoid arteries, post op pain, pelvic pain) and some by outcomes.

The reality is that most people have some co-morbidities...age and disease and depression, disease and psycho-social factors, *we can go on...*

A recent article published in the Annals of Family Medicine Vol.12.No.2.March-April 2014. (www.annfammed.org) was sent to me by one of my family physician colleagues. It may introduce us to another way of 'thinking' when treating our patients.

Effect of Stratified Care for Low Back Pain in Family Practice. (IMPact Back): A Prospective Population-Based Sequential Comparison. Forster NE, Mullis R, Hill NC Lewis M et al - a collaborative effort of the Impact Back Study team from 1) Arthritis Research UK Primary Care Centre, Keele University, UK; The Primary Care Unit, Dept. of Public Health and Primary Care, University of Cambridge, UK.; Faculty of health Sciences, Simon Fraser University, BS; and Centre for Clinical Epidemiology and Evaluation, Vancouver Coastal Health Research Institute.

IMPact refers to Implementation to improve Patient Care through Targeted treatment...The article and editorial are worth reading in their entirety.

It is interesting to note the collaborative effort of the authors-clinicians-public health and researchers. *To précis methodology* - the family physician

PAIN MANAGEMENT PROGRAMS (PMP) CONTINUED ...

assessed patients with low back pain initially (using IMPact) and referred (stratified) those with high risk (psycho-social factors) to appropriately trained physiotherapists (those knowledgeable and comfortable with intervention and education etc.

Conclusion: stratified care for back pain implemented in family practice leads to significant improvements in patient disability, outcome and a halving of time off work, without increasing health care costs. Wider implementation is recommended.

Something to think about...not every person will benefit from treatment (of any type, physical or psychological) - and not every person with chronic (persistent) pain symptoms (as a result of something) needs a PMP (*editors opinion!*).

Each person must (with the assistance of their health providers) learn to develop their own 'ammunition' (*editors word*)...i.e. ways of dealing with their pain/other symptoms 24/7.

It is evident that not all people will be able to progress uneventfully and many will need specific individualized treatment.

However we cannot look to the science to tell us whether a TENS unit is 'only' effective during the acute stage of pain or that only aerobic exercise will assist you with improved pain control of low back pain.

Perhaps the BEST PMP is the one initiated at the acute or sub-acute stage-

the patient and primary care physician. Yes, it may take time - and a number of appointments initially to identify what the patient's most important needs are...but it will save us a lot of time (and patients a lot of suffering and anxiety) if we can assist them on their path to wellness (or on their rehabilitation plan) earlier.

PMPs are often used as a program of last resort - because 'I do not know what else to do with my patient'. By the time, any person develops chronic, persistent or debilitating symptoms from trauma or disease, there are a multitude of factors affecting their recovery - and it will be challenging if not impossible to have a positive outcome.

Developing (and using) standardized and peer-reviewed in-take assessment tools may assist us to better treat (and stratify) our patients- by screening and referring to other health providers sooner.

Listening to our patients lifestyle concerns (work, home, financial, self-care) and acknowledging that we have more financial and personal resources as well as a better than understanding of the management of the disease or trauma ours will enable us to refer to social services - by referring to other health providers or agencies earlier.

Perhaps, if we change the way we treat/manage our patients, we will no longer need PMP programs in the future. However, until that happens, it is evident that no one discipline can provide all the treatment or tools needed for success...so we must continue and develop good multi-disciplinary teams and programs.

THE PROGRESSIVE GOAL ATTAINMENT PROGRAM (PGAP™) BY GLORIA GILBERT, PT, MSC, CAPM EDITOR

An Evidence-Based Treatment Program for Reducing Disability Associated with Pain, Depression, Cancer and other Chronic Health Conditions.

Case Study 1: Larry Brown is 47 year old office manager who was injured in a car accident 15 months ago. Although his employer is prepared to offer a modified return to work plan, Larry is concerned that he will not be able to fulfil all the elements of his job, to the precision he did before the accident.

Case Study 2: Mary Black is a 55 year old assembly worker who hurt her back in a slip and fall accident in her home 6 months ago. Mary has only 4 more years to work before she can retire on full pension. Her physiotherapist and occupational therapist have told her that she has made an excellent recovery and that she should continue on with her home based exercise program and 'adaptations' when she returns to the workforce. Mary is concerned she will not be able to work full time until she can retire.

Many 'pain management' programs address psycho-social factors (and risk factors) that clients may experience during their recovery or rehabilitation. Oftentimes it is these factors and not just the physical ones, that impede recovery and a return to the workplace or to a more normal lifestyle.

PGAP is the first disability prevention program specifically designed to target psychosocial risk factors for disability.

Psychosocial factors were chosen as targets of the intervention because of emerging research supporting their relevance to return-to-work outcomes and their amenability to change through intervention.

PGAP is a standardized community-based intervention delivered by rehabilitation professional who have been trained to use the PGAP process. The program can be administered by OTs, PTs, kinesiologists, nurses, rehabilitation counselors and psychologists. PGAP was designed to complement existing clinical services for the treatment of debilitating health and mental conditions.

Using a Client Workbook, and a DVD (specific to their need), the client works with the therapist through an 8-10 week staged process (of increasing their activity, involvement while controlling or managing their symptoms).

THE PROGRESSIVE GOAL ATTAINMENT PROGRAM (PGAP™) CONTINUED...

Although PGAP is often recommended for patients who have been involved in automobile or work injuries, it is also an appropriate intervention for patients with chronic disease or illness.

A study in *Physiotherapy*, Vol. 86 Jan 2006 has showed that participation in PGAP increased the probability of return to work following whiplash injury by 50%.

You can read other studies using PGAP in the following journals.

- J. Occupational Rehabilitation Vol, 15, 2377-392, 2005
- Physiotherapy Canada Vol 62, 180-189, 2010
- J Cognitive Psychotherapy 2: 130-142, 2012
- Translational Behavioral Medicine 2: 149-158, 2012.

Information for this article was taken from a brochure published by the University Centre for Research on Pain and Disability.
www.pdp-pgap.com. Gloria has been trained in the PGAP process.

REPORT FROM THE CAPM EXECUTIVE DR. ELDON TUNKS, PRESIDENT, CANADIAN ACADEMY OF PAIN MANAGEMENT

There are important changes this year. The legislation requires that all not-for-profit corporations revise their Letters Patent and Bylaws to conform with the guidelines established by Corporations Canada. CAPM has made these revisions, obtained approval by 2/3 of membership, and has submitted the required documentation to Corporations Canada, and we await the final approval.

The other important innovation is that we are introducing another way to credential our CAPM Credentialing Stream Members by attending three weekend days of multidisciplinary courses with case discussion, followed by an exam. (The pathway through AAPM courses and exam is of course still available and offers the additional benefit of being credentialed by both CAPM and AAPM.)

We are also introducing Advanced Credentialing in specific areas of competency and skill. Already available is Advanced Credentialing in Interventional Pain Management, by following the guidelines set by CAPM and College of Physicians and Surgeons of Ontario. Late this year we will begin to organize Advanced Credentialing for certain Chiropractors who have completed Fellowship programs and have developed competencies in pain management.

We are also strongly considering the development of Advanced Credentialing for certain professionals experienced in Rehabilitation services.

We will announce details of these initiatives shortly.

Eldon Tunks MD FRCPC
President CAPM

BEHAVIOURAL OPTOMETRY REFERENCES PROVIDED BY DR. MACIEJ SUWALA, OD WORKING AT IRIS IN LONDON

Your editor has chosen several references to demonstrate the influence of the visual system on many of our different clinical practices.

- Falk, Naomi S. and Aksionoff, Elizabeth B. The Primary Care Optometric Evaluation of the Traumatic Brain Injury Patient. *J Am Optom Assoc* 1992;63(8):547-53
- McVeigh, FL. Traumatic brain injury—what is the optometrist's role? *Rev Optom* 2008;145(4):73-77
- Padula WV, Shapiro JB, Jasin B. Head injury causing post trauma vision syndrome. *NE J Optom* 1998;41(2):16-21
- Townsend, JC Traumatic brain injury a new challenge for optometry, neuro-optometric rehabilitation and our nation. *J Behav Optom* 2007;18(3):63-66
- Trachtman JN. Post-traumatic stress disorder and vision. *Optometry* 2010;81(5):240-52
- Vogel, Mark S. An Overview of Head Trauma for the Primary Care Practitioner-Part II-Ocular Damage Associated with Head Trauma. *J Am Optom Assoc* 1992;63(8):542-6
- Wenberg S, Thomas JA. The Role of vision in the rehabilitation of the musculoskeletal system: part 1. *J Bodywork Movement Therapies* 2000;4(4):242-5
- Wenberg S, Thomas JA. Post Traumatic vision syndrome and the locomotor system: part 2: screening and collaborative care. *J Bodywork Movement Therapies* 2001;5(1):2-10

MINDFULNESS MEDITATION & MANAGING PAIN

DR. KATE PARTRIDE

“Mindfulness” is a term that has recently become a buzzword in the health field, and it comes with the implication that it can be a panacea (for all types of pain and stress-related conditions). I meet many health professionals who have heard the term and who wonder what “mindfulness” is or how it might be helpful, even transformative, for their patients (and also for themselves). The growing body of scientific research literature about the benefits of mindfulness is easily accessed through the internet. In addition to numerous studies showing significant physical and emotional benefits to patients with a wide range of health problems, recent very exciting neurological studies are revealing the structural and functional brain changes that are associated with these mindfulness-related clinical improvements. An excellent resource in this regard is the *Mindfulness Research Monthly* (www.mindfulexperience.org).

Mandy (name changed) is a woman in her 50s whose leg was crushed under the wheel of a moving bus, about five years ago. In addition to becoming significantly disabled, she has suffered severe and unremitting pain. At the same time, however, she is highly sensitive to all types of medication. As a result, she has been unable to take a number of medications, including anti-depressants, that might have been helpful to her. Three years ago, Mandy took an 8-week course in mindfulness meditation (MM), and she has continued in individual counselling with the teacher of the course. The MM has been an enormous help to her: *“My personality type is hyper and anxious, and I’m a worrier. Paying attention to what is going on helps me to stay calmer. It’s a wonderful reprieve from all the stress. I’ve also learned to relate to my leg and to the pain with kindness and sympathy, not with the anger and fear I had before. This has allowed me to accept the pain for what it is and feel more relaxed about, and it has also helped to diminish the pain itself.*

“It gives me a lot of pleasure to know that I can bring myself out of that anxious hyper state without having to depend on artificial things like drugs – and I’ve tried a lot of them. MM is very real, something I can do for myself, and with practice I’ve gained some control over my situation and can impact it positively. It’s been a huge break-through for me to learn to accept the pain rather than resisting and fighting it.”

Susanna (name changed) is in her 40s and has

suffered from painful recurrent bladder cancer as well as fibromyalgia for the past 16 year. After only eight weeks of daily mindfulness practice, she noticed a significant reduction in pain. Now that she has practiced daily meditation practice for nine months, she has been able to make a huge reduction in the amount of pain medication that she is taking: -she stopped the Fentanyl patch completely, and her consumption of narcotic medication has decreased to about 1/8 of what it had been before starting Mindfulness. Susanna is sleeping better, and she feels happy and content even though she still has some pain.

“I’ve made peace with the pain. We were at war – I was angry and resentful about it – I had gone from being an accomplished athlete to zero because of the pain, and I hated it. Now, I don’t do this. I treat myself and my pain with compassion. This has given me the drive to get out and help others to move in the same direction, and I’m taking courses now to enable me to become a meditation teacher.”

In health and rehabilitation settings, MM can be invaluable in helping patients to better regulate their health. Within two to three weeks of a daily meditation practice, many patients notice that they are less emotionally reactive to the stressors of their illness, injury or chronic pain. Over time, they become kinder to themselves, and they are less likely to be angry with and/or frightened by their illness or pain, which significantly reduces their stress load. What is changing and improving is their *relationship* to their pain or illness. Clients often become more aware of the connections between what they think, feel or do, and their health or pain status. This makes it easier for them to take more responsibility in changing / modifying or regulating their own health behaviours.

For a helping professional to be able to effectively teach clients mindfulness skills, there is an essential pre-requisite: the professional him or herself must have a personal daily practice of MM. Reading about MM is not a substitute for developing for oneself the language of awareness that grows with the practice. It isn’t possible to understand the gentle but powerful changes that arise from mindfulness practice without doing it yourself, on a regular basis. When you cannot understand this, you cannot properly support your clients in their own practice.

To understand how it might be useful to you, the

health professional, to learn to practice meditation, think about the stressors in your own busy life. How do you keep your nervous system balanced - both energetic and calm - in the face of this stress?

One central skill is to be able to recognize when your nervous system has been spending too much time being stimulated by the Sympathetic Nervous System, and not enough time being restored by the Parasympathetic Nervous System. The sooner you can notice this imbalance, the easier it is to re-establish your centre, which is where you will have the best access to both your energy and your calmness. Mindfulness practices, including Mindfulness Meditation, are designed to cultivate this ability.

A very useful definition of “**Mindfulness**” comes from Dr. Jon Kabat-Zinn, the founder of the first hospital-based mindfulness program in 1979 (Mindfulness-Based Stress Reduction, or MBSR). You are being mindful when you are paying attention, on purpose, in the present moment - *without making any judgments* about yourself or what you are attending to. This seems pretty simple, but in fact it is so simple that it is not at all easy to do in any sustained way. And yet there are enormous benefits, psychological and physical, to being able to bring a sustained mindful presence to whatever you are doing.

“**Mindfulness Meditation**” is a systematic way to cultivate Mindfulness. Although it is derived from the 2500-year-old practice” of Buddhist meditation, it is *not* a religious practice, nor does it require any particular belief system. In fact, I find it more useful to think of MM as a type of **physiotherapy for the mind**. Through the practice, you become very intimate with the patterns of flow of thoughts, emotions, physical sensations and actions that make up your here-and-now reality. This increased awareness allows you much more choice in how you respond to the circumstances of the moment.

Several different mindfulness techniques are taught in MBSR, and to be effective, they must be practiced on a regular basis. They each cultivate the ability to focus attention deliberately (that is, to concentrate) in a fluid and flexible way that stays alert to the nuances of moment-to-moment changes in the field of awareness, including sensory experiences, body sensations, emotions and thinking.

MINFULNESS MEDITATION & MANAGING PAIN

Continued ...

- In the *Body Scan*, there is a systematic scanning of sensations throughout the body.
- In *Sitting Meditation*, the focus of attention is a specific area (usually somewhere within the chest or belly) and on the sensations that ebb and flow within this area as the breath breathes itself in and out.

There is no attempt to breathe in any particular way, nor is there any attempt to deliberately relax the body (although this is often a side effect of these practices). The benefits are broader and deeper than mere relaxation.

In these practices, there is no attempt to stop thinking. This is a common misconception about MM. People say “*I could never meditate because I can’t slow my mind down!*”. However, meditation was designed for the *purpose* of slowing the mind down – a slowed down mind is *not* a pre-requisite. We call it the “practice” of meditation because we are not naturally skilled at paying attention, on purpose, non-judgmentally. **Developing any skill takes practice.**

From a more subjective viewpoint, the benefits of MM include an increase in emotional stability or equanimity – being able to stay calm and grounded regardless of

what is going on around you and inside you. At the same time, you have the luxury of much fuller and richer sensory experiences of, for example, food, music, art (and even sex!). Most beneficial of all, perhaps, the practice of mindfulness leads to a broader, deeper awareness of and compassion for oneself and for other people, thereby enhancing your personal and work relationships. If you are a helping professional, your work can be transformed by your increased inner calm, - your open, clear and non-judgmental awareness of the client, and your compassion.

Several practical reading and ‘experiential’ resources that may assist you start your meditation practice include:

Mindfulness: Finding Peace in a Frantic World by Mark Williams and Danny Penman

A Mindfulness-Based Stress Reduction Workbook by Bob Stahl and Elisha Goldstein

www.mindfulexperience.org

Quiet Space Breathing- a 15 minutes Beginners Mindfulness Meditation track- On YouTube audio. <https://www.youtube.com/watch?v=4UDKLRZFBI>

J.Consult Clin Psychol. 2014 Feb 3. Mindfulness-Oriented Recovery Enhancement for Chronic Pain and Prescription Opioid Misuse: Results From an Early-State Randomized Controlled Trial. <http://www.ncbi.nih.gov/pubmed/24491075>

An interesting talk by psychologist Kelly McGonigal from Stanford U., about the neuroscience of mindfulness, with some interesting findings near the end of the talk about pain and mindfulness. <http://www.buddhistgeeks.com/2013/02/the-power-of-mindfulness/>

Dr. Kate Partridge is a Registered Psychologist in private practice in London, Ontario. In addition to working in groups and with individual clients within the framework of Mindfulness-Based Psychotherapy and Cognitive Behaviour Therapy, Kate teaches courses and workshops to train health professionals of all kinds to develop a Mindfulness approach to stress and pain management with their own clients. www.stressrelease.ca

Clinical Education Sources

Check out all the links and resources posted on the website of the Canadian Pain Society. In the section on RESOURCES, click “Pain Scenarios in Teaching” - you may find information presented in a case study style - helpful in your clinical practice.

OSTEOARTHRITIS PAIN NEW UNDERSTANDING AND REVISED GUIDELINES ON MANAGEMENT BY GLORIA GILBERT, PT, MSC, CAPM EDITOR

Osteoarthritis PAIN New Understanding and Revised Guidelines on Management.

Dr. Philip A Baer, rheumatologist was a recent speaker at the Interdisciplinary Pain Rounds held at St Joseph' Health Care London.

He was kind enough to provide a pdf of his talk - which was attended by more than the usual number of (multi-disciplinary) clinicians (Perhaps that tells us that subject specific topics on 'pain' are more helpful than generic ones for good clinical care practice!)

Dr. Baer, a well-known and respected clinician and researcher had three main objectives to his lectures:

- 1) Discuss osteoarthritis (OA) pain in the context of a new understanding regarding pain processing.
- 2) Review the recent 2012 ACR-American College of Rheumatology guidelines re pain management.
- 3) Outline evidence supporting a variety of non-pharmacological and pharmacologic interventions for OA pain.

The following are highlights from that dialogue. A case study approach was used for much of the lecture which made the 'application' of both research and guidelines more relevant. It is timely to review the current literature on OA - since much like, Fibromyalgia Guidelines, they are changing.

- **Definition - according to (ACR) American College of Rheumatology:*** - a heterogeneous group of conditions leading to joint symptoms and signs associated with defective integrity of articular cartilage, in addition to related changes in underlying bone at the joint margins.
- OA affects 1 in 8 Canadians - and it is estimated that 1/3 of working Canadians will be diagnosed with OA in the next 10 years.
- 52% of new cases of OA are among Canadians <60 years old OA accounts for greater loss of independence than any other disease, especially in the elderly and account for approximately 25% of visits to the primary care physicians.
- OA is usually progressive.
- It is a chronic disease with a multi-factorial etiology, which includes modifiable and non-modifiable risk factors.
- Most frequently seen in hands, knees, hips and spine.
- Clinical presentation: pain the affected joints including deformity and swelling, brief morning staidness, crepitus and typically worsens with time.
- *Not all persons with OA need be referred to a rheumatologist* - many can be managed by the primary care physician, incorporating new clinical guideline and obtaining appropriate resources into their practice.
- Treatment is directed at reducing joint pain and stiffness, maintaining and improving joint mobility, reducing physical disability and handicap., improving health-related quality of life, limiting progression of joint damage, educating patients about the nature of the disorder and its management (many resources can be downloaded from on line sites).
- 50% PA patients treated with prescription medication.

X-rays and MRI studies:

- Pain and functional impact are poorly correlated with radiographic severity.
- Pain is a better predictor of disability than radiographic grade
- X-rays of weight bearing (WB) joints (ankle, knee, hips) should be done in a WB position, otherwise joint narrowing may not be seen.
- MRI imaging does not help in decision about current interventions for OA of knee and should not be performed unless it will change management.
- Inappropriate use of MRI imaging can lead to increased detection of incidental meniscal tears which are common in older people and result in unnecessary arthroscopic knee surgery.

How to 'Diagnosis' Knee OA in 4 minutes: By asking 4 questions

Do you have constant or intermittent discomfort or pain in the knee(s)

1. At any time on most days of the month?
2. In the past year ?
3. Is pain worse with activity?
4. Relieved with rest?

ASSESS 3 signs:

1. Effusion
2. Flexion contracture
3. Gait abnormality

Need minimum of 1/3 to be diagnosed with OA.

Instructional video on the diagnosis of Knee OA (With Drs. Jolanda Cibere and Leslie Neilson <http://www.arthrtisresearch.ca/>)

Treatment options: Pharmacologic and non pharmacologic treatments for OA - a few interesting facts:

- **Glucosamine and chondroitin sulfate** alone or in combination did not reduce pain effectively in the overall group of patients with OA of the knee: NIH Gait Study. Clegg, DO et al. NEJM. 2006.
- **Intra-articular steroids:** efficacy 1-3 months +, doses of 20-160 mg methyl/prednisolone acetate, no more than 3-4 times a year in a single joint; animal studies show reduced disease progression due to inhibition of cartilage destroying enzymes, with appropriate dosing, the concern re atrophy of bone, soft tissues is not seen.
- **Cardiovascular Risk: with Non-Steroidal Anti- Inflammatory Drugs:** Systemic Review of Population-Based Controlled Observational Studies - This review suggests that among widely used NSAIDs, naproxen and low-dose ibuprofen are least likely to increase cardiovascular risk.

Best Clinical Recommendations (include):

- Weight loss: 10 lbs. of weight loss = 48,000 less lb. of pressure for every mile walked (Messler et al. Arth & Rheum 2005, 52 (7)).
- Exercise: should be a core treatments for people with OA, irrespective of age, comorbidity, pain severity or disability: should include local muscle strengthening and general aerobic fitness.

OSTEOARTHRITIS PAIN NEW UNDERSTANDING AND REVISED GUIDELINES ON MANAGEMENT CONTINUED ...

- Gastro-protective agents (GPAs) included in NSAIDs for OA management: enteric-coated naproxen 375 or 500 mg + immediate-released esomeprazole 20 mg BID (VIMOVO) or
- Ibuprofen 5800 mg - famotidine 26.6 mg TID (DUEXA): has shown reduction in endoscopic ulcers, improved complaints (no GI our come studies thus far).

Resources: Essential to Review

- American College of Rheumatology 2012 Recommendations for the Use of Non pharmacologic and Pharmacologic Therapies in Osteoarthritis of the Hand, Hip and Knee. Hochberg MC et al. Arthritis Care & Research. Vol. 64. No.4. April 2012.

- Website of American College of Rheumatology: includes Patient Resources (tear off sheets); clinical practice guidelines (i.e. Rheumatoid Arthritis, Juvenile Idiopathic Arthritis, Glucocorticoid induced Osteoporosis); as well as treatment Recommendations.
- www.arthritis.ca The Arthritis Association of Canada...many patient resources and programs.
- About.com Arthritis & Joint Conditions Exercise Guidelines "Exercise is Essential for Arthritis (Management)".
- WEBMD.com - on line excellent patient resources for people with chronic pain conditions- can register for free by emailing [health @ messages.webmd.com](mailto:health@messages.webmd.com) (excellent slide shows).

"I CAN FEEL IT IN MY BONES" - DO WEATHER CHANGES REALLY AFFECT PATIENTS' PAIN COMPLAINTS? BY GLORIA GILBERT, PT, MSC, CAPM EDITOR

We have all heard many people say that they can 'feel' that there is a change in the weather coming (cold, rain)...because they can feel it in their bones, i.e. there is an increase in pain and joint stiffness...

Some people stay indoors - bundle up, stay warm, take more medication for 'arthritis' and 'wait' until the weather improves.

Although we can say that 'maybe' anecdotally there is something to the relationship between weather and symptoms, (up to 62% in some surveys) is there any science to explain it?

Pain Association between weather conditions and clinical symptoms in patients with hip osteoarthritis: A 2 year cohort study. Dorleijn DMJ, Luijsternurg, A et al. Pain Vol 155 No.4 April 2014.

The goal of study was to assess whether there is an association between ambient weather condition and patients clinical symptoms with arthritis. Patients were followed for 2 years, with measurements (WOMAC, pain ratings, humidity/temperature correlates) taken every 3 months.

The researchers took this weather questions very seriously! They prospectively collected data on weather variables (mean temperature, mean wind speed, total amount of sun amounts, total amount of precipitation, mean barometric pressure and mean relative humidity. These variables were collected for the day the of questionnaire completion for each patients.

Primary outcome measures were hip pain severity and disability as well as functional scores on WOMAC – Western Ontario and McMaster University OA Index...

"Barometric pressure and relative humidity influence perceived osteoarthritis OA symptoms. However, the contribution of these variables to the severity of OA symptoms is clinically irrelevant (not statistically relevant)".

Although some previous studies have reported that higher humidity was associated with more hip pain - details of weather conditions were not understood. Some other arthritis studies did not distinguish between cohorts and had rheumatoid arthritis (RA, knee and hip OA patients as the subject group.

So - although there may not be a 'statistically significant' relationship between weather and symptoms, it does appear that there is enough information to state that these complaints (concerns) should NOT be overlooked or dismissed. Managing arthritis pain conservatively - will still assist the patient with better pain control and improved function (heat, water therapy, gentle range of motion exercises, medication if needed to improve sleep etc.).

Another excellent on line resource: WEBMD.com Slide Show in April 3, 2014 edition. On "Does Weather Affect Joint Pain".

TEMPOROMANDIBULAR DISORDER PAIN AFTER WHIPLASH TRAUMA: A SYSTEMATIC REVIEW

HAGGMAN-HENRIKSON, B., ET AL, J . OROFACIAL PAIN, VOLUME 27, NUMBER 3, 2013
REVIEWED BY DENNIS MARANGOS BSc., DDS

Cervical whiplash (hyperextension-flexion injury or acceleration-deceleration of the head, neck and TM joints) is a very common injury post-MVA, especially rear-end-motor vehicle accidents. Most health care practitioners are familiar with this type of injury and the treatment. However there is a population of injured patients that do not respond to conventional treatment. An often over-looked injury is whiplash of the temporomandibular joint.

This article provides a systematic review of the literature to determine the prevalence and incidence of temporomandibular disorder (TMD) pain after whiplash trauma as well as reviewing treatment modalities that are commonly used for TMD and their effectiveness in patients with TMD alone compared to those with TMD associated WAD disorders (Whiplash-associated disorders).

The article reviews the "traditional" TMD symptoms and clinical signs without whiplash injury. The authors then review the "typical" cervical signs and symptoms of whiplash alone. Treatment of the acute WAD injury is helpful in solving most of the patient's concerns. However, the authors report that approximately 30% of these patients will develop chronic problems. In *chronic* WAD, there has been an association between pain and dysfunction of the neck and disturbed jaw motor function. They further demonstrate that in TMD patients, neck pain is common and in studies of patients with neck pain, TMD is common.

The results of their systematic review demonstrated a median prevalence of TMD pain after whiplash trauma was 23% and the incidence was 10% (median). This suggests that the prevalence and incidence of TMD pain increases in WAD (compared to the general population).

Patients with combined TMD and neck pain after whiplash showed a median improvement rate of 48% (range of 13%-68%) compared to 75% (range 51% to 91%) for TMD patients without whiplash injury.

They concluded that there is evidence that the prevalence and incidence of TMD pain are *higher* in patients with WAD compared to control groups. Furthermore, data suggest a less favourable treatment outcome for this patient group compared to TMD pain patients *without* a history of neck injury.

The authors suggest from their research that TMD pain after a whiplash trauma may develop over time rather than being a part of an acute syndrome. Chronic WAD patient groups reported TMD pain in 30%-50% of patients, compared to less than 10% for the control groups.

With respect to "Interventions", the authors conclude "TMD pain after whiplash trauma has a different pathophysiology compared to localized TMD pain". This can be attributed to overstretching or compression of the TM joint causing a mandibular whiplash. In the chronic case, there is a process of central sensitization and associated increased pain sensitivity leading to the chronic pain patient.

The authors conclude:

1. The prevalence and incidence of TMD pain are increased after whip-

lash.

2. Intervention studies indicated limited treatment effect in patients with combined TMD pain and neck pain after whiplash trauma.
3. TMD pain after whiplash trauma has a different pathophysiology compared to localized TMD pain and dysfunction.
4. This could be a part of a regional or generalized pain syndrome caused by sensitization mechanisms.

Reviewer's Comments

Treating patients for the past 15 years or so with WAD related TMD, I would like to make the following observations:

1. After a MVA, most patients visit a local Emergency Room. Most Emergency Physicians do not screen for a TM joint problem (except the obvious facial fractures). A basic test would be range of motion (ROM). A normal ROM from maxillary incisor edge to mandibular incisal edge would be 44-52mm with no pain, deflection or deviation.
2. Granted that routine radiographs or CT scans would not show any osseous damage since most injuries are soft tissue a MRI may be indicated.
3. Simple screening questions would include: "Since the MVA, have you noticed a change in your bite or how your teeth come together?" This would suggest a possible synovitis or Capsulitis of the TM joint (the usual clinical feature would be that the back teeth no longer touch due to soft tissue swelling).
4. A few days/weeks after the MVA the following questions would be prudent: "Have you been able to chew properly?", "Can you chew comfortably?" This is further suggestive of joint/capsule/ligament inflammation.
5. Most patients that attend my clinic after a MVA have been through many assessments, treatments and expense with little improvement. In most cases I see these trauma patients anywhere from **3-12 months after** the injury. They are now chronic pain patients and have undergone central sensitization changes that are very difficult to treat.

When you are faced with a patient with a history of MVA, facial trauma etc., it is prudent to have a Dentist trained in TM joint and joint dysfunction assess your patient. The sooner after the trauma the patient is examined the more successful the treatment outcome.

Dr. Dennis Marangos BSc., DDS

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SCALP ACUPUNCTURE FOR ACQUIRED BRAIN INJURY

Dr. Richard Nahas

As healthcare providers who manage chronic pain, our focus is often on treating the body. This is where our patients hurt. The pain in their backs, hips or thighs, the stiffness in their necks, upper backs or shoulders, the numbness and tingling that affects their arms or legs are the problems they ask us to help them with. Yet growing evidence suggests that the body is not where their problem lies. It is becoming more and more clear that chronic pain is in the brain.

Few of us question the role of the brain, but the question is how to treat it. In fact, modern pain management requires a multimodal approach that usually includes treatment of the brain. Many of the drugs we use to treat pain target the central nervous system. Cognitive-behavioural therapy treats the mind; while it is supported by evidence, it is not widely available. Mindfulness training has great potential, but is not yet an established practice.

Hundreds of trials support the role of body acupuncture in most painful disorders. Broad acceptance is limited by methodologic issues, including unclear sham needling effects, individualized point selection and differences in the type, duration, number and frequency of treatment sessions. Nonetheless, many patients with chronic pain have tried body acupuncture based on western physiology or the body meridians described in Traditional Chinese Medicine (TCM). Millions of people around the world have tried acupuncture, and this will likely continue for years to come.

Acupuncture is widely used to treat the body, but it also appears to heal the brain. Several lines of evidence, including functional MRI studies, suggest that acupuncture triggers changes in many parts of the nervous system. These include nociceptors, ascending and descending spinal pathways, brain-stem and limbic areas that respond to pain, as well as cortical neurons. Needling affects levels of microglia, many neuropeptides and, through the hypothalamic-pituitary-adrenal axis, several hormones.

One specialized acupuncture technique that may offer great potential in treating the brain is scalp acupuncture. There are dozens of points on the head and face that have been treated for centuries as part of TCM acupuncture. Many lie on or near potentially important areas, such as foramina where nerves exit the cranium, neurovascular and lymphatic networks or ligamentous sutures where two or more cranial bones meet. They may involve temporal, frontal and occipital muscles, and all overly the thin layer of fascia that covers the cranium.

A significant body of evidence suggests that scalp acupuncture can improve outcomes after acquired brain injury due to stroke. This includes a meta-analysis of six trials involving 538 patients with ischemic stroke and another meta-analysis of seven trials involving 238 patients with hemorrhagic stroke. While some of these trials suffered from the methodologic concerns that plague most acupuncture trials, they are strengthened by a review of animal studies that included 54 trials involving 1816 animals. This identified consistent reductions in infarct volume and improvements in neurologic function in animals who were observed before and after standardized induced ischemic lesions - and then again after scalp acupuncture.

Early promising evidence supports the idea that scalp acupuncture may also offer benefits for other neurologic conditions. In a review of four trials involving patients with Parkinson's disease, some reported improvements in a standardized functional outcome. One Chinese randomized controlled trial in insomnia sufferers reported greater improvements in the Pittsburgh Sleep Quality Index in participants who received scalp acupuncture than those in the TCM acupuncture arm. Single case reports have described startling improvements in a case of multiple sclerosis and an acute life-threatening seizure.

There is very little research that has evaluated scalp acupuncture in painful disorders. A preliminary search of the PubMed database revealed only one randomized controlled trial in 80 migraine sufferers. They received 18 sessions of either TCM acupuncture or a standardized approach called Yamamoto New Scalp Acupuncture. All participants saw major benefits that were still impressive one month after the last treatment session, but there was no significant difference between treatment groups. The only other published evidence is a case series of 108 chronic low back pain sufferers who benefited from scalp acupuncture and traction, and 30 women with knee osteoarthritis who reported less pain 2 hours after a single session.

Our community-based referral pain practice has recently established an interest in treating people who meet criteria for the diagnosis of mild traumatic brain injury (concussion). Diagnosis of so-called post-concussion syndrome is controversial because many of the symptoms are nonspecific, but there is no question that many people with chronic pain have them. Those who have been subjected to rapid velocity changes associated with motor vehicle accidents, sports collisions, blasts and other combat-related injuries seem to be more affected.

There are many reasons why scalp acupuncture makes physiologic sense for these patients, particularly when considered using integrative thinking about physiology. The sympathetic nervous system regulates blood flow inside and outside the skull, and responds vigorously to acupuncture needling. There are also nonspecific changes in electromagnetic fields that occur when sensory nerve endings respond to needle insertion into the skin. These are spherical in nature, and penetrate the skull. There is also a physiologic response to human touch that appears to stimulate healing. This is why neonates who get their feet rubbed do better than those who don't, and why most people agree that massage feels good.

Our early clinical experience with scalp acupuncture has been promising. When evidence is lacking, a brief therapeutic trial may be a prudent approach. This should be considered in carefully selected patients after verbal or written informed consent, and followed by close monitoring to assess the clinical response. When combined with cognitive and physical rehabilitation and other appropriate therapies, scalp acupuncture may offer additional benefits

SCALP ACUPUNCTURE FOR ACQUIRED BRAIN INJURY CONTINUED...

that improve patients' lives.

Studies have shown that prior beliefs about the potential benefit of acupuncture have an impact on results. This is true of all therapies, but especially important for hands-on experiential treatment modalities. A brief discussion to explore your patients' interest in scalp acupuncture will identify those who are more likely to benefit. It is important to identify a good practitioner, and there are many ways to do this.

A simple internet search can often locate practitioners with an expressed interest in this technique. Most reliable therapists will be happy to share their experience if you ask, and will either take the case or refer you to a local specialist if they know of one. A collaborative approach to decision-making and treatment is encouraged, and often yields better outcomes - and a better experience for everyone.

Integrative medicine is an approach to healthcare that encourages judicious use of so-called Complementary and Alternative Medicine therapies as part of the solution for our current healthcare crisis. Perhaps more than any other chronic illness, those of us who treat chronic pain recognize the need to be open-minded about such therapies. Some of us are also more willing to consider therapies that fall outside the usual standards of evidence. This is an important first step that will hopefully lead to more outcomes-based studies that provide real-world evidence.

Dr. Richard Nahas

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