CME CATEGORY IIIA – SELF STUDY

A SELECTION OF TEN CURRENT READINGS ON PAIN MANAGEMENT AVAILABLE AS FREE FULL-TEXT (SOME REQUIRING PAYMENT)

Selection of readings made by A/Prof Goh Lee Gan

HISTORY AND HUMANISM ON PAIN

Reading 1

Meldrum ML. A Capsule History of Pain Management. *JAMA.* 2003;290:2470-2475.

http://jama.ama-assn.org/cgi/reprint/290/18/2470

Department of History, University of California-Los Angeles, Los Angeles.

ABSTRACT

Pain is a complex clinical problem. Assessment depends on verbal report, and the patient's physical perceptions may be modified by cognitive and affective factors. The salience of pain as a problem in its own right has grown since 1945 and new therapeutic alternatives have developed from research and from new theoretical perspectives. This short historical review of the highlights of the history of pain management gives particular emphasis to the 20th century and to chronic and cancer pain.

Reading 2

Dean C. Grams. *JAMA.* 2003 Nov 12;290(18):2379-80

http://jama.ama-assn.org/cgi/reprint/290/18/2379

New Orleans, La

SUMMARY

This is a humanistic piece of writing from a medical student written with an acknowledgement to her mentor Cathy J. Lazarus, MD, of Tulane University School of Medicine for her inspirational teaching and her commitment to developing medical students into humanistic physicians. It is about a medical student, her grandmother and pain: "I'm new at this and I don't know what to do. I don't understand why the pain has to be so bad. Can't they give her something?" This may well be the generic plea from our patient's relatives as they witness the pain that seem to be so overpowering.

LINK BETWEEN PHYSICAL AND EMOTIONAL PAIN

Reading 3

Vastag B. Scientists Find Connections in the Brain Between Physical and Emotional Pain. *JAMA.* 2003 Nov 12;290(18):2389-2390.

http://jama.ama-assn.org/cgi/reprint/290/18/2389

SUMMARY

Poets muse about the agony of a broken heart. Losing a friend hurts, and rejection can feel like a kick in the gut. It turns out that these expressions are more than metaphorical. It turns out that the brain processes both experiences in much the same way. While a large part of how the brain responds to physical pain remains mysterious, a series of recent discoveries has unveiled an evolutionary efficiency: the brain circuits and structures that respond to a twisted ankle also recognize a stinging rebuke. The pain of the twisted ankle is processed by the anterior cingulate cortex which acts as a neural alarm system. Pain, as the most primitive "something is wrong" signal, strongly activates this area, which then sends signals to higher brain regions that prompt the individual to act to stop the pain. This area is connected to a second area of the brain, namely, the right ventral prefrontal cortex, which helps dampen the emotional distress caused by pain. Activation of this area lessens pain response in rats, and also appears to improve pain symptoms in humans given placebo. It turns out that these two regions are also activated during social rejection. So, rejection can be like a kick in the gut.

CHRONIC PAIN

Reading 4

Lin EHB, Katon W, Von Korff M, Tang L, Williams JW Jr, Kroenke K, Hunkeler E, Harpole L, Hegel M, Arean P, Hoffing M, Della Penna R, Langston C, Unützer J, for the IMPACT Investigators. Effect of Improving Depression Care on Pain and Functional Outcomes Among Older Adults With Arthritis A Randomized Controlled Trial. *JAMA.* 2003 Nov 12;290(18):2428-2429.

http://jama.ama-assn.org/cgi/content/full/290/18/2428

Center for Health Studies, Group Health Cooperative, Seattle, Wash (Drs Lin and Von Korff); Department of Psychiatry, University of Washington, Seattle (Drs Katon and Unützer); Center for Health Services Research, UCLA Neuropsychiatric Institute, Los Angeles, Calif (Dr Tang); Center for Health Services Research in Primary Care, Durham Veterans Affairs Medical Center, Durham, NC (Dr Williams); Department of Medicine, Duke University Medical Center, Durham, NC (Drs Williams and Harpole); Indiana University Regenstrief Institute for Health Care, Indianapolis (Dr Kroenke); Division of Research, Kaiser Permanente of Northern California, Oakland (Ms Hunkeler); Department of Behavioral Medicine, Dartmouth-Hitchcock Medical Center, Hanover, NH (Dr Hegel); Department of Psychiatry, University of California, San Francisco (Dr Arean); Desert Medical Group, Palm Springs, Calif (Dr Hoffing); Kaiser Permanente of Southern California, San Diego (Dr D Penna); and John A. Hartford Foundation, New York, NY (Dr Langston).

ABSTRACT

Context: Depression and arthritis are disabling and common health problems in late life. Depression is also a risk factor for poor health outcomes among arthritis patients.

Objective: To determine whether enhancing care for depression improves pain and functional outcomes in older adults with depression and arthritis.

Design, Setting, and Participants: Preplanned subgroup analyses of Improving Mood-Promoting Access to Collaborative Treatment (IMPACT), a randomized controlled trial of 1801 depressed older adults (260 years), which was performed at 18 primary care clinics from 8 health care organizations in 5 states across the United States from July 1999 to August 2001. A total of 1001 (56%) reported coexisting arthritis at baseline.

Intervention: Antidepressant medications and/or 6 to 8 sessions of psychotherapy (Problem-Solving Treatment in Primary Care).

Main Outcome Measures: Depression, pain intensity (scale of 0 to 10), interference with daily activities due to arthritis (scale of 0 to 10), general health status, and overall quality-of-life outcomes assessed at baseline, 3, 6, and 12 months.

Results: In addition to reduction in depressive symptoms, the intervention group compared with the usual care group at 12 months had lower mean (SE) scores for pain intensity (5.62 [0.16] vs 6.15 [0.16]; between-group difference, -0.53; 95% confidence interval [CI], -0.92 to -0.14; *P* = .009), interference with daily activities due to arthritis (4.40 [0.18] vs 4.99 [0.17]; between-group difference, -0.59; 95% CI, -1.00 to -0.19; *P* = .004), and interference with daily activities due to pain (2.92 [0.07] vs 3.17 [0.07]; between-group difference, -0.26; 95% CI, -0.41 to -0.10; *P* = .002). Overall health and quality of life were also enhanced among intervention patients relative to control patients at 12 months.

Conclusions: In a large and diverse population of older adults with arthritis (mostly osteoarthritis) and comorbid depression, benefits of improved depression care extended beyond reduced depressive symptoms and included decreased pain as well as improved functional status and quality of life.

Reading 5

Mäntyselkä PT ,Juha H, O. Turunen, Ahonen RS, Kumpusalo EA. Chronic Pain and Poor Self-rated Health. JAMA. 2003 Nov 12;290(18):2435-2442.

http://jama.ama-assn.org/cgi/reprint/290/18/2435

Department of Public Health and General Practice, University of Kuopio and Unit of General Practice, Kuopio University Hospital (Drs Mäntyselkä and Kumpusalo); and Department of Social Pharmacy, University of Kuopio (Mr Turunen and Dr Ahonen).

ABSTRACT

Context: Chronic pain is common in Western societies. Self-rated health is an important indicator of morbidity and mortality, but little is known about the relation between chronic pain and self-rated health in the general population.

Objective: To analyze the association between chronic pain and self-rated health.

Design, Setting, and Population: A questionnaire survey carried out during the spring of 2002 of an age- and sex-stratified population sample of 6500 individuals in Finland aged 15 to 74 years, with a response rate of 71% (N = 4542) after exclusion of those with unobtainable data (n = 38). Chronic pain was defined as pain with a duration of at least 3 months and was graded by frequency: (1) at most once a week; (2) several times a week; and (3) daily or continuously. On the basis of a 5-item questionnaire on self-rated health, individuals were classified as having good, moderate, or poor health. Multinominal logistic regression analysis was used to assess the determinants of health. Analysis included sex, age, education, working status, chronic diseases, and mood.

Main Outcome Measures: Perceived chronic pain graded by frequency and self-rated health status.

Results: The prevalence of any chronic pain was 35.1%; that of daily chronic pain, 14.3%. The prevalence of

moderate self-rated health was 26.6% and of poor health, 7.6%. For moderate self-rated health among individuals having chronic pain at most once a week compared with individuals having no chronic pain, the adjusted odds were 1.36 (95% confidence interval [CI], 1.05-1.76); several times a week, 2.41 (95% CI, 1.94-3.00); and daily, 3.69 (95% CI, 2.97-4.59). Odds for poor self-rated health were as follows: having chronic pain at most once a week, 1.16 (95% CI, 0.65-2.07); several times a week, 2.62 (95% CI, 1.76-3.90); and daily, 11.82 (95% CI, 8.67-16.10).

Conclusion: Chronic pain is independently related to low self-rated health in the general population.

Reading 6

Lonner JH.A 57-Year-Old Man With Osteoarthritis of the Knee. *JAMA.* 2003 Feb 26;289(8):1016-25.

http://jama.ama-assn.org/cgi/reprint/289/8/1016

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SUMMARY

How would you manage a patient who is active and has persistent pain from osteoarthritis? The modalities of treatment range from non-pharmacological measures like physical therapy and exercise, heel wedges, braces and canes, to medications like analgesics, intra-articular corticosteroids, intra-articular viscosupplements, nutritional supplements, to surgical interventions like arthroscopy and debridement, periarticular osteotomy to arthroplasty.

Reading 7

Goucke CR. The management of persistent pain.Med J Aust. 2003 May 5;178(9):444-7.

http://www.mja.com.au/public/issues/178_09_050503/gou10286_fm.pdf (Free full text)

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ABSTRACT

Persistent pain is a complex mix of physical and psychological symptoms and is ideally managed by a biopsychosocial approach. Often the relative contributions of family and personal relationships, finances, work, past pain experiences and personality outweigh those of the nociceptive or neuropathic processes from which most pain originates. Recent advances in our understanding of the pathophysiology of pain may lead to improved drug treatments; however, non-drug treatments – education, lifestyle modification, exercise and reassurance – should be used routinely to improve patients' quality of life. Patients with persistent pain that is difficult to control or has complex psychosocial influences, or who have a history of medication misuse, should be referred to a multidisciplinary pain centre. Selected patients may be offered invasive options such as nerve blocks or spinal-cord stimulation. The best outcomes are achieved in patients treated in group-based pain-management programs using cognitive-behavioural therapy to improve physical function, change unhelpful thinking and improve patients' understanding of their situation.

PALLIATIVE CARE

Reading 8

Bruera E , Kim HN. Cancer Pain. JAMA. 2003 Nov 12;290(18):2476-9.

http://jama.ama-assn.org/cgi/reprint/290/18/2476

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SUMMARY

Pain is consistently one of the most feared consequences of cancer for both patients and families. Major improvements in the management of cancer pain in recent years include better assessment of pain, recognition and treatment of opioid-induced neurotoxicity, and the emerging use of opioid rotation and of methadone.

Reading 9

Good PD. Advances in palliative care relevant to the wider delivery of healthcare. Med J Aust. 2003 Sep 15;179(6 Suppl):S44-6.

http://www.mja.com.au/public/issues/179_06_150903/goo10370_fm-1.pdf (Free full text)

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ABSTRACT

The availability of a variety of opioids, together with the discovery of new uses for old drugs (such as ketamine), assists individualised pain management in palliative care. Experience in palliative care provides reassurance that the effective use of opioids and sedatives does not accelerate the approach of death. In taking patient histories, recognising the spiritual component of life experience enlarges the focus of care. Interdisciplinary care brings many different insights to care situations in a prospective and cooperative way. Models of bereavement care established in palliative care units deserve wider implementation in medicine. An “experiential” model of medical student education encourages a focus on the whole experience of patients and their journey with their carers.

PAIN MANAGEMENT IN CHILDREN

Reading 10

Howard RF. Current Status of Pain Management in Children. *JAMA.* 2003 Nov 12;290(18):2464-9.

http://jama.ama-assn.org/cgi/content/full/290/18/2464

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ABSTRACT

Many changes have taken place in pediatric pain management since the undertreatment of children's pain was first reported. Notable advances include an increase in understanding pain during development and improvements in the management of acute pain. Although much more about the safe and effective management of pain in children is now known, this knowledge has not been widely or effectively translated into routine clinical practice. Lack of suitable research on which to firmly establish evidence-based care is likely to have contributed to this situation. A subject of considerable interest recently is the discovery that the experience of pain in early life may lead to long-term consequences. New research findings from laboratory and clinical studies have clearly identified possible mechanisms and provided evidence that long-term behavioral changes can extend far beyond what would be considered the normal period of postinjury recovery. Timing, degree of injury, and administered analgesia and its nature may be important determinants of the long-term outcome of infant pain. Chronic pain, including neuropathic pain, is far more common in children than was thought. The assessment and treatment of this pain and its functional consequences present a considerable unmet challenge. There is a pressing need for further research and clinical development in the management of pain in children.