Pain Management Review Part 1

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Objectives

- Study the relationship between migraine pain and multiple sclerosis.
- Investigate the limitations and usefulness of quantitative sensory testing in clinical and research applications to neuropathic pain state.
- Discuss the financial analysis of emergency admissions for chronic back pain in a Maine hospital.
- Discuss the predictors of the onset of facial pain and temporomandibular disorders in early adolescence.
- Describe the influence of timing of administration on the analgesic efficacy of parecoxib in orthopedic surgery.
- Study a case report of bilateral painful idiopathic ophthalmoplegia.
- Discuss management strategies for pain in breast carcinoma patients including current opinions and future perspectives.
- Discuss the use of naprapathic manual therapy or evidence-based care for back and neck pain.
- Discuss symptom prevalence in patients with incurable cancer.
- Evaluate whether phenol neurolysis for severe chronic nonmalignant pain is obsolete.

Two cases of lesions in brainstem in multiple sclerosis and refractory migraine.

Fragoso YD, Brooks JB

Journal: Headache 47(6):852-854, 2007. 9 References
Reprint: Dept of Neurology, Medical Faculty UNIMES, Rua da Constituição 374, CEP 11015-470, Santos SP, Brazil (YD Fragoso, MD, MSc)
Faculty Disclosure: Abstracted by T. Newitt, who has nothing to disclose.

Multiple sclerosis (MS) with a lesion in the brain stem and severe migraine was identified in 1993, and other lesions of the brain stem such as hemorrhage in cavernous angiomas near the periaqueductal area (PAG), have been reported to generate abrupt and severe headaches. Brain stem activation by pain has been located in areas of the midbrain reticular formation, in regions consistent with the location of nucleus

cuneiformis and rostrally superior, colliculi/PAG.

This article reports on two new cases of MS with visible plaques in the brain stem, presenting refractory migraine as one of the initial symptoms of MS. In both cases, all other diagnoses were excluded.

Case 1 describes a 36-year-old homemaker, with no personal or familial previous history of headaches. For two continuous weeks she presented with a severe throbbing headache without aura, accompanied by intense photophobia, phonophobia, nausea, and vomiting. The headache was predominantly bitemporal and frontal, although it affected the whole head from the second day onwards. Attempts to move the head or body resulted in increased pain intensity. This pain was refractory to analgesics, ergotamine, triptans, and haloperidol. A moderate and temporary improvement was obtained with high doses of intravenous dexamethasone.

She developed left hemiparesia and left eye optical neuritis in the second week. Her MRI, as shown in the article, indicates a demyelinated area of the brain stem. Cerebrospinal fluid showed increased levels of IgG and oligoclonal bands. After 6 weeks, the patient presented with relapse with left hemiparesia and was started on glatiramer acetate treatment. She was symptom free for 18 months, at the time of the writing of this article, and had an occasional migraine attack without aura, then totally responsive to abortive treatment. No episodes of aura were observed in this patient at any time.

Case 2 was an Afro-descendant female, 45-year-old nurse, with a previous history of occasional migraine attacks without aura since puberty, mainly moderate in intensity, and totally responsive to low doses of analgesics. She presented with right hemiparesia and hemihypesthesia, which had a gradual onset over 48 hours, associated with severe a throbbing headache without aura. The headache was predominantly unilateral, frontal, and temporal. She reported that the present headache was much more intense than any other attack of migraine she had ever had. This headache did not respond to ergotamine, triptans, haloperidol, or dexamethasone.

The patient's MRI, showing a demyelinating lesion in the brain stem, is shown in the article. Cerebrospinal fluid showed increased levels of IgG and presence of oligoclonal bands. She was treated with high doses of intravenous methylprednisolone and obtained moderate improvement of her neurological symptoms and signs.

After 5 weeks, she presented with right-eye optical neuritis and was started on glatiramer acetate treatment. Over a period of 3 months all her symptoms and signs improved considerably, and after 21 months she only had hypesthesia in the right arm. She still complains of occasional migraine attacks without aura, totally responsive to abortive treatment with analgesics No episodes of aura were observed in this patient at any

time.

Despite general acknowledgment that the brain stem has an important role in pain modulation, few cases have been reported. Nonetheless, such reports may lead to a better understanding of the possible areas of the brain stem involved in acute and severe pain. The location of brain stem demyelinating lesions in these two patients was different, though the presenting symptoms were very similar. The intensity of the refractory headache they presented in the first bout of MS was remarkable and unusual.

Usefulness and limitations of quantitative sensory testing: clinical and research application in neuropathic states.

Hansson P et al

Journal: Pain 129(3):256-259, 2007. 31 References
Reprint: Dept of Neurosurgery, Pain Center, Karolinska University Hospital, 171 76 Stockholm, Sweden (P Hansson, MD, PhD, DDS)
Faculty Disclosure: Abstracted by T. Newitt, who has nothing to disclose.

Over the past 2 decades quantitative sensory testing (QST) has been developed to complement traditional neurological bedside examination in the analysis of somatosensory aberrations. The approach, derived from experimental psychophysics, consists of measuring the responses evoked by mechanical and thermal stimuli, intensity of which is controlled by automated devices. In theory, the main advantages of QST over standard bedside examination would be greater precision in accessing the functionality of the somatosensory systems. The interest in QST for the follow-up and, although to a lesser extent, the diagnosis of sensory neuropathy, has been recognized. However, the role of QST in the diagnostic work-up hierarchy of neuropathic pain patients has not been clearly defined. This topical review highlights the usefulness and limitations of QST in clinical and research settings.

QST is based on precise definitions of the stimulus properties (modality, intensity, spatial and temporal characteristics), analysis of the quantity of evoked sensation and quantification of is intensity. In addition to assessment of sensory thresholds, QST includes the assessment of sensations evoked by suprathreshold stimuli. Thermal as well as static and dynamic mechanical stimuli are used in order to assess the different sensory modalities corresponding to different types of receptors, peripheral nerve fibers and CNS pathways. Devices delivering calibrated mechanical stimuli are less sophisticated and less standardized such as Von Frey hairs and paintbrushes.

Numerous algorithms have been validated for the assessment of sensory thresholds, but the most commonly used are the method of limits and the method of levels. In the method of limits, the intensity of a stimulus applied to the skin is increased (or decreased) until the subject perceives a stimulus or feels it as painful and

stops the stimulus by a feedback control. The thresholds are then calculated as means of the values obtained during a series. Because this method involves the reaction time, its results are highly dependent on the subjects' motor abilities and attention.

In the method of levels, a series of predefined stimuli are applied to the skin and, for each stimulus, the subject has to report whether the stimulus is perceived or not or whether it is painful or not. The intensity of the next stimulus is increased or decreased on the basis of the subjects' response. This does not depend on the reaction time. However, this method is used less frequently because it is time consuming.

In any testing protocol, characteristics of the stimulus should be clearly specified and followed rigorously because any deviation may seriously affect the measurements. Influences may be the model or make of the instrument, room temperature, site of stimulus, size of the stimulated area, stimulus velocity and inter-stimulus interval, or variations in patient characteristics such as age, sex, cooperation/ motivation, vigilance, or attention. Combinations of quantitative, qualitative, spatial, and temporal somatosensory aberrations may be found, all usually confined to the innervation territory of the affected peripheral or central nervous structure.

Although, in theory, the main clinical diagnostic aim of QST is to support the hypothesis whether or not a lesion exists along somatosensory pathways, very few studies have directly compared the results of QST with those of standard clinical examinations and, therefore, the sensitivity and specificity of these techniques for the diagnosis of neuropathic pain are unknown.

In some individual patients it is not possible to conclude whether the QST results are normal or abnormal. Even though a finding is normal as judged by normative data it may be abnormal when compared to the healthy contralateral homologous site of the patient. Outcomes of QST and bedside testing do not necessarily coincide. The more qualitative and faster bedside examination allows testing of a larger part of the innervation territory of the injured nervous structure. Thus, QST cannot replace bedside examination. The two approaches, however, are complementary.

QST has been used in therapeutic trials to demonstrate the putative differential effects of drugs on the different neuropathic pain components (i.e., spontaneous pain, allodynia/hyperalgesia).

Since the expected role of QST in the definition of a mechanisms-based approach to neuropathic pain has not yet been met, there are probably no simple relationships between the pattern of sensory deficits and neuropathic pain symptoms; and the ultimate

aim of marrying clinical symptoms and signs with pain pathophysiology still has to be accomplished.

Fiscal analysis of emergency admissions for chronic back pain: a pilot study from a Maine hospital.

Jorgensen DJ

Journal: Pain Med 8(4):354-358, 2007. 26 References
Reprint: Jorgensen Consulting, LLC, 1053 Western Avenue, Manchester, ME 04351 (DJ Jorgensen, DO, CPC)
Faculty Disclosure: Abstracted by T. Newitt, who has nothing to disclose.

The hospital emergency department's mandate is immediate symptom relief, not follow-up care and coordination of health care resources. Many consider it a costly venue for ongoing management of chronic pain. Habitués of emergency facilities tend to have laboratory tests and imaging studies duplicated when they are admitted at successive visits. Moreover, most emergency department staff lack the time and training to address the underlying issues that contribute to the experience of chronic pain and influence functional recovery.

Data from emergency departments provide a good entry point for evaluating the economic burden associated with chronic back pain. Hypothesizing that the treatment of chronic back pain by emergency personnel is a costly approach to management of these patients, the author's group designed a pilot study of fiscal data for urgent-care visits at a hospital that has emergency facilities on two campuses in central Maine. The purpose of this study was to collect and analyze enough preliminary data to determine whether more in-depth analyses were justified.

This retrospective descriptive study was based on fiscal data from the records all patients who received emergency care for acute exacerbation of chronic back pain over a 12-month period beginning March 1st, 2004. Data were extracted from the records of patients over the age of 18 who had no evidence of acute trauma and no history of malignant disease.

The author had access only to data for patients with thoracic spine pain. Severity was indicated by the level of intervention required, as determined by Current Procedural Terminology (CPT) codes for emergency departments. Of the five available codes, only the top three were selected for study to exclude back problems of limited complexity and those associated with relatively mild pain. Fiscal data included charges for physician and provider services, laboratory tests, imaging studies, medications, and other billable items.

In the 12-month study, the author's emergency department logged a total of 1,397 admissions for patients with acute exacerbation of chronic back pain at five levels of severity. Of these, 1039 visits represented

patients with the three highest CPT codes. Thus, among the 1,397 emergency visits for chronic nonmalignant back pain, more than 74% were assigned one of the top three, most costly CDT codes. Of the 1,039 visits, 30% represented multiple visits to the emergency department over the 12-months study. While only 3% of the patients in the study were seen three or more times, they accounted for 0.4% of the total charges ($1,799 per visit).

Continued access to services for pain management is difficult for many patients. Elderly or indigent patients may encounter regulatory barriers in the Medicare and Medicaid systems. Patients with health insurance often find that their coverage for pain management comes to a halt. Most insurance plans have no distinct policies regarding outpatient management, as they do for inpatients, and claims are generally handled on an individual basis, making it difficult for subscribers to know when reimbursement will end.

The author suggests that while studies for patients with recurrent cancer pain have demonstrated fewer emergency department visits and hospitalizations when appropriate pain management is available, economic studies of chronic nonmalignant pain are in short supply. Before insurers and regulators will change their policies about coverage and reimbursement of services, they are likely to require hard data showing that the results of treatment are commensurate with its cost.

The cost of emergency intervention for one-time relief of symptoms in this study was probably much higher than outpatient intervention would have been, ranging from $399 to $1943 per admission for chronic to severe back pain. Overall charges for repeat users of the emergency department in the authors setting were particularly high.

Predictors of onset of facial pain and temporomandibular disorders in early adolescence.

LeResche L et al

Journal: Pain 129(3):269-278, 2007. 31 References
Reprint: Dept of Oral Medicine, University of Washington, Seattle, WA 98195-6370 (L LeResche, MD)
Faculty Disclosure: Abstracted by T. Newitt, who has nothing to disclose.

Many adults with temporomandibular joint and muscle disorders (TMDs) report that their condition began during adolescence. If gender, presence of other pain conditions and psychological symptoms are related to TMD onset, these factors may begin to play a role during the adolescent period. It is also possible that these factors are not strongly associated with pain onset, but are associated with the tendency for pain, if present, to persist and become more severe.

The aim of this perspective cohort study was to identify risk factors for onset of clinically significant TMD

pain, i.e., pain associated with a Research Diagnostic Criteria for TMD (RDC/TMD) diagnosis of myofascial pain or arthralgia, between the ages of 11 and 14 years. The authors also assessed risk factors for onset of facial pain that did not meet these strict diagnostic criteria.

Baseline subjects in this study were 1,996 boys and girls, initially 11 years old. Initial telephone interviews took place from May 2000 to April 2001. Data on history and presence of facial pain, back pain, headache, and stomach pain in the past 3 months, as well as information on demographics and suspected risk factors were collected from the child through a telephone survey at baseline.

Three months after completing the baseline interview, the child received a brief mailed questionnaire that inquired into the presence in the past 3 months of each of the 4 pain conditions. Identical questionnaires were sent every 3 months for the next 3 years. Subjects were classified into one of 3 categories: (1) no facial pain report, (2) facial pain report with confirmed RDC/TMD pain diagnosis, or (3) facial pain report without confirmed RDC/TMD pain diagnosis. Among the 1310 subjects in the sample, 848 (64.7%) reported no facial pain prior to the first follow up; 89 subjects (6.8% of the cohort) had an onset of clinically significant TMD pain. Of these, 36 subjects met criteria for myofascial pain only, 44 arthralgias only, and 13 for both disorders.

Female gender was the only variable that predicted both the onset of an RDC/TMD pain diagnosis and the onset of facial pain report alone. Further, the odds of experiencing an onset of a pain condition meeting RDC/TMD criteria were significantly increased among children with higher levels of depression and somatic symptoms at baseline. Children with low self-esteem at baseline, as well as those who reported themselves to be neutral or dissatisfied with life in general, were also at greater risk for facial pain meeting the diagnostic criteria.

The probability of developing clinically significant facial pain was increased for children who reported experiencing any one of the other pain conditions at baseline. Children with 2-3 pain conditions, the odds of experiencing an onset of clinically significant pain were over 4 times those of children with none of the other pain conditions at baseline. Finally, children whose parents had a lifetime history of 3 or more pain conditions were at significantly increased risk for onset of facial pain meeting RDC/TMD criteria.

Children who reported their race as white were significantly more likely to experience onset of facial pain not meeting RDC/TMD diagnostic criteria than those who reported their race as black or "other." Never having smoked and having undergone orthodontic treatment were each predictors of an onset of non-RDC/TMD facial pain. Obese or overweight children were less likely to experience facial pain than those of normal weight and those whose parents had a high-school education or less were also significantly less likely to report facial pain, compared with children whose parents had a professional or graduate education.

Baseline variables showing no statistically significant relationship with future facial pain or RDC/TMD

pain diagnoses, included self-rated general health status, the amount of time spent in sedentary activities, physical activity level, self-rated school performance, schools satisfaction, and parental marital status.

The authors were able to confirm that many risk factors for onset of clinically significant TMD pain in adolescents are similar to the risk factors for onset of TMD and other pain problems in adults, and are also similar to risk factors for onset of the other pain conditions in adolescents. These findings suggest that individuals who develop TMD pain in adolescence may have an underlying vulnerability to experience pain that is not unique to the facial region.

The influence of timing of administration on the analgesic efficacy of parecoxib in orthopedic surgery.

Martinez V et al

Journal: Anesth Analg 104(6):1521-1527, 2007. 34 References
Reprint: Service d'Anesthésie Réanimation, Hôpital Raymond Poincaré, 104 boulevard Raymond Poincaré, 92380 Garches, France (D Fletcher, MD)
Faculty Disclosure: Abstracted by T. Newitt, who has nothing to disclose.

Tissue injury and inflammation induce cyclooxygenase-2, responsible for the synthesis of prostaglandins, which sensitize the nociceptor and act as excitatory neuromediators in the CNS. In animal models, the inhibition of constitutive cyclooxygenase-2 and reduction of its inducible form reduce the peripheral and central sensitization that occurs after tissue injury. Additionally, rofecoxib limits both primary and secondary hyperalgesia in a human pain model. This article describes an investigation into whether inhibition of cyclooxygenase-2 before tissue injury might enhance the analgesia provided by parecoxib for postoperative pain control.

All patients had total hip arthroplasty under a standardized general anesthesia protocol. Patients were randomly allocated into 3 groups: control, pre, and post. All patients received 3 IV injections: the first with anesthesia induction, a second at wound closure, and a third, 12 hours after induction. The control group received 3 placebo injections. The pre group received 40 mg parecoxib at induction, placebo for the second injection, and 40 mg parecoxib for the third injection. The post group received a placebo for the first injection, 40 mg parecoxib for the second injection, and 40 mg parecoxib for the third injection.

Upon beginning recovery in the PACU, patients rated their pain on a 100-mm-long visual analogue scale (VAS) (0 mm = no pain). Morphine requirements were recorded both in the PACU and postoperative PCA. Side effects of morphine were noted. Hematocrit was determined on the day before surgery and on day 5 after surgery. The total number of red blood cell concentrate transfusions was tabulated on day 5.

Data from 62 patients were analyzed for morphine consumption over 24 hours and morphine-related side effects (n = 21 control group; n = 22 pre group; n = 19 post group) and 63 patients for postoperative bleeding.

Cumulative morphine consumption for the 24 hours after surgery was reduced by approximately 45% in both the pre and post groups compared with the control group. The average PCA morphine-sparing effect was 66% in the pre group and 72% in the post group compared with the control group. The 4-hour intervals dose of IV PCA morphine was significantly reduced in the pre and post groups compared with control.

The preoperative administration of parecoxib more than doubled the time to first analgesic demand in the PACU, but postoperative administration only increased it by 26%. The first VAS pain score in the PACU before morphine titration was 29% less in the pre group than in the control group, but only 18% less in the post group than the control. However, the pre and post scores were not significantly different. Blood loss was not significantly different in any group.

The authors concluded that parecoxib does not provide clinically significant preemptive analgesia. However, it improves postoperative analgesia, reduces the dose of morphine required by patients, and does not increase perioperative bleeding. The analgesic effects are still evident at 24 hours when 2 injections, spaced 12 hours apart, are given.

Bilateral painful idiopathic ophthalmoplegia: a case report.

Nieri A et al

Journal: Headache 47(6):848-851, 2007. 17 References
Reprint: Dept of Clinical Neurology, Universidade Estadual Paulista/FMB, CP 540-18618-970, Botucatu, SP, Brazil (AB Nieri, MD)
Faculty Disclosure: Abstracted by T. Newitt, who has nothing to disclose.

Painful ophthalmoplegia is an important presenting complaint to emergency departments. Tolosa-Hunt syndrome (THS) is one of the differential diagnoses of the unilateral ophthalmoplegias.

The first and second editions of the International Classification of Headache Disorders (ICHD-1 and ICHD-2) define THS as a unilateral headache. However, 3% of individuals with painful ophthalmoplegia have bilateral complaints (although not classified as THS). This article reports a case of bilateral ophthalmoplegia with unknown secondary cause.

A 26-year-old Caucasian woman reported a history of ocular and retro-orbital pain initiated one month

before the initial visit. The pain was stabbing, of moderate severity, with tearing and photophobia. A few days later, the patient reported spreading of the pain to the ipsilateral periocular region, and double vision when looking to the right. After 3 days, the pain became ocular and retroocular bilaterally, of severe intensity, associated with ptosis on both sides.

After referral, the patient had bilateral ocular pain of severe intensity, bilateral ptosis, and bilateral ophthalmoplegia, except on right abduction. She had bilateral mydriasis and poor response to light. A fundoscopic exam was negative and she had no meningeal signs. Neurological and physical exam were unremarkable as was family history.

Neuroimaging investigations were performed including a CT scan with contrast, MRI of the brain and orbits, and angio and venous MRI. No abnormalities were demonstrated. Appropriate and extensive workup was conducted to rule out secondary causes.

Operating on the syndromic diagnosis of bilateral painful ophthalmoplegia, she was empirically started on intravenous dexamethasone. After 12 hours, she had complete remission of pain and partial remission of the ophthalmoplegia. In 72 hours, she had further remission of the ophthalmoplegia and improvement of the ptosis, as well as of the mydriasis. At this time, her pupils were again responsive to light. She was discharged using oral prednisone.

One month later, she was asymptomatic. MRI was normal. Spinal tap showed proteins of 80 mg% and glucose of 121 mg%. Cultures were again negative and she was maintained on prednisone for 2 months before tapering off. She has been asymptomatic since the onset of steroids (7 months at the writing of this article).

Bilateral painful ophthalmoplegia is a syndromic diagnosis, with multiple potential etiologies, including many secondary causes, such as diabetes, giant cell temporal arteritis, meningiomas, lymphomas or paraseller tumors, or vascular malformations of the posterior communicating artery or intracavernous carotid artery. Inflammatory conditions such as orbital pseudotumor, sarcoidosis, and systemic signs of infectious and granulomatous-specific diseases should be sought. All were excluded in this case.

Tolosa-Hunt syndrome represents from 2.9% to 3.4% of the painful ophthalmoplegias and was carefully ruled out in this case. To the authors' knowledge this is a unique case of ophthalmoplegia **i**n which no cases of secondary disorder were found

Management strategies for pain in breast carcinoma patients: current opinions and future perspectives.

Saxena AK, Kumar S

Journal: Pain Pract 7(2):163-177, 2007. 83 References
Reprint: Pain Clinic, Dept of Anesthesiology, University College of Medical Sciences & GTB Hospital, Delhi, India (AK Saxena, MD, DA, FAMS)
Faculty Disclosure: Abstracted by T. Newitt, who has nothing to disclose.

Approximately 50% of patients at all stages of breast cancer and more than 70% of patients with advanced disease report pain. Tumor invasion of bone, common in breast cancer, accounts for pain in approximately 50% of these patients. The remaining 50% experience tumor-related pain due to nerve compression or infiltration, or tumor involvement in the gastrointestinal tract or soft tissue.

Recent advances in pain management techniques, including effective use of opioid therapy and numerous adjunctive approaches, can provide adequate control of pain and improved quality of life for the vast majority of breast cancer patients. This article concerns modern approaches to the treatment of pain in breast cancer patients.

The assessment of breast cancer pain requires an understanding of pathophysiology and characteristics of breast cancer. The pain history, combined with information obtained from the physical examination and appropriate imaging and laboratory studies, usually provides sufficient data to generate meaningful conclusions concerning the etiology of the pain, its pathophysiology, and its defining syndrome.

A pathophysiologic classification of pain can have utility in treatment planning. Pain syndromes may be labeled nociceptive, neuropathic, psychogenic, or mixed. Pain syndromes may be acute or chronically persistent. Acute pain syndromes are commonly caused by diagnostic or therapeutic interventions, including surgery, or may be a form of breakthrough associated with a chronic persistent pain syndrome. Pain syndromes in breast cancer patients are of various types: (a) tumor-related nociceptive pain syndromes, including metastases, extension of tumor, neural compression, or obstruction, infiltration or compression of visceral structures; (b) tumor-related neuropathic pain syndromes; and (c) treatment-related pain syndromes.

Pain management includes the World Health Organization (WHO) 3-step analgesic ladder. A suitable model for treatment of acute pain is found in the principles of pain management in postoperative patients. A reasonable starting dose for moderate cancer pain in opioid-naïve patients is 5 to 10 mg of oral intermediate-release morphine or equivalent, with a reassessment of pain at 4 hours. If sufficient, the dose should be repeated every 4 hours around the clock. If not, the dose can be increased by 25% to 50%.

At the present time, parenteral NSAID therapy is limited to ketorolac. The transdermal drug diclofenac is a

useful adjunct. Intravenous patient-controlled analgesia may be used, and its most important alternative is epidural opioid administration.

Analgesia can be achieved by effective treatment of the underlying pathology causing the pain. Primary treatment includes anti-neoplastic therapies (the taxanes, platinum agents, and vinca alkaloids are most likely to cause neuropathic pain) and interventions directed at other structural pathologies, intralesional excision and reconstructions with cement of spinal metastases and radiation, among others.

The article further discusses analgesic approaches including pharmacologic management and opioid analgesics, including initiating therapy, consolidating therapy, and maintaining therapy. Adjuvant analgesics include corticosteroid, anti-depressants and anticonvulsants, oral local anesthetics, intravenous or subcutaneous lidocaine, ketamine, lidocaine patches, capsaicin, and other drugs. Management of bone pain due to osteolytic bone metastases includes biphosphonates, steroids, calcitonin, and radiopharmaceuticals.

Interventional strategies include intrathecal pumps, neural blockade, temporary nerve blocks, continuous thoracic epidural block, interplural analgesia with local anesthetics, and neurodestructive and neuroablative procedures.

Nonconventional approaches include transcutaneous electrical nerve stimulation, acupuncture, cognitive behavioral and psychological approaches, yoga and meditation, and support groups.

Naprapathic manual therapy or evidence-based care for back and neck pain: a randomized, controlled trial.

Skillgate E et al

Journal: Clin J Pain 23(5):431-439, 2007. 40 References
Reprint: Institute of Environmental Medicine, Karolinska Institutet, Box 210, SE-171 77 Stockholm, Sweden (E Skillgate, DN)
Faculty Disclosure: Abstracted by T. Newitt, who has nothing to disclose.

Naprapathy, literally "to correct cause," is a health profession characterized by viewing the musculoskeletal system as a whole where shortened soft and connective tissues around the spine and other joints are believed to cause pain and disability. Naprapathy combines manual techniques like spinal manipulation/mobilization, massage, and stretching to treat the shortened tissues to decrease pain and disability. It is practiced in Sweden, the United States, Finland, Norway, and other countries.

The aim of this trial was to compare the effectiveness of naprapathic manual therapy (Index Group) and

evidence-based care defined as support and advice on staying active and on pain coping strategies, according to guidelines and the best scientific evidence available, provided by a physician (Control Group), for patients with pain and disability in the back or neck lasting for at least 2 weeks, regarding pain, disability, and perceived recovery.

A total of 409 patients were randomly selected and assigned to 1 of the 2 groups. The assigned patients had a mean age of 47 years and were 71% women, mainly suffering from neck pain. For patients randomized to the Index Group, an experienced licensed naprapath provided a maximum of 6 treatments within 6 weeks.

The Control Group was given evidence-based care in direct conjunction with the medical examination. The care involved advice and support, aiming to empower the patient with an understanding of the importance of staying active and living as normal a life as possible, including work and physical activities. All outcomes in the trial were self-rated by web-based or postal questionnaires 5 times during the year following the inclusion. Starting from the day of inclusion, data from 3-week, 7-week, and 12-week follow-ups were included in this report.

On the basis of defined scales, 4 dichotomized outcomes were defined: (1) improvement in pain; (2) improvement in disability (*von Korff*); (3) improvement in disability (*Hoving*); (4) totally recovered. The secondary outcome was perceived recovery.

There were statistically significant changes within both groups compared with baseline, and there were statistically significant differences in changes between the groups favoring the Index Group for all outcomes at 7 and 12 weeks. After 12 weeks a higher proportion in the Index Group stated that they were very much improved; had improvement in pain; had improvement in disability; and had totally recovered.

Adverse reactions in the Index Group were recorded and none were serious, but minor short-term reactions such as muscle soreness, tiredness, and increased pain were reported, most commonly after the first and second treatments.

Symptom prevalence in patients with incurable cancer: a systematic review.

Teunissen SC et al

Journal: J Pain Symptom Manage 34(1):94-104, 2007. 57 References
Reprint: Dept of Medical Oncology, F.02.126, University Medical Center, Heidelberglaan 100, 3584 CS Utrecht, The Netherlands (A de Graeff, MD)
Faculty Disclosure: Abstracted by T. Newitt, who has nothing to disclose.

The suffering of incurable cancer patients is determined to a large degree by the presence and intensity of

the symptoms of their disease and palliation has different dynamics in every patient. The main aim of this study was to obtain a reliable estimation of symptom prevalence in patients with incurable cancer by performing a systemic review of studies assessing this topic. Secondary aims were 1) to study differences in symptom prevalence during the last 1 to 2 weeks of life, and 2) to assess the influence of assessment method, gender, and age on symptom prevalence.

A systematic literature review was done using the following databases: MEDLINE, EMBASE, and CINHAL. Studies were separated assessing symptom prevalence in the last 1 to 2 weeks of life (Group 2) from other studies (Group 1).

Forty-six studies met the inclusion criteria, including a total of 26,223 patients. Data from 40 of the studies were included in Group 1, data from 4 studies were included for both groups, and data from 2 studies were included for Group 2 only. In Group 1, (25,074 patients), 37 symptoms were identified that were assessed in at least 5 (> 10%) studies. Almost all symptoms occurred in more than 10% of the patients. Five symptoms (fatigue, pain, lack of energy, weakness, and appetite loss) occurred in more than 50% of the patients in Group 1. More than 20% were seen for lack of energy, weight loss, dry mouth, worrying, anxiety, early satiety, and sore mouth/stomatitis.

In Group 2, 4 symptoms (fatigue, weight loss, weakness, and appetite loss) occurred in more than 50% of patients. More than 20% of patients were seen for most of the symptoms. Weight loss occurred significantly more often in Group 2 compared with Group 1, and pain, nausea, and urinary symptoms occurred significantly less often.

For 26 symptoms, different assessment methods could be compared. A clear indication for gender differences, occurring in most or all studies looking at that particular symptom, was found for dysphagia and insomnia (both more prevalent in men) and for nausea and vomiting (more prevalent in women). The relation between age and symptom prevalence found pain and dysphagia both decreasing with age

Phenol neurolysis for severe chronic nonmalignant pain: is the old also obsolete?

Weksler N et al

Journal: Pain Med 8(4):332-337, 2007. 24 References
Reprint: Div. of Anesthesiology and Critical Care Medicine, PACU, Soroka Medical Center, Faculty of Health Sciences, Ben Gurion University of the Negev, Beer Sheva 84101, Israel (N Weksler, MD)
Faculty Disclosure: Abstracted by T. Newitt, who has nothing to disclose.

Sometimes conventional therapeutic measures fail to optimize pain control, and additional techniques are required to achieve enhanced functional capacity, physical, and psychological well-being, and enhanced quality of life for patients with chronic pain. In these cases, chemical (phenol or alcohol) or physical (cryotherapy, thermal coagulation, or radiofrequency) neurodestructive techniques can be used.

Although radiofrequency neuroablation has gained popularity for the treatment of most common chronic nonmalignant syndromes, this equipment is very expensive. The purpose of this report is to present the authors' experience with phenol neurolysis in patients with severe chronic pain syndromes unresponsive to conventional modalities of treatment.

Forty-two patients with persistent severe chronic pain for more than a month despite treatment with narcotic drug, with or without nonsteroidal anti-inflammatory drugs or other adjuvant therapy, were selected from the authors' pain clinic and treated with phenol neurolysis. Phenol neurolysis was performed after a trial diagnostic block with local anesthetic and one sham block with saline 0.9%. Neurolysis was considered appropriately indicated in patients who had a decrease of at least 70% in pain intensity following the diagnostic block and no pain relief after the sham block.

An admixture of aqueous phenol and iopamidol was used for treatment, the final concentration for phenol being 4%, and 12% for the contrast media. Neurolysis was fluoroscopically guided for chemical lumbar sympathectomy, medial branch destruction, and sacroiliac injections. Anatomical-landmarks technique was used for intercostal, great occipital nerve, genitofemoral, and lateral femoral cutaneous neurolysis, as well as paracoccygeal infiltration.

A nurse recorded the pre- and post-neurolysis visual analogue scale (VAS) ratings with a linear 10-cm scale (0 = no pain). An absolute VAS value ≤ 3 was considered a good result. Patients assessed the quality of pain relief at each monthly visit, using a linear visual scale ranging from 0-10.

Phenol neuroablation was effective in 35 patients. The mean pretreatment VAS score was 8.74, compared with the main post treatment VAS of 1.93. The mean VAS score for pain relief assessment after phenol neurolysis was 8.4. No treatment-related serious complications were observed. There were, however, minor complications such as local hematoma or pain at the injection site that disappeared after less than 2 weeks in 6 patients.

The ideal concentration of phenol for neuroleptic treatment is not well determined and varies from 3% to 12%. It is well known that aqueous solution is more potent than glycerin and the addition of small amounts of glycerol or water-soluble radio-opaque contrast material may increase the concentration to 15%. Ethyl alcohol is a potent drug and can also be used. The authors prefer phenol because alcohol produces severe burning pain on injection and both drugs have similar efficacy.

Only 11 patients (26%) achieved the desired pain relief after 1 single phenol injection. In all others, multiple injections were administered until the goal of VAS ≤ 3 was obtained. Phenol 4% seems to be a safe drug for neurolysis in treatment of chronic nonmalignant pain syndromes in a selected group of patients.