

bexinfo- Pain

Updating the power of your pen in managing pain

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PHARMA**

here's to Life

Acupuncture Effective in Treating Pain After Tonsillectomy Surgery

Children have long been prescribed codeine for pain relief after having surgery to remove their tonsils. However, in February 2013, the Food & Drug Administration (FDA) banned the use of codeine in this setting because of a recently recognized risk of complications. Since the FDA ban on the use of codeine, patients must rely on over-the-counter drugs such as Acetaminophen and ibuprofen, which also have risks and adverse effects especially in young patients and may not be effective. Narcotics have long been the mainstay of therapy for children suffering pain after tonsillectomy, but it is no longer safe to prescribe opioids, so it is paramount to find ways of helping these young patients in an effective and safe manner. The researcher conducted a study using acupuncture instead of codeine for pain relief for his tonsillectomy patients which was published in



the *International Journal of Pediatric Otorhinolaryngology*. Children often experience pain for ten days after tonsillectomy, even longer for adults. It's extremely gratifying to see a safe and drug free treatment such as acupuncture reduce the pain and discomfort in

children after surgery. Acupuncture in general has been shown to be effective in reducing pain, is safe, and can be done quickly at minimal cost.

In this novel study, 31 patients ranging from 2 to 17 years old received acupuncture after tonsillectomy. Prior to acupuncture treatment, patients or their parents reported a mean pain level of 5.52 out of 10. After about 15 minutes of acupuncture the pain level dropped to 1.92, a statistically significant difference. Furthermore, parents on average estimated the duration of benefit from the acupuncture to last about 2½ days. No adverse effects were reported as a result of the drug-free treatments. "I've been using medical acupuncture for years to help my patients suffer less pain after surgery. Now that it is unsafe to use codeine for these kids, I wanted to see if acupuncture without the use of narcotics was helpful for my patients," said the researcher.

Cluster Headache: A Special Torture Reserved Mainly for Men

How terrible are Cluster headaches? "You keep jumping up and running around, trying to run away from this excruciating pain," says Marty Chappell, a 49-year-old Dallas sales manager who has suffered them 25 years. "It comes behind my right eye, it feels like somebody has jammed a screwdriver in there. Many times I said if I didn't have a wife and two boys, I would have killed myself." He said. That's why it's called the 'suicide headache.'" Cluster headaches affect only 1% to 3% of the population. Most of the victims are men in their 30s to their 60s, according to the neurologists, and it's not known why most of those affected are men. The headaches come on often in the middle of the night or at other times of relaxation. They typically occur behind one eye, with swelling, tearing, redness and nasal congestion. They might last an hour, then recur several times a day. They can attack for a few days, then go into remission — until they return, if they return, and they usually do, weeks, months or years later. When in a cycle, tobacco, alcohol or other triggers might set off another headache, but there are no triggering substances or foods that bring on the clusters themselves. These headaches are not easily endured and are stubbornly resistant to treatment or pain relief. Because they're rare and because of their other symptoms, they often escape diagnosis, according to the researchers. "People get a runny nose and their eyes water. They take Pseudoephedrine and in a half hour, the headache goes away." "But it's not the medicine — that's how long the headache lasts. The headache comes back, so they see their doctor, but because it's really quite rare and the average primary-care doctor may see one case in their career, now we're chasing the path of sinus headache and taking antibiotics. The problem centers in the hypothalamus, which controls the body temperature, sleep, circadian cycles and more. Histamine intolerance seems involved, yet antihistamines are useless. One theory implicates light fluctuations during the equinoxes, the solstices and even international travel. Thus, Cluster headache is a fascinating entity and very unique, its cause is mysterious, its treatment haphazard, and any treatment's effectiveness highly individualized.



Sections Inside

- New Arena of Pain
- Clinical Knowledge
- Interesting Facts

DIAGNOSIS

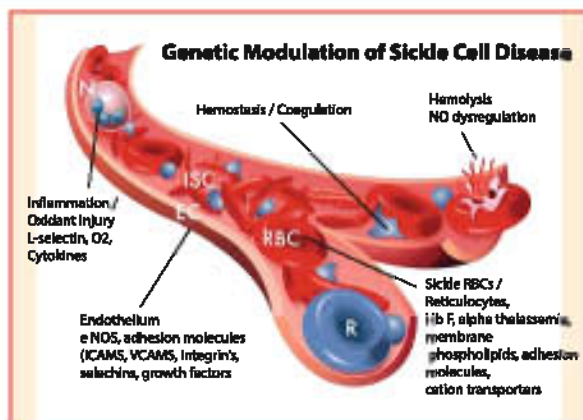
Outcome: Chest X-ray and CT scan showed a diastasis between the right lateral 6th and 7th ribs, with an intercostal muscle defect and herniation of the lung. Bedside ultrasonography showed persistent lung herniation. The hernia was reduced under ultrasound guidance but re-herniated with an episode of coughing. Cardiothoracic surgery consultation was obtained and another CT scan was performed in the ED. The patient was again managed conservatively as an outpatient. A follow-up CT scan 3 months later showed sub-diaphragmatic fat and the hepatic flexure of the colon herniating into the right chest wall, raising concern for an anterior diaphragmatic hernia. He was also found to have multiple right-sided rib fractures on imaging studies at that time. He was taken to the operating room and was found to have a defect at the insertion site of the right anterolateral-diaphragm. The abdominal contents were reduced and the hernia was repaired. Ribs #6 and #7 on the right were sutured in close approximation to close the diastasis. At the time of surgery, a bone biopsy was performed. This ruled out malignancy as a cause for his spontaneous rib fractures. He recovered well and had an uneventful hospital stay. Follow-up CT scan showed persistent rib fractures, but resolution of his lung and bowel herniation's. He remains asymptomatic 1 year after initial presentation.

In moderate to severe pain

NapaDol[®]
Paracetamol 325 mg &
Tramadol 37.5 mg Tablet

Synergy, for superior pain relief

Arginine Therapy Shows Promise for Sickle Cell Pain

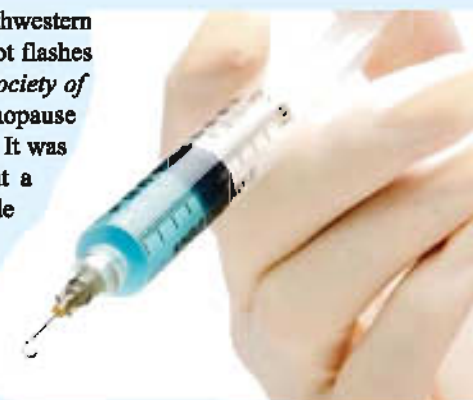


Arginine therapy may be a safe and inexpensive treatment for acute pain episodes in patients with sickle cell disease, according to results of a recent clinical study. The study was to demonstrate benefits of arginine therapy in children with sickle cell disease hospitalized for severe pain. Sickle cell disease is an inherited condition in which the red blood cells are produced containing abnormal hemoglobin. This abnormal hemoglobin (hemoglobin S) causes red blood cells to distort into a sickle, or crescent shape that often blocks blood flow in small blood vessels, leading to severe pain and organ damage. Arginine is an amino acid found in a normal diet, but is also available as a nutritional supplement. Previously it was identified an acute arginine deficiency in children during pain episodes, with lowest arginine levels found in children with pain severe enough to require hospitalization. A deficiency of nitric oxide, a potent vasodilator, has been identified in sickle cell disease and may contribute to episodes of blocked vessels and pain. Since arginine is a building block of nitric oxide, researchers hypothesized that arginine could be a beneficial treatment for pain related to sickle cell disease. Previous research also found that a single dose of arginine given to patients with sickle cell disease and acute pain episodes resulted in a significant dose-dependent increase in plasma nitric oxide concentration. Building on that knowledge, the current research study was a randomized, double blind placebo controlled clinical trial of 38 children with sickle cell

disease hospitalized for 56 episodes of pain. The research team discovered a 54% reduction in the use of opioid pain medication and significantly lower pain scores at hospital discharge in those treated with arginine over those receiving placebo. The results were published in the journal *Haematologica*. The researchers said "Episodes of pain due to vaso-occlusion are the leading cause of hospital admission and emergency room visits and are associated with increased mortality, yet there is no effective therapy targeting the underlying cause." "Treatment consists only of symptom relief with pain medicines and hydration. There is an urgent need for new therapies for acute sickle cell pain, and a greater than 50% reduction in use of opioid pain medication was a remarkable finding" the researcher also added. The study found safety in the use of arginine therapy. Although the treatment did not result in a significantly shorter length of hospital stay, a trending decrease in hospital stay by 17 hours favored the arginine arm. The researchers believe delivering the study drug as early as possible in the emergency department or clinic may have a greater impact on length of stay.

Local Anesthetic Injected in Neck Reduces Severe Hot Flashes

A shot in the neck of local anesthesia may reduce hot flashes by as much as 50 % for at least six months- a recent Northwestern Medicine study found. "We think we are resetting the thermostat in women who are experiencing moderate to very severe hot flashes without using hormonal therapies," said the researcher. The results of the initial study was presented at a recent *American Society of Anesthesiologists' annual meeting*. Forty women between 35 and 65 years old experiencing natural or induced menopause participated in the study. The women suffered debilitating hot flashes with more severe symptoms than the typical hot flash. It was found that many of the women in this study experienced repeated drenching sweats that lessen the ability to go about a day-to-day routine, including interfering with their professional lives. "We wanted to see if this injection could provide symptom relief without hormones, as hormone therapy has been associated with an increased risk of cancer, stroke and heart disease, and there are few other viable treatment options available right now"-the researchers said. To administer the treatment, the doctor used low dose X-ray to guide an injection of bupivacaine hydrochloride (commonly used local anesthetic) into the stellate ganglion, located in the neck. It's a 30 second procedure that must be done by a trained physician because the injection is close to the carotid artery, the vertebral artery and the spinal nerves. Injecting any of those areas could cause a seizure, loss of consciousness or other complications. The idea came from a pain study published in 2007 in the journal *The Lancet*, where stellate ganglion injections were performed to try to alleviate pain. In some cases, hot flashes dissipated after the injection, independent of pain relief, leading the research team to wonder if this might be a safe, effective way of treating hot flashes from menopause. The patients tracked their hot flashes for two weeks before and six months after the injection. Half the group got the anesthetic; the other a placebo injection of saline, or salt-water. Those who received the anesthetic medication reported a reduction of hot flashes by a half. The benefits lasted at least six months. The researcher is now planning a larger study to further investigate the shot's effectiveness.



Factors Associated With Pain One Year after Breast Cancer Surgery



A study published in *JAMA* reported that more than 800 women who had undergone surgery for breast cancer, the majority reported some level of pain 12 months after surgery. The factors associated with pain included chronic preoperative pain, chemotherapy, preoperative depression and pain in the operative area. Persistent pain following breast cancer treatments remains a significant clinical problem despite improved treatment strategies. Data on factors associated with persistent pain are needed to develop prevention and treatment strategies and to improve the quality of life for breast cancer patients. The researchers of this study examined the prevalence and severity and factors associated with chronic pain after breast cancer surgery and treatments. The study included 860 patients younger than 75 years with non-metastasized breast cancer treated at the Helsinki University Central Hospital in 2006-2010. A questionnaire was sent to patients 12 months after surgery, with assessments of presence and intensity of pain. At 12 months after surgery, 34.5% of the patients reported no pain, 49.7% mild pain, 12.1% moderate pain, and 3.7% severe pain. The factors associated with pain at 12 months were chronic preoperative pain, preoperative pain in the area to be operated, axillary lymph node dissection, preoperative depression, chemotherapy and radiotherapy. "These findings may be useful in developing strategies for preventing persistent pain following breast cancer treatment. To identify patients who would benefit from preventive interventions, a risk assessment tool is needed," the researchers concluded.



For instant pain relief



Diclofenac Sodium

Victory over pain

Cryotherapy Reduces Pain, Narcotic Use after Surgery

Cryotherapy involving the simplest of pain remedies can ease symptoms after major abdominal surgery, according to a new randomized controlled trial. "Ice packs can reduce postoperative pain and narcotic use. They are an easy, benign, and cost-effective addition to postoperative pain management," said the researcher. The researcher presented the study results at the *American College of Surgeons 2013 Annual Clinical Congress*. Icing or Cryotherapy is widely used for postoperative inflammation and pain management. In this prospective trial, postoperative pain was assessed in patients who undergo open abdominal operations with midline incisions. A group of 27 patients was treated with morphine & cryotherapy, and 28 patients (control group), were treated with morphine alone. In the cryotherapy group, ice packs were placed on the dressing immediately after surgery and were maintained for at least 24 hours, with refills and removal as needed. Pain was assessed twice a day with a 10-point visual analog pain scale, and total morphine equivalents were calculated. Nurses and patients also completed questionnaires after 3 days. Each ice pack had a cloth covering, which served to prevent direct skin contact. Skin burns are a potential concern, but they can be avoided with the intermittent use of ice and by preventing direct contact between the ice and skin. Patients could also regulate how cool they felt by putting a towel around the ice pack. The use of icepack are typically limited by advising patients to have it off for at least 30 minutes per hour. The cryotherapy group used the ice packs for a mean of 2.75 days, none asked for it to be removed prior to 24 hours. Pain scores assessed the morning after surgery were significantly lower in the cryotherapy group than in the control group (3.12 vs 4.86), as were scores assessed that afternoon (2.13 vs 4.76). On the third postoperative afternoon, the difference in pain scores was significant, with a combined day 1 and day 3 *P* value of <.005. There was significantly less narcotic use on postoperative day 1 in the cryotherapy group than in the control group (13.5 vs 17.4 morphine equivalents; *P* = .008). There was no documented hypothermia in any of the patients. Of the 21 cryotherapy patients who completed the survey, 17 (81%) said they had postoperative pain relief and of the 10 nurses surveyed, 8 reported that their patients experienced moderate to significant pain relief. Thus, the data of the study do demonstrate a statistically significant reduction in the use of opioid pain medications at several points of the post-operative period.



7TH WORLD CONGRESS WORLD INSTITUTE OF PAIN

Maastricht, The Netherlands, May 7-10, 2014

Pulmonary Puzzle : A Case of Chest Pain

Case History:

A 61-year old gentleman presented to the Emergency Department (ED) with complaints of a sharp, pleuritic right-sided chest pain. He had a history of chronic obstructive pulmonary disease (COPD) and previous 66-pack-year smoking history. He was hemodynamically stable, but was saturating 90% on room air. Physical examination revealed a slightly overweight gentleman with coarse breath sounds at the right lung base, otherwise appeared to be in no respiratory distress. He was noted to have ecchymosis along the right chest wall tracking down the right flank but no risk factors for pulmonary embolus (PE), and no recent or remote history of trauma.

The patient had complaints of persistent violent coughing after an upper respiratory tract infection several weeks prior to presentation. Given his symptoms and hypoxia, a PE-protocol computed tomography (CT) scan was performed at the time of presentation to the ED, which did not show evidence of PE, pneumonia, or rib fractures. Pulmonology consultation was obtained and he was diagnosed with bronchitis and intermittent mucus plugging. He was instructed to start Tiotropium bromide inhalation powder incentive spirometry, and continue pain management strategies. Due to continued symptoms, his primary care physician obtained a repeat chest X-ray study and CT scan 4 weeks later. He was initially treated conservatively, but presented back to the ED with worsening pleuritic, right-sided chest pain. At that time, bedside ultrasonography was performed.

Participate in Online

bexinfo-Pain

quiz and win attractive prizes

<http://beximco-pharma.com/bex-info-1/bexinfo-pain.html>

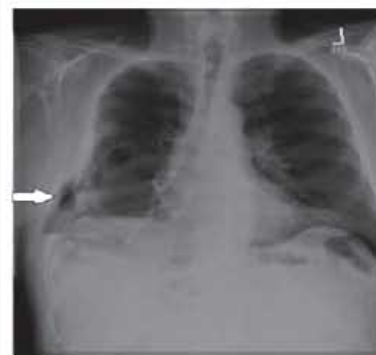


Figure . Chest X-ray study showing lucency along the right lateral chest wall



Figure. Chest computed tomography scan

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Interesting Facts

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Fruits Help Arthritis

Fruits are especially effective in helping reduce inflammation in the body, which is the major cause of the muscle aches, joint stiffness, and pain. Fruits are packed with antioxidants, which are powerful substances that battle harmful free radicals caused by oxidative stress in human body. They are also rich in vitamins, which is metabolized in our body and uses for a variety of different biochemical functions, including cell repair and tissue growth. There are some fruits which help in curing arthritis-



Cherries are high in phytochemicals that reduce inflammation; tart cherries may be even higher in anthocyanin than blueberries.



Strawberries have recently been shown to help lower levels of C-reactive protein (CRP) in blood, a measure of inflammation in the body.



Blueberries contain high levels of anthocyanin, a phytonutrient that encourages collagen production. Our tissues are composed of collagen, so eating a cup of these berries (fresh or frozen) daily may be a protective against tissue damage.



Apples are packed with antioxidants and have been shown to help lower levels of C-reactive protein. The skin of the apple contains the most beneficial substances, so make sure to leave the peel on.



Rhubarb is a rich source of calcium, which is vital for strong bone health. Cooked rhubarb is known to provide our body with more usable calcium than if it is consumed raw.

Chinese Herbal Compound Relieves Inflammatory, Neuropathic Pain



A compound derived from a traditional Chinese herbal medicine has been found effective at alleviating pain, pointing the way to a new non-addictive analgesic for acute inflammatory and nerve pain, according to a study published in the journal *Current Biology*. The study reports that the researchers isolated a compound called dehydrocorybulbine (DHCB) from the roots of the *Corydalis yanhusuo* plant. *Corydalis* is a flowering herbal plant, its root extract to alleviate menstrual cramps, chest pain and abdominal pain. It's been previously studied for its analgesic properties, but this is the first time DHCB has been identified, extracted and tested. In tests on rodents, DHCB proved to diminish both inflammatory pain, which is associated with tissue damage and the infiltration of immune cells, and injury-induced neuropathic pain, which is caused by damage to the nervous system. Moreover, DHCB did not generate the tolerance seen with continued use of most conventional pain relievers. "Our objective was to identify compounds in these herbal remedies that may help us discover new ways to treat health problems, and we're excited that this one shows promise as an effective pharmaceutical. It also shows a different way to understand the pain mechanism" said the researcher. The researchers screened 10 traditional Chinese medicines known as analgesics, testing nearly 500 compounds for their pain-relief abilities and only DHCB in *corydalis* induced a reproducible effect. Drawing upon traditional Chinese medical-herbal products could lead to a breakthrough treatment for these patients. This product needs to be evaluated for any toxicity before it can be developed as a drug, if DHCB is chemically modified, a more potent pharmaceutical may be found.

Eating Fish Lowers Risk of Rheumatoid Arthritis

Eating one portion of fatty fish, or four portions of lean fish, every week may reduce the risk of developing rheumatoid arthritis, according to a study published in the journal *Annals of the Rheumatic Disease*. In the study, researchers sent a questionnaire to all women between 1987 and 1990 who participated in The Swedish Mammography Cohort Study and who were born between 1914 and 1948. The questionnaire called for information on their diet, height, weight, parity and education level. Then in 1997, a follow-up questionnaire was sent to 56,030 women requesting the same information in addition to information on smoking history, physical activity and use of dietary supplements and aspirin. The woman also completed a food frequency questionnaires regarding how often they ate a selection of 67 foods in 1987, and 96 foods in 1997. The selection included a variety of lean and fatty fish. Of these women, 32,000 had their health monitored between 2003 and 2010 and results showed 205 were diagnosed with rheumatoid arthritis. The results showed that across the study group, the women with the highest consumption of omega-3 polyunsaturated fatty acids (PUFAs) had four times high intake than those with the lowest intake. Further, of the women who developed arthritis, 27% had a dietary omega-PUFAs intake of less than 0.21 grams per day. The women in the study who consumed over 0.21 grams per day, which is equivalent to a minimum of one serving of fatty fish, or four servings of lean fish per week, in both 1987 and 1997 had a 52% lower risk of developing rheumatoid arthritis. Additionally, findings showed that eating more than one serving of all types of fish every week for a minimum of 10 years was linked to a 29% reduced risk of arthritis, compared to eating less than one portion a week. These results coincide with guidelines from the *American Dietary Guidelines Advisory Committee*, which suggests that consuming seafood twice per week to obtain an average daily intake of 250 mg of omega-3 fatty acids in the diet. Other studies have shown that women who consume an increased number of omega-3 fatty acids found naturally in fish like salmon and tuna are less likely to develop breast cancer as well.



For managing chronic arthritic pain

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575/20 & 500/20 Delayed-Release Tablets

Relieves pain, protects the stomach