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Cancer Pain: An Allopathic or Alternative Approach?

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The American Cancer Society estimates that 1,334,100 new cancer cases will be diagnosed in 2003 and that 17 million new cancer cases have been diagnosed since 1990. They have also determined that in the U.S., men have a slightly less than 1 in 2 lifetime risk of developing cancer and women have a 1 in 3 chance of being diagnosed with cancer in their lifetime. These statistics show that cancer will touch the life of at least one person you know; unfortunately that person may be someone very close to you. It's extremely difficult to watch someone you love endure so much pain and suffering because of a disease. My father was first diagnosed with cancer six years ago and I have watched him struggle with the disease as well as the treatments associated with it. One of the most difficult experiences for me was watching him suffer with pain. It seemed like he was never comfortable, especially after surgeries, chemotherapy and radiation. The pain relievers his physicians gave him were not effective in managing his pain. His quality of life declined dramatically because it hurt too much to do normal activities. Other family members were also affected because it was difficult to watch my dad suffer and be frustrated by his condition. The pain altered his personality causing him to be very short tempered and anxious about everything, which was out of character for my dad. If his pain had been managed more effectively, the whole treatment process would have been greatly improved, thus positively affecting his quality of life. He would have been able to complete routine activities without pain and may have been more receptive and responsive to treatments without the complications of pain. My father was the inspiration for my thesis research and his experiences directed me toward an examination of the pain associated with cancer and how it could be better managed.

The life span of patients with cancer is increasing as treatments and detection become increasingly effective. Of the 1.3 million people diagnosed with cancer in 2003, more than 60% will live 5 years or more (Ressel 423). People living with cancer for years, experience fatigue, depression and pain. Fatigue and depression are treated aggressively; however pain is least often addressed. Genevieve Ressel, a writer for American Family Physician, suggests that a range from 14-100% of cancer patients have pain. The large range is due to ineffective pain management and underreporting of patients with pain.

Pain is entirely subjective, and is, consequently, very difficult to understand and manage effectively. However, numerous studies and improvements are being made daily to understand chronic pain. Each kind of pain, including cancer pain is thought to be produced by a different mechanism in the body (Benowitz 869). These mechanisms are not yet fully understood, but there are some pain pathways that have been identified.

Pain is usually divided into two major groups, nociceptive and neuropathic. Nociceptive pain comes from tissue injury and can be called somatic nociceptive pain when it is related to the primary afferent nerves in the somatic tissue including muscles, bone and joints. It is called visceral nociceptive pain when the afferent viscera are affected, including most internal organs like the intestines and liver (Portenoy 1695). Neuropathic pain is caused by nerve damage (Benowitz 869). Neuropathic pain has many subtypes including central pain, phantom pain, and postherapeutic neuralgia, which are difficult to treat; these kinds of pain require very specific non-traditional analgesics (Portenoy 1695).

Cancer pain is thought to be a combination of both types, nociceptive and neuropathic. It is also unique because it can be progressive and cause several types of pain including the various types within nociceptive and neuropathic (Benowitz 869). Steve Benowitz, a researcher at Thomas Jefferson University, states that 85% of cancer patients will experience pain from the cancer itself or from the treatments. Tumors can invade a nerve or compress it, they can also produce skin ulcers which causes inflammation and tissue injury experienced in nociceptive pain (Benowitz 869). Chemotherapy drugs like Vinblastine, Vincristine and Taxal can damage nerves, causing a burning sensation (Benowitz 869). This nerve damage occurs as a result of nonspecific effects of the chemo drugs; they are designed to damage cells, which often include healthy tissue surrounding the tumor like nerves. Surgery and radiation can destroy a nerve's ability to send and receive signals by severing a part of the nerve (Benowitz 869). However, nociceptive pain related to surgery or radiation is rare (Portenoy 1696). The most common kind of cancer related pain is the neoplastic invasion of a bone joint, muscle or connective tissue leading to persistent somatic pain in the bone area (Portenoy 1696).

When pain is not effectively controlled, it "can have a profoundly adverse impact on the patient and his or her family" (Portenoy 1695). Thirty to forty percent of cancer patients in active treatment of a tumor and 70-90% of cancer patients with advanced disease, suffer from chronic pain (Portenoy 1695). Russell Portenoy, a physician who is chairman of the department of pain medicine and palliative care at Beth Israel Medical Center in New York, believes that 90% of pain sufferers could get relief from simple drug therapy. There are numerous reasons why 90% of cancer patients are not getting

adequate relief (Portenoy 1695). Since pain is subjective, medical assessments should focus on the onset, course, pattern, location, severity, quality, effective pain relievers and things that increase the pain. The patient's answers to these inquiries along with an exam, labs, and radiological imaging should lead to an accurate diagnosis of the cause, thus allowing for more effective pain management (Portenoy 1695).

There are numerous barriers to managing pain effectively, some of which include: a lack of awareness, patient compliance, communication as well as legal sanction on opioids, and the fear of loss of effectiveness. Pain should be assessed on a regular basis with a numeric or visual scale (Ressel 424). Pain is related to the disease itself, therapy or treatment. Treating pain often leads to the relief of another symptom such as depression, or may make other symptoms, like fatigue, worse (Ressel 424).

Yet another complication in managing cancer pain is that continuing pain can have residual effects on the central nervous system, causing another set of problems. Peripheral sensitization causes continual heightened sensitivity to any kind of stimulus received by the body (Benowitz 869). Central sensitization can also occur causing changes in the neurochemistry of the spinal cord because of chronic pain (Benowitz 869). Acute flare-ups of chronic pain are common in cancer patients and many also experience breakthrough pain (Portenoy 1696). However, most of the chronic pain in cancer is a result of neoplasm (Portenoy 1696). Some believe that the pain pathway is composed of unique molecules and receptors that are not found elsewhere in the body and could become possible drug targets (Benowitz 869).

Pain is generally managed using a three step analgesic approach developed by the World Health Organization. The first pharmacological agent of choice is an NSAID like

acetaminophen. If pain continues, a weak opioid is added to the NSAID. If these interventions are not successful, then the existing drugs are replaced with a strong opioid. Anticancer drugs are also used to manage pain and new drugs like Suramin are found to be very effective for many patients (Benowitz 870).

As suggested above, opioids are a class of drugs surrounded by controversy and confusion, which is another contributing factor to badly managed cancer pain. Physicians are afraid to prescribe opioids because of tight legal control and complications related to use. Many studies have shown respiratory depression in treatments with opioids, but Henry McQuay, a scientist working on pain research at the University of Oxford, argues that the studies were completed on people who weren't experiencing pain; therefore, their breathing was decreased. Patients with pain, however, did not experience respiratory depression. He uses the same reasoning to refute claims that opioids are addictive, stating that people in pain do not become addicted (McQuay 2229).

Morphine is the standard opioid and most commonly used in cancer pain management (McQuay 2230). There is little difference among opioids regarding the duration and speed of onset. The route of administration can be changed to produce faster and longer lasting doses (McQuay 2230). There is little difference in speed of onset among opioids administered via IV solution. However, for opioids given intramuscularly, the speed of onset varies considerably; the more lipophilic the opioid is, the faster acting it is (McQuay 2230). Tolerance to opioids is another concern of the medical community; however, McQuay proposes that tolerance is probably driven by the worsening of the disease and not the pharmacology of the drug itself.

Ressel states that continuous dosing, instead of dosing on an as needed basis, would improve both patient compliance and outcome. Benowitz believes that 85-90% of cancer pain could be managed effectively with oral medications, including new drugs like Gammapentin. The route of administration is very important in medicating cancer pain; oral, transdermal, infusion, epidural or intrathecal are each appropriate in different cases. For instance, certain drugs like Fentanyl, which is lipophilic, can be delivered transdermally (Portenoy1699). Transdermal Fentanyl has been proven effective ad well tolerated for the treatment of chronic pain caused by malignancy (Kornick 951). It has also been found to have fewer adverse effects and higher patient satisfaction (Kornick 951).

Corticosteroids are used to manage other symptoms associated with pain such as anorexia, nausea and malaise and have also been found effective as adjuvant drugs that reduce pain. Antidepressants and anticonvulsants are also prescribed as adjuvant drugs to treat neuropathic pain (Portenoy 1700).

The key to pain management with medication is to find a favorable balance between the analgesia and their side effects (Portenoy 1699). The most common side effects with opioids are gastrointestinal problems such as diarrhea, constipation, nausea, vomiting, and neuropsychological complications (Portenoy 1700). In addition to medications other therapies are often employed. Beam radiation therapy for local pain and bisphosphonates for bone metastases are two other examples (Ressel 424). Nerve blocks, surgery, and psychological therapy are also commonly employed in relieving cancer pain. The pain associated with pancreatic and prostate cancer can be effectively managed with new medications including Gemcitabine and Mitoxantrone (Portenoy

1698). Palliative chemotherapy is also used to manage cancer pain during later stages of the disease. Yet another approach to pain management is alternative medical therapies such as acupuncture.

Acupuncture in the United States is viewed as a complementary medical therapy that has its base in traditional Chinese medicine dating back over 5,000 years. Acupuncture is one part of the Chinese healing system that also includes exercise, diet, massage and herbal formulas (Health). Acupuncture has also been a part of many other cultures such as the Phoenicians, Romans, Egyptians and Galls (Health). Acupuncture has been practiced in the United States for hundreds of years, but the first clinic opened in 1973 in Washington D.C (Health). Today, the World Health Organization recognizes acupuncture as a good treatment for more than 100 different diseases including: pain, acne, allergies, asthma, addictions, earaches, headaches, infertility, arthritis and gastrointestinal problems (Health).

Acupuncture is medicine that works on the body's vital energy or "qi". The body has 12 meridians along which qi/energy flows. This energy is responsible for moving blood, lymph, and all other body fluids to maintain correct flow within the body. This process is essential in carrying byproducts and waste away from cells and tissues. When the energy flow is in a pattern of disharmony, acupuncture works to restore proper flow and correct problems in the body that are a result of accumulated fluids and energy blockages.

An acupuncture needle can be placed downstream from the site of blockage or sometimes directly at the site. When the needle is put into the skin, tissue damage occurs, setting off a cascade of events that includes biochemical release of many substances. One

of the substances thought to be released are endorphins, which are endogenous proteins that produce natural pain relief in the body (Complete 5). More importantly, there is a release of energy and qi is able to flow back into the area. Acupuncture works by helping the body heal itself. The needles themselves are disposable, vary in size and can be placed anywhere from 1/16-6 inches deep into the body, depending on the area of focus. If the site of qi blockage is along a meridian in the ear, the needle will be placed at a shallow depth, but if the meridian lies along the leg, the needle may be placed deeper. Needles are left in for various amounts of time, but are typically in for 20-25 minutes. The insertion of needles is also thought to prevent pain impulses from reaching the brain by stimulating an acupuncture point (Complete 5).

I interviewed an acupuncturist to gain further insight on the practice. I spoke with Dr. Gregory Flynn of Health and Energy in Kalamazoo. He told me about his background, practice and thoughts on acupuncture as it relates to cancer and pain management.

Dr. Flynn states that he obtained a doctorate level of education in California, and that there are numerous programs throughout the country, but most of them are at the master's level. On average, he sees about 10-12 patients per day and the most common ailment is low back pain. He also works with asthma, diabetes, drug addiction, smoking cessation, headaches as well as many other ailments. New patients fill out a series of questions about their condition. The information helps Dr. Flynn in understanding the problem, where it's coming from in the body, and which meridians he needs to work with to treat it. He also said that the exam includes much more than compiling a list of symptoms. It also includes observing the patient's hair, teeth, tongue, eyes, skin, speech,

color of clothing, pulse, and diet, which are all important indicators of what is happening in the body. He gave examples of someone who frequently wears yellow, they may have a problem with their liver; or someone with dark circles under their eyes may have an energy block in the kidneys. Usually it takes 3-5 treatments to notice an improvement in the condition. Improvement is measured by a decrease in intensity, duration or frequency of the symptoms. He explains that there are virtually no side effects, other than possible bruising at the site of needle placement, and initial worsening of the symptoms before improvement. Acupuncture is becoming increasingly recognized by the medical community and is even covered by some insurance plans, mostly in California.

Regarding cancer, Dr. Flynn does not believe the tumor itself can be treated with acupuncture. When I asked him about studies that have shown decrease in tumor size, he explains that when qi is able to flow and restore balance, areas of the body will improve because toxins, waste and inflammation are all reduced in an area that was previously blocked by their accumulation. Dr. Flynn explained that tumors might decrease in size as a result of eliminating the toxins that surround them. He also states that decreasing a tumor requires more than the standard 3-5 acupuncture sessions for improvement.

Elimination of the side effects of traditional medical treatment and pain management can effectively be accomplished through acupuncture for many people (Flynn). Acupuncture can work to decrease pain and may be a much safer alternative to the traditional use of opioids. It can also help with nausea that comes from chemotherapy treatments or prescribed medications. Many cancer patients are not aware of the potential benefits associated with acupuncture and continue to suffer while utilizing allopathic medical care that is often very ineffective at managing pain.

One study that explored the use of complementary medicine on women with gynecologic cancers, found that about half of the patients studied use some type of complementary alternative medicine (Swisher 363). These patients wanted to improve their overall well-being and try to combat their cancer (Swisher 363). Some of the alternative therapies used by these patients included herbs, diet, bioelectromagnetics, manual healing, and Chinese medicine including acupuncture (Swisher 363). Many cancer centers offer multiple kinds of alternative therapy to aide cancer patients in their physical, psychological and emotional wellness (Swisher 363).

Many other studies have found acupuncture to be an effective way to manage pain for patients with cancer. One study at the Royal Marsden Hospital in London concluded "acupuncture has an increasing role in support for pain and symptom management [in patients with cancer]" (Filshie 117). Another study at the Royal Victoria Infirmary in Newcastle found that "...acupuncture can be helpful [in relieving cancer pain]" (Charlton 621). "Acupuncture's analgesia has benefited many whose painful symptoms did not yield to more conventional medical approaches" (Murray 453).

One example of a cancer patient who may have benefited from acupuncture like patients in the above studies is my father. I wanted to include some of his experiences with cancer pain to provide a specific firsthand account. My dad was first diagnosed with cancer six years ago and has since had many different treatments and experienced nociceptive, neuropathic and cancer pain. He has had surgeries, chemotherapy, and radiation with traditional pain management. He serves as a good example of a cancer patient who experienced an allopathic pain management approach. When I interviewed

him about his experiences with cancer pain, I learned that his pain was not effectively managed like many other people living with cancer.

He told me that after his first surgery, his pain was constant, intense and was worse than any of the other treatments he had; he rated it as 9 or 10 on a pain scale from 0-10 with 10 being the worst pain. After this first surgery, he was given a PCA pump for pain management. A PCA pump allows the patient to push a button and administer his or her own pain medication. He told me that he did not like this method of pain management because he was allowed such small doses with each push of the button that he never felt pain relief. He also said that when he requested more pain medication, he was told that he was already receiving enough, even though he was not experiencing pain relief. His pain level was down to a six on the scale from 0-10 before he left the hospital and was sent home with oral pain medications. The most common side effects that he experienced with these medications were nausea and vomiting.

After chemotherapy treatments, he describes the pain as aching and uncomfortable often accompanied by headache, lethargy, nausea and vomiting. He would experience these symptoms for only part of the day making it more tolerable for him than the surgical pain that was constant. The most effective pain management after chemotherapy for my dad was rest. He said that no medication provided relief for these symptoms associated with chemotherapy.

After radiation treatments, he describes the pain as minimal. He experienced some nausea and vomiting immediately following the treatment that lasted only minutes. He said that the worst part of radiation treatment was the burns. He told me that these kinds

of burns feel like a deep tissue ache and are very tender to touch. The most effective relief for pain after radiation for my dad was ice, which helped to numb the area.

For my dad, the pain associated with cancer was not managed effectively and in his case, the biggest barrier was lack of communication between him and his physicians. My dad felt ignored by his physicians who were so focused on the cancer and its treatment that his pain was often dismissed. Some physicians told him that feeling pain is necessary so that new symptoms aren't masked and that becoming addicted to pain medications was a real concern that they wanted to avoid. He said that certain specialists like the oncologists were more attentive to managing pain and did a much better job of listening to him and providing good pain relief than did other specialists like the surgeons.

My dad also said that he was not well prepared by his physicians for the cancer treatment process. He thought that his physicians should have taken more time with him when he was first diagnosed to give him realistic information and expectations regarding pain and complications. He also thought that he would have benefited from talking to other patients with similar cases early on in his treatment. He said that he would have tried other therapies to manage his pain if he had known more about them. However, he said that he didn't think acupuncture would be something he felt comfortable with. He told me that he was uncomfortable with acupuncture because he didn't know much about it and that he didn't know anyone else that had used it. He also told me that the thought of more needles, examinations and doctor visits was not something he would have done when he was experiencing his worst pain.

The pain associated with cancer is a widespread problem for many people like my dad that is not being managed effectively. The traditional approach of allopathic medicine has been to utilize medications in a well-controlled manner to manage cancer pain. This approach is often ineffective because of lack of communication, awareness, patient compliance and tight legal control of opioids. There are also many side effects such as nausea and vomiting associated with opioids and other traditional pain medications that may be intolerable for the cancer patient. Since each kind of pain is unique, it is often difficult to find an effective pain medication. Studies have shown that alternative therapies such as acupuncture are effective ways to manage the pain associated with cancer with minimal side effects or complications. In many cases, cancer patients could experience effective pain relief from acupuncture instead of using pharmacological agents such as morphine. Physicians are becoming more aware of the benefits of alternative therapies as complementary medicine and in the near future, may begin to recommend such therapies to patients. However, it is currently still the primary responsibility of the patient to investigate alternative treatments for pain management since the allopathic medical community has not yet fully accepted their effectiveness. The trend in medical care is certainly moving toward a more holistic approach and I agree with Thomas Edison in that "the doctor of the future will give no medicines, but will interest his patients in the care of the human frame, in diet, and in the causes and prevention of disease."

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