



## Cancer Patients Pump Up the Pain Relief

In patients with advanced cancer, medical treatment often shifts from curative to palliative, that which focuses on improving symptoms, preserving quality of life, and alleviating pain. Advances in technology and the ability to try a variety of pain medications have made the intrathecal pump an effective tool in providing pain relief to cancer patients.

"The pump is a system that includes a reservoir that can be implanted underneath the skin in the abdomen," described **Nolan Tzou, MD**, Director of Huntington's Center for Pain Treatment. "A thin tube runs under the skin from the reservoir to the spine. Through this tube, we can infuse morphine or other pain killers or anesthetic agents directly into the central nervous system."

This direct drug delivery system is extremely effective because it places the pain medication where the nerves are. "Because we don't have to use as much medication, patients often experience fewer medication side effects with this system," Dr. Tzou noted.

While the technology behind the intrathecal pump has been around for several years, new advances are improving the device. At the same time, new narcotic and non-narcotic agents are being tested in the hopes that they will provide improved pain control.

The device itself is typically the size of a hockey puck, although newer models scheduled to arrive on the market soon will be smaller and thinner. The pump works by continuously delivering a steady dose of medication directly into the spinal cord. Pump manufacturers are developing models that will be programmable to deliver medication on a schedule that varies according to time of day and patients' individual needs.

The medication in the pump lasts from one to three months, at which time the device can be refilled through a simple injection in the doctor's office. If the medication in the pump is not effective at controlling pain, the pump can be infused with a different medication.

"Cancer patients sometimes find that after awhile, their pain medication may no longer work, they may not be able to tolerate pain medication that is taken by mouth," Dr. Tzou explained. When that happens, this is one of the alternatives we can offer to try to give them some sort of relief so they don't have to be in fear of pain."

Dr. Tzou is currently involved in a clinical trial of a non-narcotic pain reliever that is delivered through an intrathecal pump.

"This is a double-blind, placebo-controlled study, so patients who enroll may or may not receive the actual drug," Dr. Tzou reported. However, after the three-week trial period, those patients who have been receiving the placebo and who wish to try the investigational medication have the option to do so. Study participants will be asked to self-report their level of pain control.

"I've seen this device provide very effective pain control for many patients," Dr. Tzou concluded.

"Advances in the design of the device itself and the ability to infuse different medications through the device, promise to make it an even more reliable tool for helping patients with cancer pain or other types of chronic pain."