

## Opioids versus Spinal Cord Stimulation

The vast majority of people who have moderate and severe non-cancer pain are living with persistent pain an average of 6 days out of every week. Beside that they have more depression and anxiety and less able to work or/and sleep. When chronic pain patients are able to control the pain it significantly improves their emotional well-being and the quality of their life.

Opioid medications are among effective therapies for treating of chronic pain. However, opioid prescription always raises the concern about abuse, misuse and diversion. The possibility of abuse is one of the reasons to under treat chronic pain. The challenge is how to improve the treatment of chronic pain with or without opioid medications taking substantial steps to minimize abuse, misuse, and diversion. There are several ways to help identify the person who is at high risk of abusing opioids. It is usually a person with personal or family history of alcohol or substance abuse; behavioral problems; and/or therapeutic manipulation.

The person with aberrant behavior does not prove opioid abuse. It may be a sign of pseudo addiction or physical dependence. The definition of opioid addiction involves the compulsive use of opioids, continued use despite self-harm, impaired control over drug use and craving. Pseudo addiction describes the patient behaviors when pain is under-treated and the patient focused on obtaining opioid medications. Physical dependence is the state of adaptation that is manifested by withdrawal syndrome and can be produced by abrupt cessation of the drugs.

For the past several decades, there were many attempts to find the ideal opioid that would provide analgesia without ceiling affect and also without side affects. Unfortunately, this ideal opioid has not been found. In the contrary to opioid research, the other pain treatment was discovered and developed. Direct and indirect therapeutic electrical stimulation of the efferent peripheral and central nerves has been used and reported for more than three decades. For this period of time tens of thousands of units were implanted every year showing great efficacy of pain relief and did not show any addiction, misuse and/or diversion.

Therapeutic neurostimulation crosses traditional limitations at a professional level: neuroscience, anesthetics, cardiology, vascular surgery, urology, orthopedics, gastroenterology, etc. Pain reduction with the use of therapeutic neurostimulation leads to a reduction or even cessation of potent opioid medications; making the patient feels better and definitely improving the quality of the life of these patients. At present time, invasive neurostimulation is regarded as a last resort but is quite likely that better results would be obtained in some conditions if it were used earlier. Many Western societies are drug-oriented and very slow to accept the use of physical treatment such as neurostimulation, even when drugs are relatively ineffective and having undesirable side effects. This position is slowly changing because the hardware for neurostimulation continues to become more and more reliable and user friendly. In nova days the hardware become more sophisticated incorporating feedback control system and better control the pain.

Lack of existing of ideal opioid medication is definitely slow changing the physicians' focus from extensive use of opioid medications to physical treatments such as spinal cord stimulation.