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Title:
Presentation of Targeted Drug Delivery Article:
"Patient Satisfaction Following Intrathecal Targeted Drug Delivery for Benign Chronic Pain: Results of a Single-Center Survey Study"
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ABSTRACT:
Targeted spinal drug delivery (TDD) is considered a last resort option for the management of patients with intractable chronic pain. Past studies have proven efficacy in pain relief, reduction in opioid use and cost-effectiveness in long-term pain management[1], however there are few studies investigating satisfaction amongst patients with chronic benign pain managed with targeted intrathecal medications using implanted pain pumps.

Our recent article titled *Patient Satisfaction Following Intrathecal Drug Delivery for Chronic Benign Pain: Results of a Single-Center Survey Study*, revealed remarkably high satisfaction with TDD in patients suffering from intractable, chronic, benign pain. Our study describes patient satisfaction with TDD in single medical practice for patients implanted with pain pumps for relief of chronic pain. Six hundred and ten active TDD patients were identified, and an anonymous 18-question survey was administered to determine satisfaction with TDD therapy. Four hundred and forty-three patients (74% of the active pump population) completed the survey. Most patients had a 40cc reservoir implanted in an upper buttock pocket site and overall, 91% of patients were happy with pump pocket location. 96% of patients reported significant benefit from TDD and over 85% reported improvement in quality of life. 94% reported improved pain relief and 60% reported good to excellent pain relief with TDD. 78% of respondents reported improved physical functioning after pump implant. 77% had not been to the hospital or ER at all since implant and another 15% reported seeking hospital care less

[1] Smith TJ, Staats PS, Deer T, et al. Randomized clinical trial of an implantable drug delivery system compared with comprehensive medical management for refractory cancer pain: impact on pain, drug-related toxicity, and survival. J Clin Oncol. 2002;20(19):4040-4049.

often. Almost 90% of patients reported taking less systemic opioids after implant and nearly 40% had stopped systemic opioids completely. Regarding side effects, 93% of patients reported no or manageable side effects from TDD. In addition to our questions, we provided a free text box in the survey and asked respondents to supply any additional feedback in their own words. Although there were a few negative comments, the majority were very positive as per these examples:

"The pump literally saved my life."
"I can honestly say that I would not be alive without the pump."
"The pump is the best thing I ever did."
"Best thing I ever did for myself and my family."

Nonetheless, TDD continues to be a misunderstood and perhaps underutilized therapy. Most pain specialists consider TDD to be a last resort option and reserve it for the most complex and refractory pain problems, typically in patients with terminal cancer. Neurostimulation is a far more popular therapy for benign pain in the U.S. because it is considered less drastic and overall lower risk compared to continuous delivery of intrathecal medication. Unfortunately, some patients, especially those with nociceptive or mixed pain problems, will not experience pain relief with trial neurostimulation, and permanent neurostimulation implants have a significant failure rate over time with high rates of system removal[2]. In view of the ongoing opioid crisis in the United States, we believe TDD offers a viable alternative to systemic opioids for the treatment of intractable chronic benign pain, providing better analgesia with fewer mental side effects. We conclude that intrathecal TDD therapy can relieve pain and improve quality of life in patients with intractable pain and offers a reasonable alternative to long-term oral or skin patch opioid management.

[2] Hagedorn JM, Lam CM, D'Souza RS, et al. Explantation of 10 kHz Spinal Cord Stimulation Devices: A Retrospective Review of 744 Patients Followed for at Least 12 Months. Neuromodulation. 2021;24(3):499-506.