Author’s response to reviews

Title: Malfunctioning Sufentanil Intrathecal Pain Pump Case Report

Authors:

Lindsay Warner (warner.lindsay@mayo.edu)
Anna Branstad (abranstad@wisc.edu)
Lindsay Guevara (guevara.lindsay@mayo.edu)
Laura Matzke Bitterman (MatzkeBitterman.Laura@mayo.edu)
Matthew Pingree (Pingree.Matthew@mayo.edu)
Wayne Nicholson (Nicholson.Wayne@mayo.edu)
Jason Eldrige (Eldrige.Jason@mayo.edu)

Version: 1 Date: 11 Jul 2019

Author’s response to reviews:

JMCR-D-19-00098 Revised, “Malfunctioning Sufentanil Intrathecal Pain Pump Case Report”

Manuscript ID JMCR-D-19-00098 entitled “Malfunctioning Sufentanil Intrathecal Pain Pump Case Report”, that was submitted to the Journal of Medical Case Reports, has been revised. The authors thank the reviewers for their comments and appreciate all the critiques. For certain comments, text from the revised manuscript has been inserted under the comments with quotation marks. Also, new text within the revised manuscript is highlighted throughout.

Reviewer #1:

Comment 1) Why was Sufentanil chosen in the first place in the intrathecal drug delivery system for this patient? What other pain medication did the patient take prior to ITDDS and why was spinal fusion performed?

Response 1) Thank for the questions. The text below has been inserted in to the revised manuscript. “After failing conservative opioid analgesic management, an intrathecal pain pump, Medtronic SynchroMed IIB, was placed at a non-Mayo facility in 2006. Records were not available detailing the reason for using sufentanil.”

Comment 2) What happened after discharge of the patient? What medications were taken at home and till how long did he not complain of pain? Did a follow-up of the patient was done and for how long?

Response 2) Thank for the questions. The text below has been inserted in to the revised manuscript. “After discharge, the patient had continued pain but elected to keep the pump in place. “
“Recommendation was made for pump explantation and pain rehabilitation however the pain did not pursue either option. No cause was identified for the pump malfunction since the pump still remains in place several years later.

Comment 3) Did the patient have symptoms of CRPS? What was the morphine equivalent opioid dose taken before the installation of ITDDS? Did the patient give history of previous opioid use or withdrawal symptoms?

Response 3) Thank for the questions. The text below has been inserted in to the revised manuscript.

“The majority of his pain localized to his low back and posterior legs without symptoms of CRPS”. Unfortunately, the pump was placed by a free standing pain clinic not affiliated with Mayo and they did not provide us with records of his morphine equivalents.

He did not show signs of withdrawal. The following sentence details this.

“At the time that he presented to our institution he rated his pain at 6/10 and denied any dizziness, nausea, sweating, diarrhea, or myalgias.

Comment 4) Is there a company support system from Medtronics in your setup for issues related to pump malfunction? What about cost issues, especially since the patient discontinued Sufentanil pump.

Response 4) Thank for the questions. The text below has been inserted in to the revised manuscript.

“Medtronic has a patient services line open for patients with implanted devices that is listed on the patient’s device registration card (1-800-510-6735).”

The patient elected to keep the pump in place in order to minimize any additional costs.

Comment 5) What was the cause for pump malfunction so early after installation?

Response 5) Thank for the questions. The text below has been inserted in to the revised manuscript.

“Drug was not being delivered despite an adequate reservoir volume, so the pump was deactivated and again thought to be related a rotor stall malfunction. Recommendation was made for pump replacement and pain rehabilitation however the pain did not pursue either option. No cause was identified for the pump malfunction since the pump still remains in place several years later.

Reviewer #2:

Comment #1) The introduction does not explain the relevance of the case to the medical literature.

Response #1) Thank for the comment. Please see the following sentences highlighting the importance of sufentanil to the pain pharmacology literature.

“Given the paucity of sufentanil use in the chronic pain medicine population, there is very little literature regarding the pharmacokinetics and clinical management of sufentanil in IDDS. Here we highlight the pharmacokinetic properties of sufentanil and some of the challenges of its use in intrathecal pain pump chronic pain management.”
Comment #2) No physical examination findings.

Response #2. Thank you for pointing this out. We have included the pertinent physical exam findings in the following sentence included in the manuscript.

Physical exam revealed a well-healed scar with some scar tissue around it likely related to prior wound dehiscence.

Comment #3) No specific dates or times in this case.

Response #3: Thank for this comment. The text below has been inserted in to the revised manuscript.

“Medtronic SynchroMed IIB, was placed at a non-Mayo facility in 2006 (10 years prior to malfunction).