

Dental surgery triggers full body pain in patient with severe post-treatment Lyme disease syndrome

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by Daniel J. Cameron, MD, MPH

“Her functionality was severely affected; she was bedbound for approximately 5 years and required a wheelchair,” [writes Lim from the University of California in San Francisco](#). [1] Her medical history also included fibromyalgia, hypothyroidism, anxiety/depression, and insomnia.

Her skin, spine, bones and joint pain was severe and difficult to treat. “She had severe pain episodes requiring emergency department visits and admissions with notably poor response to opioids but relieved with ketamine,” Lim states.

Treatment for pain involved an extensive list of pain therapy modalities and medications, including a history of sustained use of opioid medication, methadone, and buprenorphine 2 mg tablet for breakthrough pain approximately once every 3–4 weeks.

Her pain medication list was extensive as she was preparing for dental extraction but she was able to taper the methadone prior to surgery. Her symptomatic management also included clonazepam (0.5 mg nightly), and quetiapine (200 mg nightly).

“The patient received fentanyl 250 mcg intravenous (IV), ketamine 100 mg IV, acetaminophen 1000 mg IV, and ketorolac 30 mg IV for pain control,” writes Lim. “At the end of surgery, local anesthetic was administered in all four quadrants by the surgeon for postoperative pain relief.”

Despite an uneventful extraction of 4 molars, the woman complained of severe, widespread pain. Although the physicians used a multimodal pain regimen during surgery, they were unable to prevent PTLDS symptoms from recurring after surgery. The woman’s oral pain was minor, explains Lim, while her main issue was total body pain.

The pain was uncontrolled in the recovery room even after receiving an additional fentanyl 250 mcg IV, hydromorphone 1.2 mg IV, lorazepam 2 mg IV, gabapentin 600 mg p.o., and ketamine 50 mg p.o. But, Lim explains, “her pain was still severe and uncontrolled; therefore, a ketamine infusion was started at 5 mcg/kg/min.”

The patient’s pain became so severe that she was transferred to the Intensive Care Unit (ICU). “A multimodal pain regimen was used for 2 days and included: ketamine infusion; acetaminophen 1 g IV four times a day; ketorolac 15 mg IV four times a day; sublingual buprenorphine 2 mg once a day; oxycodone 10–20 mg p.o. as needed; and hydromorphone 0.4–1.2 mg IV as needed.”

On day 3, she was discharged but remained on pain medication, which included ibuprofen 800 mg three times a day, oxycodone-acetaminophen 5/325, two tablets four times a day, ketamine 20 mg four times a day, gabapentin 600 mg three times a day, clonazepam 0.5 mg nightly, sublingual buprenorphine 2 mg once a day, and hydromorphone 4 mg every 4 hours as needed.

“The patient was expected to taper off medications for acute pain over a period of several days as acute pain from her dental procedure was expected to resolve over that period of time,” Lim states. This case, he points out, demonstrates the difficulty of pain management in patients with PTLDS.

Doctors have confirmed that [PTLDS is a serious condition that can last for years](#). This patient met the definition of PTLDS as outlined by the Infectious Diseases Society of America (IDSA) in 2006. [2] To fit the criteria for PTLDS, writes Lim, an individual must have a:

1. Documented episode of early or late Lyme disease with post-treatment resolution of the symptoms,
2. Subsequent onset of symptoms of fatigue, widespread musculoskeletal pain with or without cognitive difficulties,
3. Symptoms lasting for at least 6 months, and
4. Symptoms severe enough to reduce the functional ability of the patient.

There are doctors who have concluded that the cause of chronic pain of PTLDS is inflammatory, musculoskeletal, neuropathic, and/or mixed. Lim says, “The persistent symptoms may be due to central sensitization, which is known as central sensitivity syndrome (CSS).”

However, other doctors are concerned that ongoing symptoms might be due to a persistent infection. [3] There are no tests to confirm that “post-treatment” means the infection has resolved, and trials suggesting that antibiotics are not effective in treating persistent infection are flawed. There is also growing concern that Lyme disease and other tick-borne illnesses are more complex than originally thought.

It would be reasonable to revisit the woman’s PTLDS clinical history to determine whether she was adequately treated for her infection. There are patients who have been diagnosed with PTLDS after receiving only 3 weeks of doxycycline.

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[Could ketamine help manage pain in patients with post-treatment Lyme disease syndrome?](#)

[Case report: persistent pain and fatigue after treatment for Lyme disease](#)

[Post-treatment Lyme disease syndrome is a serious problem](#)

References:

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