Opioid Wean With Medical Cannabis: A Case Report

By Leslie Apgar, MD, Medical Director, Greenhouse Wellness, Ellicott City, Maryland.

We present a case report of a patient who was guided through 2 postsurgical opioid wean programs. The opioid wean after the first surgery did not include medical cannabis whereas the opioid wean after the second surgery did; the difference in symptoms is striking.

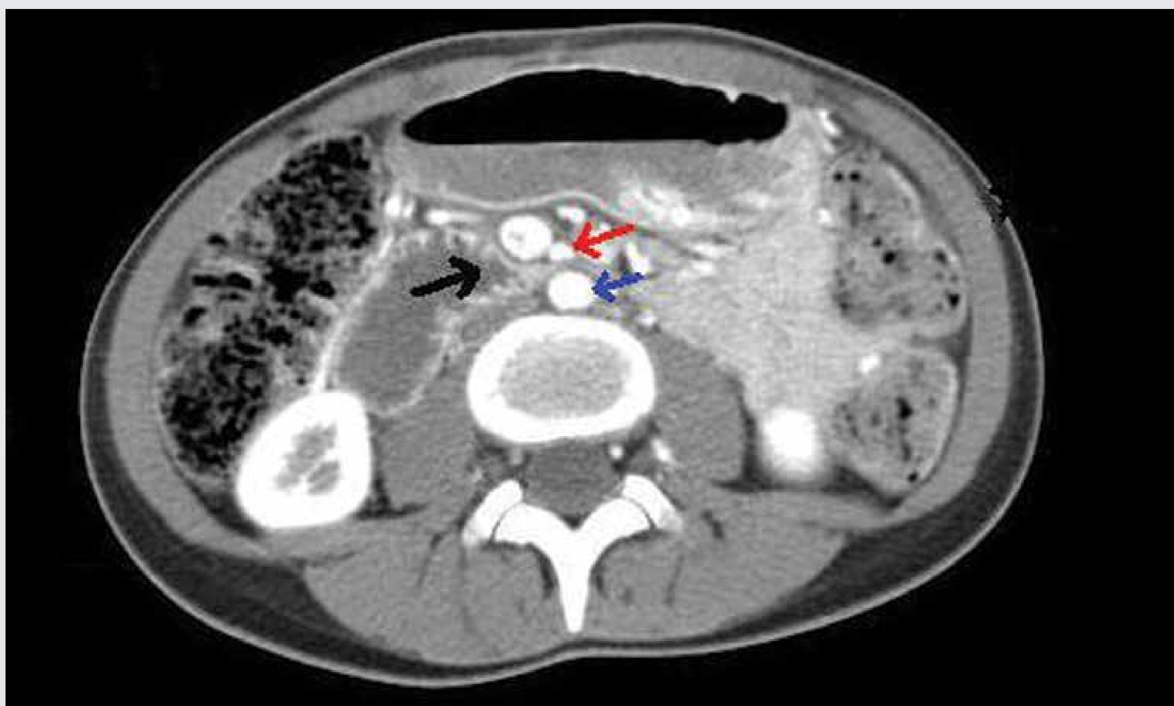
LM is a 30-year-old white woman who visited Greenhouse Wellness (GW)—a medical cannabis dispensary located in Maryland near Baltimore and Washington, DC—on January 5, 2018 for chronic pain management. The dispensary has a unique model of care, emphasizing the education and rigorous training of its wellness consultants by the on-site medical director, Leslie Apgar, MD (see **Practice Spotlight,** page 30).

Medical History

LM has a past medical history significant for common variable immune deficiency (CVID). She was diagnosed with CVID in 2014, but has experienced symptoms her entire life. Additionally, she experienced postural orthostatic tachycardia syndrome as a teenager and throughout college, acute viral parotitis (mumps) in 2012, Legionnaires' disease and Lyme disease in high school, and constant upper respiratory infections, all of which resulted in significant weight loss—at her lowest, LM weighed 98 lb. She has had constipation since childhood necessitating enemas, laxatives, medications, and special diets with no symptomatic relief. During high school, she took antidepressants and over-the-counter pain medications, and was registered as disabled upon entering college.

> "The opioid wean after the first surgery did not include medical cannabis and the opioid wean after the second surgery did; the difference in symptoms is striking."
> *—Leslie Apgar, MD*

During college, LM experienced symptomatic relief of pain and nausea and intermittent appetite stimulation with smoked cannabis obtained from friends. Still in constant pain, LM consulted numerous specialists including a gastroenterologist, rheumatologist, cardiologist, electrophysiologist, neurologist, gynecologist, nephrologist, urologist, pulmonologist, vascular radiologist, and a vascular surgeon. Finally, LM was diagnosed with superior mesenteric artery syndrome (SMAS) and renal nutcracker syndrome in April 2015 by a gastroenterologist. Regular oral intake resulted in vomiting, dumping syndrome, and severe pain due to duodenum compression. Although her pain symptoms were initially associated with oral intake, they evolved to include constant left flank, lumbar, and pelvic pain.



Case of superior mesenteric artery syndrome. Abdominal and pelvic computed tomography scan showing duodenal compression (emphasized by black arrow) by the abdominal aorta (blue arrow) and the superior mesenteric artery (red artery).

Photo credit: *Samantha S. Mina, Wikimedia Commons.*

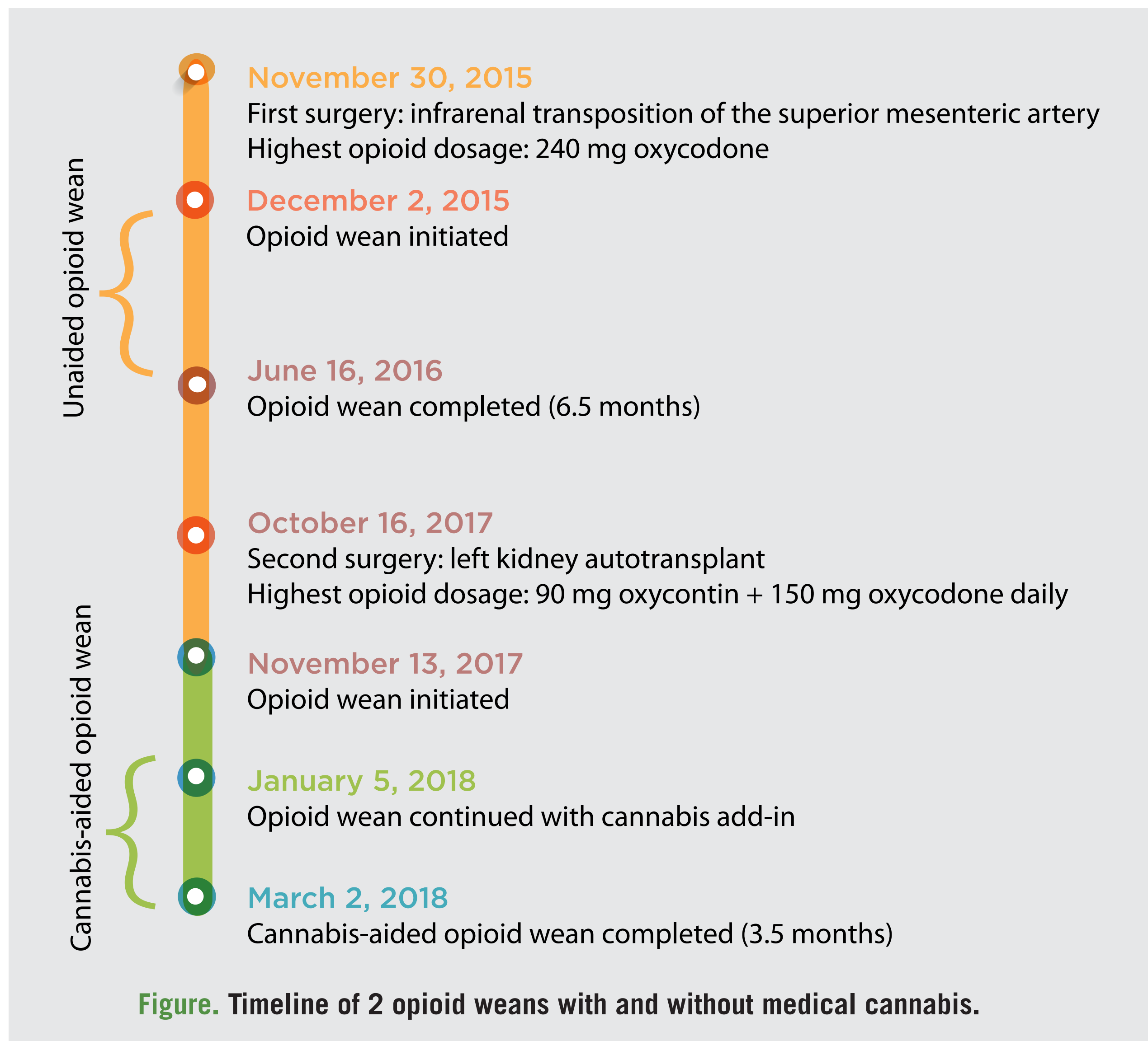


Figure. **Timeline of 2 opioid weans with and without medical cannabis.**

Postoperative Pain Control

LM underwent her first SMAS surgery—infrarenal transposition of the superior mesenteric artery—in November 2015. For postoperative pain control, she was prescribed 240 mg oxycodone daily in divided doses. She was also taking clonidine, alprazolam, lansoprazole, ondansetron, bupropion, acetaminophen, aspirin, stool softeners, and weekly saline enemas. She underwent a successful opioid taper over approximately 6.5 months.

Her left flank, pelvic, and lumbar pain returned, and LM underwent a second surgery—a left kidney autotransplant—on October 16, 2017. Prior to this second surgery, she was placed back on oxycodone 180 mg daily for pain. To manage pain postoperatively, her dosage was increased to oxycontin 90 mg and oxycodone 150 mg daily. By October 25, 2017, she was taking a slightly lower dosage—oxycontin 90 mg and oxycodone 120 mg per day.

Opioid Tapers

To taper opioid prescriptions after her first surgery, LM was placed on a 12-week opioid weaning schedule that proved to be too aggressive. She started the weaning schedule on December 2, 2015 and did not fully wean off of opioids until June 16, 2016, instead of the February 29 goal proposed by her surgical pain management team. During the weaning process, LM experienced significant withdrawal symptoms including emesis, diarrhea, cold sweats, restless legs, racing thoughts, insomnia, and depression. She experienced severe anxiety on the days that the dose was decreased. For the first 3 months of her weaning program, LM was bed bound and unable to exercise until 5 months after surgery. She does not recall being offered psychosocial support or any supportive medications to manage withdrawal symptoms.

> "The opioid wean time with medical cannabis was cut in half after her first postoperative opioid wean."
> *—Leslie Apgar, MD*

▶ continued on page 24

Opioid Wean

continued from page 23

By June 16, 2016, she was taking only ondansetron, baby aspirin 81 mg, bupropion, and over-the-counter pain medicine as needed. She was able return to normal activities of daily living and to travel to Europe for 10 days. LM was able to resume a normal diet and her SMAS symptoms resolved. She was in good spirits and was pain free for approximately 1 year.

To taper opioids after her second surgery, LM began a formal opioid wean program with her pain management specialist on November 13, 2017. She was initially weaned soley off oxycontin and then began her oxycodone wean on January 2, 2018, with medical cannabis (which was now legal in her state) started soon after, and ultimately tapered off all opioids by March 2, 2018.

LM first visited GW dispensary on January 5, 2018. She met with the medical director on site and learned how cannabis would potentiate the effects of the opioids and minimize her withdrawal symptoms. During her consultation with the medical director, LW reported "using black market cannabis whenever I could get my hands on it, but that was so unpredictable and often terrible quality."

LM opted to use medical cannabis as part of her wean program. At that time, the Maryland market was limited to flower, assorted vape cartridges, and a few edible options, as there were not as many product options as there are currently. Based on LM's high opioid burden and her need for immediate relief, the medical director at GW directed her toward vape pens high in delta-9-tetrahydrocannabinol. LM found that she benefited from chemovars that had higher percentages of limonene and myrcene, which she reported helped treat her nausea, pain, and other symptoms.[1] She almost exclusively used vape pens to treat her opioid withdrawal symptoms, weaning from 90 mg of oxycontin per day to none in 46 days. On January 2, 2018, she started her oxycodone wean and tapered from 120 mg per day to none on March 2, 2018.

Compared with the opioid taper subsequent to her first surgery, LM experienced significantly improved symptoms during the taper with medical cannabis after her second surgery. She described postoperative pain relief within weeks after her second surgery as opposed to months after the first surgery. The opioid wean time with medical cannabis was nearly cut in half after her first postoperative opioid wean (Figure, page 23).

Additionally, LM reported experiencing 75% less withdrawal symptoms when using medical cannabis. Medical cannabis allowed her to use fewer supportive medications to manage her withdrawal. She did not use clonidine, bupropion, lansoprazole, ondansetron, or acetaminophen, and was on much less alprazolam and aspirin than during the first wean.

From a psychological standpoint, LM reported less anxiety and depression and was able to return to normal mental function much faster than after the first wean. Unlike the first wean, LM reported no anxiety associated with scheduled opioid dose tapering with medical cannabis. As documented by her caregivers, her mood was much better, absent the negative thoughts that were prevalent during her first wean.

Her gastroenterologic function normalized with the addition of cannabis—she was able to eat regular food and she experienced reduced nausea and constipation, no longer requiring stool softeners, laxatives, or enemas. Within 2 months of surgery, she was able to exercise. Her current weight is 113 lb with an upward trend.

Quality Assurance

Because Maryland has rigorous testing requirements for all medical cannabis products, the medical cannabis LM obtained from GW dispensary was tested for quality assurance, including screening for terpenes and cannabinoids, as well as testing for the presence of pesticides; heavy metals; residual solvents; microbiologics including aerobic microbials, total yeast, and mold; *Escherichia coli* and Salmonella; water content; and mycotoxin. Additionally, stability studies are required at to ensure the potency and purity of medical cannabis products at 6- and 12-month intervals.[2]

"LM is able to draw from her experience as a chronically ill young adult and her successful wean from opioids using medical cannabis. She is a true asset for the medical cannabis patients of Maryland."
—Leslie Apgar, MD

Unique Model of Care

Because of the true medical nature of the GW dispensary, it has received numerous accolades and remains a referral center for many practitioners throughout the state. Patients report excellent reviews and often travel great distances to visit GW when they have found their experiences at other dispensaries to be inadequate.

LM has continued to use cannabis to manage her pain and nausea on a daily basis and reports much milder symptoms. She now works in the cannabis industry and counsels others as a wellness consultant at GW. LM is able to draw from her experience as a chronically ill young adult and her successful wean from opioids using medical cannabis. She is a true asset for the medical cannabis patients of Maryland.

Study Limitations

Study limitations included the potentially different postoperative pain symptoms following infrarenal transposition of the superior mesenteric artery surgery vs left kidney autotransplant surgery. However, because the doses of opioids LM was prescribed after the 2 surgeries were identical, this suggests the potential role of medical cannabis in weaning from high doses of postoperative opioids.

References

1. Russo, E. Taming THC: potential cannabis synergy and phytocannabinoid-terpenoid entourage effects. *Br J Pharmacol.* 2011; 163(7):1344-1364.
2. The Natalie M. Laprade Maryland medical cannabis commission's (MMCC) technical authority for medical cannabis testing: Final draft. Accessed February 13, 2020. https://mmcc.maryland.gov/Documents/Final%20Draft%20MMCC%20Technical%20Authority.pdf

Dr. Apgar *is co-owner of Greenhouse Wellness and Blissiva, and is co-author of* High Heals.