



Methadone Use in Calciphylaxis

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INTRODUCTION

Methadone is widely known as a treatment for opioid addiction¹. However, methadone can also be used to treat chronic pain, as it has unique pharmacodynamic properties². This synthetic opioid’s analgesic effects are centrally-mediated through agonism at the μ -opioid receptor, antagonism at the *N*-methyl-D-aspartate (NMDA) receptor, and inhibition of serotonin and norepinephrine reuptake³. Additionally, methadone’s excellent oral bioavailability and mucosal absorption, low cost, long half-life, and availability in oral, parenteral, and suppository forms make it an excellent alternative for the treatment of chronic pain⁴. This case report demonstrates the use of methadone as an alternative opioid choice for chronic pain control in a patient’s unique case of calciphylaxis.

MEDICAL AND PAIN HISTORY

40 year-old female:

- H/o Alcohol abuse disorder
 - Sober for 15 years
 - Relapse leading to hospital admission for pancreatitis, sepsis, and calciphylaxis
- Depression
- Chronic pain from calciphylaxis wounds
 - Severe pain over bilateral calves, medial thighs, lateral hips, and buttocks

Previous Pain Regimen:

- 6mg PO hydromorphone q3 hours PRN
- 1g acetaminophen q6 hours
- 800mg ibuprofen q6 hours
- 50mg pregabalin BID

TREATMENT COURSE AND FOLLOW UP

Tried & Failed Pain Modalities:

- Oxycodone 15mg q4 hour PRN
- Fentanyl patches 12mcg q72 hours



Day 1 (Before Treatment):
Left Lateral Thigh

Final Pain Regimen:

- Methadone 2.5mg TID
- Tizanidine 4mg TID
- Pregabalin 300mg BID
- Acetaminophen 1g TID
- Cymbalta 60mg QD
- Ibuprofen 600mg QID PRN
- Oxycodone 10mg BID

(on days of wound care; MWF)



Post Treatment Day 198:
Left Anterior Leg

DISCUSSION

The clinical impact of this case report is to encourage physicians to consider methadone as an alternative opioid choice for chronic pain control. Good pain relief is a challenging aspect of symptom control in calciphylaxis, since the mechanism of the pain typically generated by this condition is not well understood. It is thought to be largely ischemic in origin, but there may also be a significant neuropathic component related to nerve inflammation⁵. This case, demonstrating the efficacy of methadone after trialing other opioids to treat the painful wounds associated with calciphylaxis, should encourage physicians to explore the use of methadone outside of its traditional use in opioid use disorder. Although not found in the current literature, research involving STS cross reactivity with the opioid mu receptor may be valuable to understand the relationship between STS and pain.

REFERENCES

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