

A case of Abrupt Cessation of Intrathecal Clonidine

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Introduction

- Intrathecal clonidine is an established adjunct for refractory neuropathic pain, but abrupt discontinuation can precipitate withdrawal, characterized by severe hypertension, tachycardia, agitation, and potential life-threatening complications.
- While guidelines from the FDA and American Society of Addiction Medicine recommend tapering clonidine over 2-4 days to mitigate withdrawal, urgent pump explantation due to infection may necessitate immediate cessation of intrathecal agents, posing a unique clinical challenge.

Case Presentation

- Patient informed consent was obtained for submission of this case report.
- Case Presentation: A 70-year-old man with refractory neuropathic pain secondary to bilateral lower-extremity complex regional pain syndrome was managed with an intrathecal drug delivery system infusing fentanyl (350 mcg/day), ziconotide (6.56 mcg/day), and clonidine (450 mcg/day). One month after pump replacement for end of battery life, he presented with erythema and purulent drainage at the incision site. The pump was urgently explanted for infection, necessitating abrupt cessation of all intrathecal agents.
- Off-label drug use notice: the use of intrathecal fentanyl and clonidine are off-label. The 3 FDA approved intrathecal medications include morphine, baclofen, and ziconotide.

Key Points

- When intrathecal clonidine must be discontinued abruptly, immediate initiation of systemic alpha-2 agonists with ICU-level monitoring is essential.
- No validated intrathecal-to-systemic conversion exists, necessitating titration guided by hemodynamics
- Proactive withdrawal management and multidisciplinary coordination between pain medicine, critical care, and infectious disease can ensure safe withdrawal management and infection control.



Management and Outcome

- Given the high risk for clonidine withdrawal, the patient was admitted to the intensive care unit for close hemodynamic monitoring. Both transdermal clonidine (0.3 mg/24 hr) and oral clonidine (0.2 mg TID) were initiated to approximate continuous intrathecal exposure and provide titratability. Despite this, the patient developed hypertensive urgency requiring intravenous nicardipine. Once stabilized after 72 hours, he was transitioned to the medical floor with as-needed oral hydralazine and continuation of oral and transdermal clonidine.
- Abrupt cessation of intrathecal fentanyl can precipitate opioid withdrawal, presenting with agitation, myalgias, gastrointestinal distress, and autonomic symptoms. In this case, the patient's opioid withdrawal was effectively managed with oral methadone 5 mg TID. While opioid withdrawal is rarely life-threatening, its treatment improved patient comfort and reduced autonomic stress. Ziconotide cessation does not cause withdrawal.
- Outcome: The patient's infection resolved with targeted antibiotics. Clonidine withdrawal was successfully managed with combination of oral and transdermal clonidine followed by taper schedule on hospital discharge (tapered off oral clonidine first then transdermal clonidine).

References

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