

Intrathecal pump extraction in a patient on obligatory therapeutic anticoagulation: A Case Report

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Background

- Surgical site infection with possible skin dehiscence is a potential risk following surgery, most commonly occurring within the first three months.¹
- Current ASRA Pain Medicine guidelines advise holding dual antiplatelet therapy (DAPT) for seven days prior to high-risk neuraxial interventions including intrathecal catheter access or removal.²
- However, for complex patients with documented implantable device infection requiring urgent system removal while on DAPT, there is a **lack of recommendations addressing how to balance risk of infection against that of bleeding or re-thrombosis.**³

Material & Methods

- Here, we present an unusual case of sudden intrathecal drug delivery system (IDDS) extrusion with urgent need for removal in a patient on DAPT with significant cardiovascular comorbidity. We report our clinical management and measures taken to mitigate risks of infection and both post-operative hematoma and re-thrombosis.
- Written consent was obtained. As the case report is devoid of patient identifiable information, it is exempt from IRB review requirements as per UVA policy.

References

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Case

A 63-year-old male on chronic intrathecal morphine and bupivacaine therapy presented to the emergency department with dehiscence of his intrathecal pump's abdominal pocket six years after implantation.

- Notable PMHx: coronary artery disease s/p multiple percutaneous coronary interventions (PCI) with drug-eluting stents on DAPT, myocardial infarction (MI) 14 weeks prior
- Last seen 12 days prior at clinic for: skin irritation at pump site thought to be secondary to subacute on chronic moisture-related dermatitis
- Objective: afebrile and hemodynamically stable with normal mentation



Figure 1. Pump extrusion and scant purulent drainage at the left lower quadrant



Figure 2. 1 week post-op



Figure 3. 3 weeks post-op



Figure 4. 3 months post-op

- Patient was taken urgently to the operating room for wound irrigation and debridement and IDDS removal.
- Due to profound risk of re-thrombosis given the patient's previous PCI and recent MI, the **decision was made to remain on aspirin and clopidogrel and leave the intrathecal catheter intact out of concern for potential epidural hematoma.**

- Postoperative course following pump explantation was uncomplicated, and the patient was discharged on postoperative day 8 with intravenous antibiotics and pain optimized on oral opioid regimen. Ultimately, the patient has done well.

Discussion

- To the best of our knowledge, this unusual case of sudden skin dehiscence with extrusion of IDDS six years after implantation has not been previously reported.
- The case was further complicated by patient's recent MI and ongoing need for DAPT, thus presenting a dilemma since the standard recommendation for deep SSI is removal of entire implantable system.⁴
- It is challenging to balance risk of epidural hematoma versus coronary stent thrombosis in a patient on DAPT requiring urgent IDDS removal.

Removing only the pump and leaving the catheter in place while continuing anticoagulation may be a viable strategy to minimize risks.

- While postponing removal of the catheter presents a risk of infection in this scenario, this risk can be mitigated with appropriate wound care, infection prophylaxis, and patient follow-up.

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