

Multidisciplinary Management of Septic Endocarditis in a Patient with SAPHO Syndrome and Intrathecal Hydromorphone Pump

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INTRODUCTION

Background

- SAPHO syndrome (Synovitis, Acne, Pustulosis, Hyperostosis, Osteitis) is a rare inflammatory disorder causing chronic pain
- Prevalence estimated to be around 0.04% (1)
- Often causes chronic debilitating pain, requiring multimodal pain management
- Occasionally managed with intrathecal drug delivery systems (IDDS).

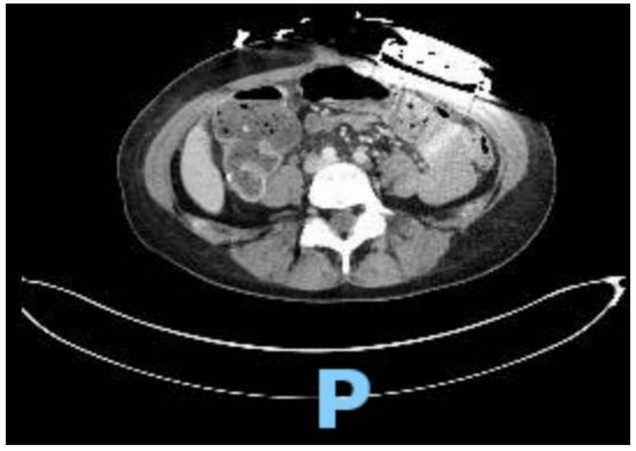
Intrathecal Drug Delivery Systems

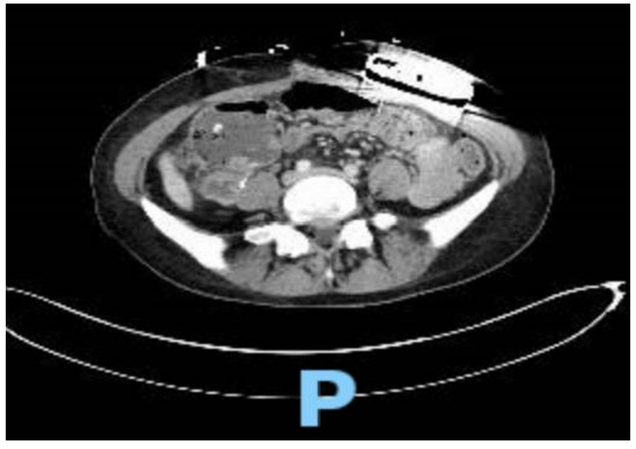
- Catheter inserted into lumbar spine below conus medullaris and advanced under fluoroscopy to the appropriate spinal level for pain control
- While IDDS offers targeted analgesia, systemic bacteremia presents a catastrophic risk of hematogenous seeding to the central nervous system.
- Complications include arachnoiditis, overdose, withdraw, CSF leak, granuloma formation (2)
- We present a complex case of a postpartum female with SAPHO syndrome who developed tricuspid valve endocarditis and septic emboli, requiring rapid, multidisciplinary management to balance systemic sepsis with IDDS safety.

CASE DESCRIPTION

- A 31-year-old female with SAPHO syndrome managing chronic pain via an intrathecal hydromorphone pump, presenting two months postpartum with fever and sepsis
- Obstetric evaluation excluded a postpartum source of infection
- Received IV biologics through a Hickman catheter; admitted to self-administering intramuscular diphenhydramine through the central venous catheter
- Workup revealed tricuspid valve vegetations and multiple cavitary pulmonary lesions consistent with septic emboli
- Multidisciplinary team (pain management, neurosurgery, obstetrics, infectious disease, cardiothoracic surgery) coordinated care
- Concern for hematogenous seeding of the IDDS — pump refills withheld and programmed off; analgesia transitioned to IV/oral opioids
- Underwent successful tricuspid valve repair and completed IV antibiotic therapy during hospital stay
- Deferred elective intrathecal pump explanation with neurosurgery to a future date

FIGURE 1: CT Imaging





DISCUSSION

Active bacteremia in patients with an IDDS demands immediate cessation of pump access to avoid catastrophic intrathecal seeding.
This case highlights the necessity of transitioning to systemic IV/PO opioids to prevent “dry pump syndrome” and severe withdrawal. Managing such complex scenarios requires tight multidisciplinary collaboration among pain specialists, neurosurgeons, and infectious disease experts to successfully navigate source control, valve repair,
and alternative analgesia options while safeguarding the intrathecal space.
Dry pump syndrome

- Studies of IDDS have shown to reduce chronic pain and lower oral opioid requirement
- Abrupt discontinuation of IDDS can precipitate withdrawal and uncontrollable pain
- In our patient, the decision to avoid pump refill required contact with the device manufacturer and pain management team to safely discontinue intrathecal therapy

CONCLUSION

1. Active bacteremia with an IDDS in place requires immediate pump cessation to prevent CNS seeding
2. Transition promptly to systemic IV/PO opioids to avoid dry pump syndrome and withdrawal
3. Source control, valve repair, and analgesia require effective multidisciplinary collaboration

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