A Twist in the Tale: Catheter Disconnection from Twiddler's Syndrome in an Intrathecal Ziconotide Pump

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Introduction

- Intrathecal drug delivery systems (IDDS) are an established treatment for severe chronic pain refractory to conventional therapies.
- IDDS complications including catheter malfunction, infection, and drug-related adverse events are well described, Twiddler's syndrome—the deliberate, inadvertent, or subconscious manipulation of an implanted device within its subcutaneous pocket—remains an underrecognized cause of IDDS failure.
- We present a case of Twiddler's syndrome causing failure of an intrathecal pump delivering ziconotide, necessitating surgical revision, and subsequent explantation.

Case Presentation

- A 60-year-old woman with an intrathecal ziconotide pump for chronic low back and radicular pain initially reported 60–70% pain relief after implantation.
- Despite multiple dose escalations over subsequent visits, she experienced no further improvement in analgesia.
- At follow-up, she reported that the pump felt loose and the patient would frequently rotate the pump within the pocket, the pocket was without erythema or other signs of infection.
- She was scheduled for pump pocket revision. Intraoperatively, several loops of severely twisted intrathecal catheter were found within the pocket (Figure 1)
- The catheter disconnected approximately 1.5 cm from the pump connection.
- Notably, the original anchoring sutures remained intact at the pump anchor points, indicating that the device had rotated despite appropriate primary fixation.
- The pocket was irrigated, the was examined and damaged portion was removed
- Catheter reattached to a new pump using a short catheter extension, and the device re-anchored.
- At follow-up, she reported persistent site sensitivity without erythema or other infection signs, with subjective improvement in back pain
- At a subsequent refill visit, the sensitivity persisted, and the patient elected to have the pump removed.

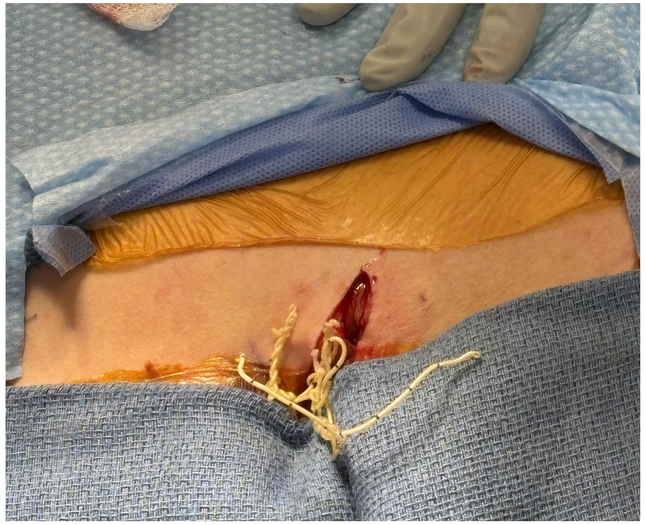


Figure 1. Intrathecal pump catheter at revision

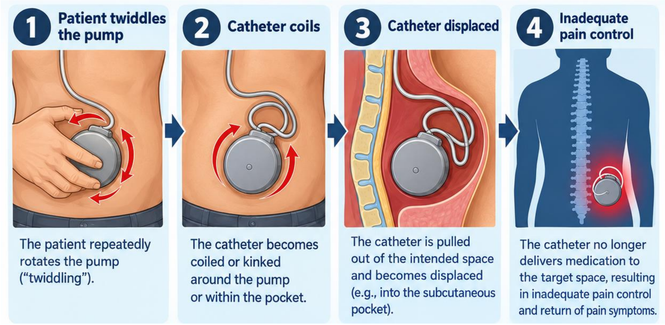


Figure 2. Depiction of Twiddlers Syndrome complication process

Discussion/Conclusion

- This case illustrates the cascading complications that can arise from Twiddler's syndrome in patients with intrathecal ziconotide pumps.
- Progressive analgesic failure despite dose escalation should prompt evaluation.
- Loss of ziconotide delivery frequently lacks withdrawal symptoms
- Standard anchoring sutures may be insufficient to prevent Twiddler's syndrome, and surgeons should consider supplemental fixation strategies.

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