

Intrathecal Pump Movement After Placement: Diagnosis and Treatment

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Background

- ITPs are implantable mechanical systems used to infuse analgesic medications into the intrathecal space
- The Implantable Systems Performance Registry monitors complications and adverse performance events
- Estimated to occur in 11.6% of patients [1]

Case Report

- 46 year old female with ITP placement for cancer pain
- Clinic visit 5 months after implantation: decreased pain control and PTM not working, unable to interrogate device, physical exam: device upside down
- Manually corrected orientation
- One day later: patient presented to ED for back pain
- X-Ray: ITP sideways in pocket
- Patient admitted and taken to OR for revision
- Catheter found to be severely twisted
- Catheter untangled and shortened
- Pump sutured to all four corners of pocket
- Follow up clinic visit: increased pain relief, pump correctly positioned on physical exam

Images



Figure 1: ITP malrotation within pocket

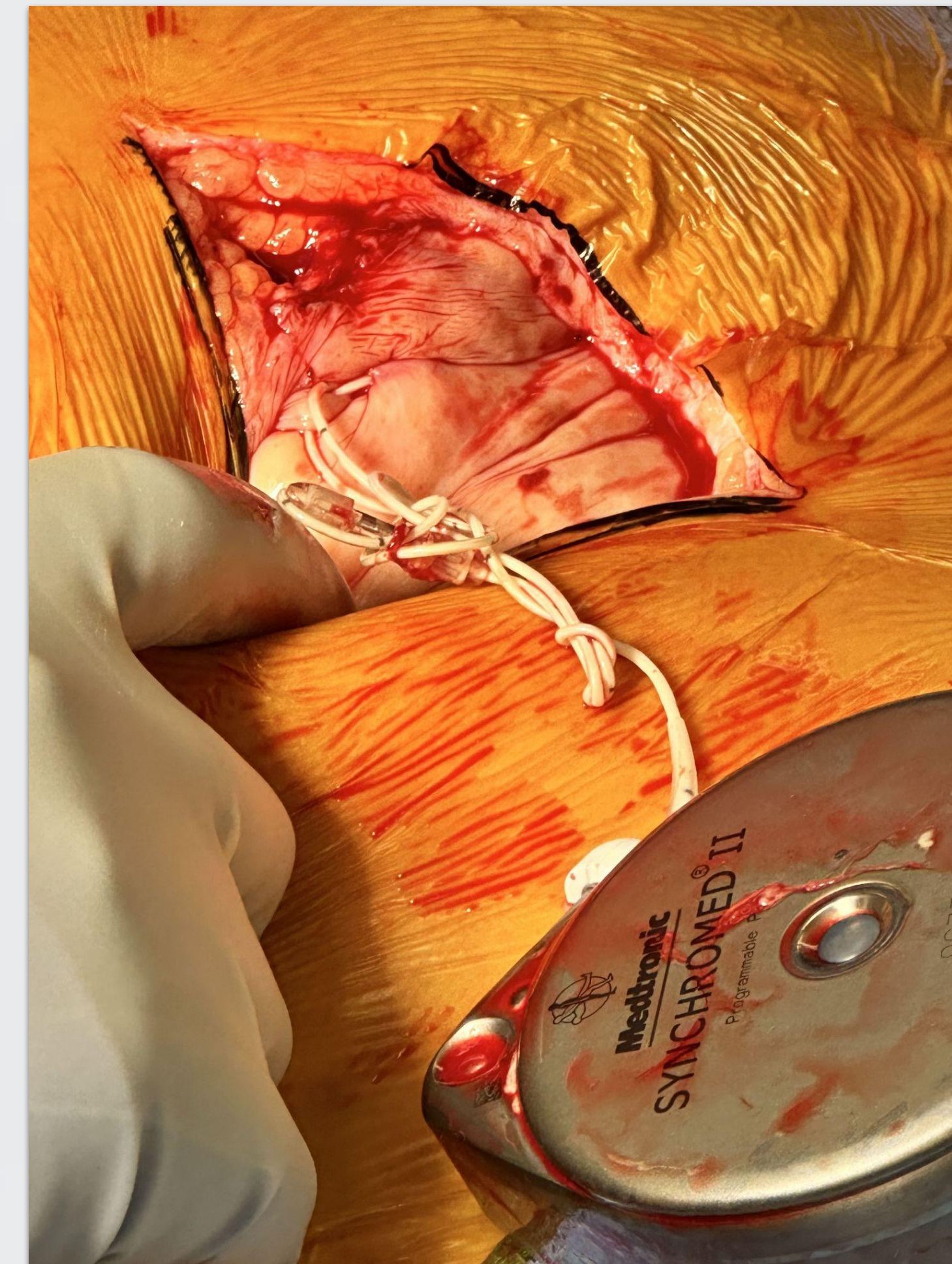


Figure 2: ITP catheter entanglement

Discussion

- ITP patient presenting with increased pain: pump inversion and catheter kinking should be considered in differential
- Catheter kinking: 3.5% incidence [1]
- ITP inversion: 0.03% incidence [1]
- Work up: physical exam, physician interrogation device, aspiration of ITP medication, dye study, and imaging
- Management:
 - Manual correction of inversion
 - Surgical revision
 - Untangling catheter
 - Shortening catheter length
 - Anchoring pump