

Subcutaneous Blister Formation with Abdominal Binder Usage in the Post-operative Period after Intrathecal Pump Placement

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Introduction

- Intrathecal pumps (ITP) are an established intervention for control of muscle spasticity, chronic cancer, and non-cancer related pain.
- The standard implantable drug delivery system (IDDS) consists of a surgically implanted and refillable reservoir and pump that delivers a set amount of medication into the intrathecal space via an intrathecal catheter.
- Risks associated with ITPs include migration of hardware, cerebrospinal fluid leak or occlusion, infection, and granuloma formation.
- In patients, especially on active immunotherapy, mitigating infection in the acute postoperative period reduces the risk of systemic infection, bacterial seeding, and subsequent removal of the ITP.
- With appropriate use, postoperative abdominal binder placement can further reduce post-surgical risks such as seroma formation, wound dehiscence, and delayed wound healing.

Objectives

- To recognize the risks and complications associated with ITP placement.
- To bring awareness to potential infectious etiologies associated with improper abdominal binder management in the acute postoperative ITP placement setting.
- To promote standardized precautions in management of abdominal binders in immunocompromised populations.

Case Report

- A 46-year-old female with a history of large granular lymphocytic leukemia on chemotherapy and immunotherapy, rheumatoid arthritis, bilateral hip replacements, chronic low back pain s/p spinal cord stimulator (2022), and chronic right knee pain s/p DRG trial underwent ITP placement with >90% pain relief.
- In the acute postoperative period, the patient developed a small blister on her right lower abdomen beneath the site of her abdominal binder. Patient reported irritation and pain with restrictive abdominal binder placement while inpatient.
- Patient's history is notable for prior sensitization to abdominal binders with previous surgeries.
- The patient's blister resolved within 24 hours after readjustment of the abdominal binder, antiseptic cleansing of blister site, placement of protective layering, and application of antibiotic ointment.



Figures A) Blister formation on right lower abdomen. B) Resolution of blister after abdominal binder readjustment

Discussion

- In the acute postoperative period, one must evaluate for any signs of systemic infection including erythema, malodorous smell, and fever in addition to closely monitoring the patient.
- The patient did not exhibit signs or symptoms of systemic infection and there were no further blisters or wounds after the adjustment of their abdominal binder.
- While abdominal binders are known to facilitate healing and reduce the risk of post-surgical complications, restrictive application can also present potential infectious complications.
- Localized sources of infection have a risk of systemic seeding to the ITP and, due to the continuous communication of the catheters, the intrathecal space can also be compromised. These risks can lead to prolonged hospital stays, long-term administration of antibiotics, and removal of the ITP.
- Standardized management, precautions, and awareness with the use of abdominal binders in post-operative ITP patients would further mitigate the risk of infection and complications.

References

