Cleveland Clinic Innovations

PRODUCT

Device and Method for the Subcutaneous Tunneling of a Lumbar Spine CSF Drainage Catheter

INDICATION

Neurology, neurosurgery, CSF drainage, lumber puncture

VALUE PROPOSITION

- Enable safer lumbar punctures and prevent CSF leakage by offering a tunneling tool.
- Manually operated valve to ensure CSF does not leak.
- Less complications

DEVELOPMENT STAGE

- MVP Build-out

INTELLECTUAL PROPERTY

Provisional patent filed.

CONTACT INFORMATION

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Device for the Subcutaneous Tunneling of a Spine CSF Drainage Catheter

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PROBLEM/OPPORTUNITY

Spinal tap procedures involve inserting a catheter between the lumbar vertebrae to access the intrathecal space. The procedure often leads to cerebrospinal fluid (CSF) leaks which cause headaches in patients. Post-Lumber puncture headache occurs in roughly 10% - 30% of patients. Tunneling a catheter under the skin for lumbar drainage (as well as intrathecal therapy) can result in several complications including CSF leaks, catheter migration and infection. There is an unmet need to develop a device that would ensure catheter is securely in place before CSF fluid flows out and reduces complications.

SOLUTION/PRODUCT

This is a modular multi-piece device comprised of three concentric tubular members. One is a solid stylet that aims to minimize CSF leakage from the device before the catheter is in place. The concentric members, when put together, have a central lumen and a basin. These features are used to lead the catheter through the device to the intrathecal space and to dock the catheter guide, respectively. When inserted, the device is sealed and when oriented properly, a channel forms through which the catheter can be safely and easily removed from the device.