Novel Treatment for Hydrocephalus

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Technology description

Brief Description:
Ventricular cerebrospinal fluid (CSF) shunting remains the most prominent treatment of choice. CSF shunting procedures provide a rapid means to normalize intracranial pressure and can prevent brain damage. In the U.S. there are approximately 69,000 annual hospital admissions for hydrocephalus resulting in over 40,000 shunting procedures and costing over one billion dollars. The excessive costs predominantly arise from relatively high complication and revision rates as well as costly equipment. This novel device and technique help avoid complications and associated costs.

Application area

This invention relates to a new type of proximal catheter shunting device and technique for the treatment of hydrocephalus. Current treatments, although effective in relieving intracranial pressures, are associated with high failure rates causing morbidity and high cost. This technology could also be effectively utilized for pressure relief secondary to trapped fluid in any solid organ.

Advantages

This novel device can be implanted in a minimally invasive manner under x-ray guidance, only requiring a single suture to close and can be performed under local anesthesia. The catheter would be less prone to obstruction and can easily be re-accessed without removal in case of failure. In certain embodiments, this invention would allow for the physiologic restoration of CSF flow rather than external shunting to the peritoneum. Effective treatment of hydrocephalus with reduced risk of complications, infection and reduction in associated costs and surgical time are other major advantages.

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