

Clinical Use in L-P shunt for Communicating Hydrocephalus

- Our Preliminary Experience

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腰椎腹腔引流管治療交通性水腦症之初步臨床經驗

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Purpose :

Shunting surgery has been widely used for hydrocephalus patients for decades. Not like the Ventricle-Peritoneal (V-P) shunt, Lumbar-Peritoneal (L-P) shunt was always think as lower safety due to easy Cerebral-Spinal Fluid (CSF) over-drainage, leading to complications like sub-dural hematoma or effusion which caused clinical symptoms like seizure, hemiparesis, or comatose consciousness. To prevent prevention over-drainage, a high-resistance distal tube designed and work with programmable pressure devices, and commercialized since 2007 (Metronic L-P Strata Shunt).

Material and methods:

Between April 2012 to April 2013, 33 Communicating Hydrocephalus patients were retrospectively evaluated after Lumbar – Peritoneal Shunting Surgery (22 patients were secondary communicating hydrocephalus, 11 patients were idiopathic normal pressure hydrocephalus (i-NPH)). All L-P shunt were Metronic L-P Strata Shunt.

The male to female ratio was 19:14. The average age was 61.15 y/o (18-86).

In Secondary Communicating Hydrocephalus patients, 5 caused by Hypoxic Encephalopathy, 10 caused by Stroke, and 7 caused by traumatic brain injury. We defined theses case as communicating hydrocephalus from the MRI study.

In i-NPH patients, we performed Lumbar-Peritoneal shunting surgery according to the study of i-NPH on neurological improvement (SINPHONI) which set by the International Society for Hydrocephalus and Cerebrospinal Disorders. The indication included Brain MRI Disproportionately enlarged subarachnoid-space hydrocephalus (DESH) and the presenting clinical triads of i-NPH including gait disturbance, dementia, and urine incontinence.

Conclusion :

In our preliminary experience, the mean operative time is 47.6 mins (32~77mins) and the mean blood loss: 20~40 c.c (34.3 c.c) . In i-NPH patients, the mean bed stay is 0.5~1 days, and the mean hospital stay is 2.6 days (2-4 days). The improvement rate are 66.67% (6/9) in dementia, 90.9%(10/11) in unstable gaits, and 77.78% (7/9) in uerine incontinence. The over- drainage and catheter-related complications are discussed. The infection rate is 0%.

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