Idiopathic normal pressure hydrocephalus case reports

an 81-year-old male with a history of iNPH with Hakim's triad. His medical history includes hyperlipidemia, hypertension, deep vein thrombosis, benign prostatic hyperplasia, total knee replacement, and chronic depression. Presenting concerns were continued cognitive and gait impairments.

Method: Patient was referred from his physiatrist for evaluation of his cognitive functioning and assistance with discharge planning in an acute inpatient rehabilitation hospital. Patient was neuropsychologically evaluated to clarify the etiology of his cognitive presentation.

Results: Patient's cognitive profile was impaired in areas of attention, executive functioning, processing speed, visuoperception, and displayed a subcortical memory profile. Patient had intact functioning in areas of oral reading, naming, and working memory. Motor examination was evident for apraxia, task-specific tremor, and micrographia.

Conclusions: This case report provides additive findings for common presentation of iNPH including parkinsonism presenting with comorbid psychiatric and medical confounders, highlighting the need for further research on neuropsychological profile of iNPH post shunt procedure. It also accentuates the need to accept parkinsonism as one of the common presentations of iNPH. Akinesia has been reported in nearly 70% of iNPH cases (Krauss et al, 1997), with bradykinesia and postural instability being the main parkinsonian features. Asymmetry and resting tremor were seen to be uncommon (Molde et al., 2017) [1].

A 75-year-old man presented with bilateral lower limb weakness. Radiological examinations implied the possibilities of idiopathic normal pressure hydrocephalus (iNPH) and a suprasellar cyst, but both were observed conservatively at that time. Due to the progressive gait disturbance, a lumboperitoneal shunt was implanted 1 year later. The clinical symptoms improved, but the cyst had grown after another year, causing visual impairment. Transsphenoidal drainage of the cyst was performed, but delayed pneumocephalus occurred. Repair surgery was performed with temporary suspension of shunt function, but pneumocephalus relapsed two and a half months after the resumption of shunt flow. In the second repair surgery, the shunt was removed because it was assumed that it would prevent the closure of the fistula by lowering intracranial pressure. Two and a half months later, after confirming the involution of the cyst and no pneumocephalus, a ventriculoperitoneal shunt was implanted, and cerebrospinal fluid (CSF) leakage has not relapsed since then. The coexistence of idiopathic normal pressure hydrocephalus (iNPH) and Rathke's cleft cyst (RCC) is rare, but it can occur. RCC can be cured by simple drainage but delayed pneumocephalus can occur in cases whose intracranial pressure decreases due to CSF shunting. When simple drainage without sellar reconstruction for RCC is attempted after CSF shunting for coexistent iNPH, attention should be paid to changes in intracranial pressure, and it is desirable to stop the flow of the shunt for a certain period [2].

An 83-year-old man who was diagnosed with idiopathic normal pressure hydrocephalus (iNPH) and underwent lumboperitoneal shunt surgery (LPS). The TAP block was performed before LPS, and the

numerical rating scale for pain was 0 at day 1 after the surgery. The patient was discharged early at day 3 after surgery despite the patient being extremely old, as he reported quick relief from the postoperative abdominal pain. The TAP block can hence be considered for use before LPS in elderly patients with iNPH [3].

1)
Kim D, Kearns KA. A - 99 Older Adult Male with Idiopathic Normal Pressure Hydrocephalus (iNPH): Neuropsychological Case Study. Arch Clin Neuropsychol. 2023 Oct 8:acad067.116. doi: 10.1093/arclin/acad067.116. Epub ahead of print. PMID: 37807225.
2)
Hashiba T, Nonaka M, Iwamura H, Kamei T, Takeda J, Asai A. Refractory Delayed Pneumocephalus after Transsphenoidal Cyst Drainage for Rathke's Cleft Cyst in a Patient with a Cerebrospinal Fluid Shunt. Asian J Neurosurg. 2023 Jun 6;18(2):342-346. doi: 10.1055/s-0043-1768573. PMID: 37397060; PMCID: PMC10310442.
3)
Cho J, Yeo J, Chang SH, Yoon SY, Park SH, Kang K, Kim CH, Hahm MH, Park E, Park KS. Transversus abdominis plane block for lumboperitoneal shunt surgery in idiopathic normal pressure hydrocephalus: a case report. J Surg Case Rep. 2021 Apr 19;2021(4):rjab123. doi: 10.1093/jscr/rjab123. PMID: 33927861; PMCID: PMC8055215.