

COGNITIVE ASPECTS OF IDIOPATHIC NORMAL PRESSURE HYDROCEPHALUS

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Background: The patients with idiopathic normal pressure hydrocephalus (iNPH) generally show findings of frontal lobe dysfunction. Its cognitive profile has not been well documented.

Method: A total of 22 iNPH patients and 22 age- and sex-matched healthy volunteers underwent neuropsychological testing of memory, attention, language, executive function, and visuoperceptual and visuospatial abilities. iNPH patients who have score greater than or equal to 25 points of mini mental state examination test (MMSET) were enrolled to the study. Wechsler Memory Scale (WMS), Oget Oktem verbal memory process test (OOVMT- A Turkish validated memory test), verbal fluency tests, sayings interpretation, dual similarities, Luria's drawings, clock drawing tests and geriatric depression scale (GDS) were applied to all subjects.

Results: There is no statistically significant difference in terms of education level between patients with iNBH and healthy volunteers. Patients with iNBH exhibited greater impairment in digit span test and visual memory test in WMS. The scores of the clock drawing test, verbal fluency tasks and OOVMT were statistically lower than controls. No significant difference was observed among the groups in terms of orientation, Luria's drawings, dual similarities, saying interpretation and perseveration errors. The score of GDS in patients with iNPH was higher compared to the healthy volunteers.

Conclusions: The iNPH patients showed deficits in attention, executive function, memory, visuoperceptual and visuospatial functions. Our results also suggested that the patients with iNBH were more depressed than controls. Depression may affect cognitive functions. The executive dysfunction, memory impairment due to attention deficit and depression has been found important factors effecting cognitive profile in iNBH.