

# Cryptococcal Meningitis Presenting as Normal Pressure Hydrocephalus in an Immunocompetent Patient

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## Abstract

**Background:** *Cryptococcus neoformans*, an encapsulated saprophytic fungus, is an opportunistic pathogen that is more commonly encountered in immunocompromised individuals. Normal pressure hydrocephalus (NPH) is characterized by the classic clinical triad of gait disturbance, urinary incontinence and dementia in the presence of enlarged ventricles and with normal cerebrospinal fluid (CSF) pressure. Although cryptococcal meningitis (CM) has been reported in association with NPH, it is rarely on the differential diagnosis for hydrocephalus in immunocompetent patients, especially those without fever or meningeal signs.

**Case presentation:** We report a case of chronic cryptococcal meningitis disguised as normal pressure hydrocephalus in an immunocompetent elderly patient. The disease progressed in a 79-year-old man over one year of worsening cognition, gait disturbances and urinary incontinence. His presentation was complicated by developing parkinsonian features as well as weight loss. He had a presumed diagnosis of normal pressure hydrocephalus considering a computed tomography demonstrated hydrocephalus out of proportion to the amount of atrophy. He underwent a large volume lumbar puncture and his cerebrospinal fluid analysis was remarkable for pleocytosis and elevated protein which raised the concern for an infectious cause. Further investigations yielded a positive cryptococcal antigen in the cerebrospinal fluid and serum. The patient was treated with antifungal agents with favorable results.

**Conclusion:** This case report highlights the importance of sending cerebrospinal fluid for analysis as more similar cases are emerging in literature, it would be a critical step in ruling out treatable causes of dementia and spare the patient from unnecessary invasive procedures such as shunt placement to treat the hydrocephalus while overlooking the underlying cause.

## Retraction Note:

The article entitled “Cryptococcal Meningitis Presenting as Normal Pressure Hydrocephalus in an Immunocompetent Patient” has been accepted for publication in the “Journal of Neuroinfectious Diseases” considering the statements provided in the article as personal opinion of the author which was found not having any conflict or biasness towards anything.

RETRACTED