

# INFECTIOUS DISEASES

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## Meningitis in setting of spontaneous CSF leak secondary to underlying idiopathic intracranial hypertension

Bilal Alam, Suleiman Al Ashi, Maryam Amir, Samin Yasar, Alinda Sarma and K V Gopalakrishna  
Cleveland Clinic Fairview Hospital

**Case:** We present a 53 year old female with hypertension who presented with progressively worsening headache of one day duration with associated photophobia. Her vitals were body mass index of 37.79 kg/m<sup>2</sup> and temperature of 37.8°C, blood pressure 108/75 and HR 128 beats/min. She had leukocytosis of 15.77 k/uL. Computerized tomography of brain was suggestive of cerebrospinal fluid (CSF) density within expanded sella. Lumbar puncture performed was concerning for bacterial meningitis with CSF being slightly turbid and showing white blood corpuscle count of 9344 with 71% neutrophils and elevated protein of 267. CSF culture and Gram stain were negative. She was started on intravenous Vancomycin, Ampicillin, Ceftriaxone and Acyclovir. On further history taking, she mentioned chronic nasal discharge/sinusitis and chronic migraine. There was high suspicion of CSF leak, hence, Beta-2 Transferrin on the nasal discharge was done, which was positive. Magnetic resonance imaging findings were also suggestive of Idiopathic Intracranial Hypertension (IICH). She was diagnosed as having spontaneous CSF leak in setting of IICH and started on acetazolamide and followed up with neurosurgery. Subsequently she required placement of ventriculoperitoneal shunt. Her symptoms of headache have improved since then.

**Discussion:** IICH is a disorder that occurs when impaired CSF absorption leads to elevated intracranial pressure (ICP). Clinically, presents in middle aged, obese women with signs and symptoms suggestive of raised ICP such as headaches, papilledema and visual disturbances. Most patients with spontaneous CSF leaks fulfill the Dandy criteria for IICH. In this case, the patient had chronic sinus discharge which was misdiagnosed as chronic sinusitis. Persistent CSF rhinorrhea, being a risk factor, put her at increased risk for meningitis.

**Conclusion:** Considering the history and knowledge of disease helped in favorable outcome for this young woman.

alamb@ccf.org