Normal Pressure Hydrocephalus

Normal pressure hydrocephalus (NPH), is an idiopathic disorder typically observed in older patients. This is seen most commonly in patients older than 65 years old, and occurs due to decreased CSF absorption, leading to dilation of the ventricles. NPH is classically described by the triad of cognitive decline, urinary incontinence and ataxia (or gait disturbance).

PLAY PICMONIC

Mechanism

Elderly

Elderly-person

This disorder affects older patients and is typically seen in patients greater than 65 years old.

Idiopathic

Idiot-hat

This process of decreased CSF absorption occurs insidiously and is difficult to diagnose because the symptoms are common to several other diseases. Primary NPH occurs idiopathically. The secondary type of NPH can be due to a subarachnoid hemorrhage, head trauma, tumor, infection in the central nervous system, or a complication of cranial surgery.

Decreased Absorption of CSF

Down-arrow Sponge with Cerebral-Spine-Fluid

Increased intracranial pressure occurs due to decreased absorption of CSF in primary normal pressure hydrocephalus.

Ventricular Enlargement

Ventricles Enlarged

Inadequate fluid absorption leads to abnormal accumulation of CSF in the ventricles of the brain, which can cause the ventricles to enlarge (ventriculomegaly).

Symptom Triad

Urinary Incontinence

Urine In-continents

This symptom appears late in the illness, and is found to be of the spastic hyperreflexic, increased-urgency type. This is associated with decreased inhibition of bladder contractions and detrusor instability.

Ataxia (Gait)

A-taxi

Patients show gait abnormalities due to traction on the corticospinal motor fibers descending to the lumbosacral spinal cord.

Cognitive Dysfunction

Broken Cogs

Patients show cognitive dysfunction, which affects the frontal lobe in nature. It presents in the form of apathy, forgetfulness, inattention, and decreased speed of complex information processing, which is reflective of frontal lobe damage.