

LEONARDO RANGEL CASTILLA: Hydrocephalus is a buildup of fluid inside of the brain and in the cavities, the ventricles, deep within the brain. Hydrocephalus can occur at any age and if left untreated it can be fatal. Each year at Mayo Clinic our team of experts diagnose and treat over 1,500 patients with hydrocephalus.

My name is Dr. Leonardo Rangel Castilla. I'm an Assistant Professor of Neurosurgery at Mayo Clinic in Rochester. My specialty and focus is brain diseases, including hydrocephalus, tumors, cerebral aneurysms, arteriovenous malformations, strokes, among others.

Hydrocephalus develops due to the obstruction or poor absorption of the brain fluid. Hydrocephalus results as a consequence of a brain bleed, brain infection, brain tumor, congenital malformation, brain cysts, or after severe head injury. Unfortunately, hydrocephalus is not a preventable disease. But certainly it can be treated successfully most of the time.

Once a patient has the diagnosis of hydrocephalus he or she should seek professional care with a neurosurgeon. The traditional treatment for hydrocephalus was a surgical insertion of a drainage system called shunt. However, shunts could come with significant risks, including infection, occlusion, breakage that lead to malfunction, and a need for further surgeries in the future.

Today, minimally invasive endoscopy has changed the treatment of hydrocephalus. Brain endoscopy consists of a minimally invasive surgery in which a small camera is introduced inside of the brain and under direct visualization we treat the cause of the hydrocephalus, either a hemorrhage, brain cyst, brain tumor or congenital obstruction.

Here at the Mayo Clinic we have a state-of-the-art facility and offer the latest treatment and technology for brain endoscopy. Our equipment includes a rigid and a flexible endoscope. Flexible brain endoscopy allows for a more versatile, safer, and less invasive surgery with excellent results. To the best of my knowledge, no neurosurgery department in the country offers flexible brain endoscopy except for Mayo Clinic Rochester.

Brain endoscopy procedures are minimally invasive surgery performed through a very small incision and low risks. Usually patients are discharged from the hospital one or two days after a brain endoscopy procedure.

For me to use my mental and manual skills combined with compassion and empathy together to help patients with devastating neurological disease such a hydrocephalus is a privilege. For more information about hydrocephalus or to request an appointment, please visit mayoclinic.org/hydrocephalus. Thank you for your time.