For two weeks Natalie Cameron lay semi-conscious in Mountainside Hospital in Montclair, NJ, aware of only the severe spasms of pain shooting through her throat and neck. Diagnosed with glossopharyngeal neuralgia (GPN) in the emergency room, she was admitted and put on a variety of medications and pain killers to address the intensely painful symptoms. Her condition quickly deteriorated to the point where she refused to eat, drink, talk or even move for fear of provoking another spasm. Afraid for her life, her family began an internet search to learn more about the disease and find a neurosurgeon with the specialized training needed to treat this exceedingly rare condition.

Their quest led them to the Dr. Mark McLaughlin, director of Princeton Brain and Spine Care, one of only a handful of neurosurgeons in the world trained to surgically treat the condition. Dr. McLaughlin immediately took over Ms. Cameron’s case and moved her to University Medical Center at Princeton. After reviewing the same MRI scans that Ms. Cameron’s previous physician read as normal, Dr. McLaughlin identified a subtle abnormality with a blood vessel and confirmed the diagnosis.

A Rare but Painful Affliction

With a reported incidence of approximately 0.7 per 100,000 people per year, GPN is as rare as it is painful. The condition is characterized by brief but excruciating pain at the base of the tongue which can radiate to the ear and neck. Typical triggers include eating, drinking, sneezing, speaking, laughing or coughing.

GPN is caused by elongated blood vessels that put pressure on the nerves of the face and throat. There is a greater incidence in people over 40 simply because of the body’s natural aging process.

“Just the sheer number of heart pulsations the vessel is subjected to over a lifetime can cause it to stretch,” explains Dr. McLaughlin, adding, “As we age, the brain tends to atrophy and sag which can also cause vessels to stretch or lengthen. In Ms. Cameron’s case, a severe loop of a vessel was digging into her glossopharyngeal nerve; the nerve responsible for the sensation of the face.”
Dear Patients and Friends:

As this letter is inked, Dr. Narayan is presenting our work in minimally invasive spine and intracranial surgery in Singapore. Concurrently, Dr. Shah is in Boulder, Colorado teaching young neurosurgeons and orthopedic spine surgeons the basics of spine surgery as the lead faculty in a Resident Training Course. I have been left back in town with our 2 physician assistants, Tina Lisman and Kevin Trolene, to “man the fort.”

In the last year physicians at Princeton Brain and Spine care have performed over 600 operations and been consulted over 1,000 times for patient care! We have served as faculty in 4 different National Neuroscience Conferences and given over a dozen lectures nationally and internationally.

What is most exciting as Medical Director, is to see Princeton Brain and Spine Care celebrating its third anniversary while all of these teaching and patient care activities are transpiring! We have experienced remarkable growth in the last 3 years and have achieved much. Our practice currently serves 6 hospitals and has become the largest neurosurgical group in the region. We have performed more minimally invasive spine procedures than any group in the area and continue to touch more and more patients’ lives.

I can only say that I could not have done it without the help of our entire team and especially without the help of Drs. Shah and Narayan. I am blessed to be surrounded by an entire organization of individuals who are truly dedicated to our patients and to excellence.

We are now embarking on our new 5,000 square foot medical office building in Langhorne, Pennsylvania and, in another 6 months, will be moving into a similar office in the Princeton area.

I want to thank all the people within our practice at Princeton Brain and Spine Care for all of their hard work and dedication. I want to thank all of our referring physicians for their confidence and trust in us. And most of all, I want to thank our patients for inspiring us to be our best.

Warmest regards,

Mark R. McLaughlin, M.D., F.A.C.S.
Medical Director
Princeton Brain and Spine Care, LLC
Juan Solares’ day began uneventfully enough. He commuted to work and began his shift at a local restaurant without incident. But within hours he lost consciousness and was rushed to the emergency room at University Medical Center at Princeton. Still unconscious Mr. Solares underwent a CT scan that revealed he had hydrocephalus or an abnormal build up of cerebrospinal fluid in his brain.

The diagnosis confirmed the need for neurosurgery and Dr. Shah and Dr. Narayan of Princeton Brain and Spine Care took over his case. Dr. Shah immediately preformed an emergency ventriculostomy. A catheter was temporarily inserted into his ventricle to drain the fluid. The procedure was a success and, with the pressure on his brain relieved, Mr. Solares regained consciousness. The cause of the condition, however, was still unknown.

“...the two major issues of concern were the cyst’s unusual appearance and its location in the ventricle, which is in the interior of the brain.”

Mr. Solares came through the surgery well. After a 10 day stay in the hospital, his drainage tube was removed and he was discharged. Though he has some mild memory problems, Dr. Narayan anticipates that they will diminish over time and he was able to resume his normal activities within a month of the surgery.

Both patient and doctor are pleased. “This was major surgery in the sense that it affected the middle of the brain, not the surface, but it was life preserving,” says Dr. Narayan. “The cyst could have ruptured and eventually caused complications such as chemical meningitis or a fluid blockage that would have required a permanent drainage system. We avoided both scenarios and Mr. Solares has a positive prognosis for the future.”
Initially, Ms. Cameron experienced isolated episodes of pain. But steadily over several months they increased in frequency and intensity to the point where she couldn’t work or perform routine activities. By the time she was admitted to the hospital her spasms were almost constant and she was incoherent from the pain.

Her physician at Mountainside Hospital recommended surgery to sever the nerve, but according to Ms. Cameron, he warned of serious side effects including possible paralysis of the tongue and loss of hearing and eyesight. Seeking a better option, Ms. Cameron’s family began searching the internet. They learned of a surgical procedure called microvascular decompression which was pioneered by Dr. Peter Jannetta at the University of Pittsburgh School of Medicine. They quickly made the leap to Dr. McLaughlin, who served his residency under Dr. Jannetta.

Once admitted to University Medical Center at Princeton, Ms. Cameron underwent a brief quiescent period to hydrate and withdraw from all unnecessary medications. During this time, Dr. McLaughlin also exhausted all conservative treatments known to alleviate the condition. Within a week, Dr. McLaughlin performed a microvascular decompression to reposition the blood vessel and eliminate pressure on the nerve.

A small hole was made in the base of the skull. An operative microscope and micro instruments were used to navigate a natural cleavage plane between the brain and skull and gain access to the brain stem and the base of the glossopharyngeal nerve. Micro instruments were then used to lift the vessel loop away from the nerve, alleviating the pressure. The vessel was then wrapped in shredded Teflon® felt to permanently maintain decompression.

“Despite the severity of the loop in the Ms. Cameron’s blood vessel, the surgery was an overwhelming success,” says Dr. McLaughlin. “Long term success rates for the procedure are high, between 70 and 80 percent, and Ms. Cameron is expected to make a full recovery.”

Ms. Cameron couldn’t be happier. “I’m pain free and my physical stamina is back. Having gone through that much pain, and knowing how it can completely destroy your life, I feel my recovery is nothing short of miraculous. Dr. McLaughlin is the true epitome of what a doctor should be. His commitment, skill and passion were evident from the start. He didn’t hesitate to take my case, even though his practice doesn’t accept my insurance. He made sure that my family and I understood the disease and explained the surgical procedure in a thorough and understanding way. He and his staff have also taken a personal interest in my recovery. I give thanks everyday that we found him.”