

Amanda Anderson

Neurosurgeons use procedures developed at Barrow to save Queen Creek child's life

by Catherine Menor

Amanda Anderson seemed to be on the mend, and her parents, Dave and Shanna, were confident that the 18-month-old Queen Creek girl would be well enough to wear her new pink kitty costume for Halloween 2007.

Amanda was in her fourth day at an East Valley hospital, where she was receiving care for a case of suspected viral meningitis. "Doctors told us that if she didn't have any high fevers and was stable, we could go home the next day," says Shanna.

But that night, Amanda had a terrible seizure, a seizure that Shanna believes saved her daughter's life.

"All through the night, she couldn't communicate at all. She couldn't look you in the eye, and she was making these really strange movements. I don't think she would have lasted much longer."

Shanna Anderson

The next morning, Amanda's doctor ordered a CT scan and discovered the cause of her symptoms. The child had severe bleeding and swelling in her brain. Worried that child abuse might be the cause, the hospital alerted Child Protective Services and transferred Amanda to St. Joseph's Hospital and Medical Center.

And that's when the Andersons' fortunes took a definite turn for the better.

Finally, a diagnosis

Within a few hours of Amanda's arrival at St. Joseph's, the Barrow Neurological Institute team had found the cause of the bleeding—an aneurysm behind Amanda's eyes. "The doctors explained that she would need surgery as soon as possible to stop the bleeding," Shanna says. "This was not caused by an accident, and we were told she likely had the aneurysm from birth."

Dr. Robert Spetzler, director of Barrow, explains, "The aneurysm involved very small blood vessels deep in her brain, a very unusual condition in a child so young. The aneurysm had ruptured, causing a life-and-death situation."

Fortunately, a surgery scheduled for the next morning had been cancelled, and Dr. Spetzler would be able to operate on Amanda.

"All through the night, she couldn't communicate at all," Shanna says of the agonizing hours before the Oct. 26 surgery. "She couldn't look you in the eye, and she was making these really strange movements. I don't think she would have lasted much longer."

Navigating safely to the aneurysm

To safely reach the aneurysm, the Barrow team used a route into the brain that had been researched and developed by surgeons, fellows and scientists at the institute. It is called the modified orbital zygomatic approach and involves removing a small piece of bone at the top of the eye and then going under the brain instead of retracting the brain.

Dr. Joseph Zabramski is one of the neurosurgeons who developed the modified OZ approach. He says it was critical to the success of Amanda's operation. "In young children, the skull is small and there's not much extra room around the brain. Retracting the brain can put pressure on it and damage it. With the modified OZ approach, the Barrow team was able to reach the aneurysm without retracting Amanda's brain."

Once he reached the aneurysm, Dr. Spetzler removed it, leaving a hole in the artery where the aneurysm had arisen. He then did a very unusual bypass to repair the opening in the artery. Maneuvering a tiny nearby vessel over the opening, Dr. Spetzler secured the vessel in place with microscopic sutures to prevent future bleeding.

Dr. Spetzler credits the Barrow team's ability to successfully perform the unique operation to the neurosurgical research conducted at Barrow. "Through research, we were able to develop the modified OZ approach and conduct anatomical studies that demonstrated the feasibility of the bypass," he says.

During the long hours of Amanda's surgery, Dave and Shanna received regular updates from the Barrow



staff. Finally, an anesthesiologist came out to tell the couple that the surgery was over.

The child recovered beautifully, her mother says, surprising even her doctors. A week after surgery, Amanda went home and within two weeks, she was attending church with her parents, visiting her grandparents and going to the zoo. Today, the long scar that runs from the top of her head down to her right ear is hardly visible beneath her blond ringlets.

"Amanda has been truly blessed and healed by some very skilled people and has been in the hands of our Father in heaven," Shanna says. "It was not her time to go, and for that we are very thankful." ■

Neurosurgical research conducted at Barrow—and supported by the Barrow Women's Board, other benefactors and the Health & Wealth Raffle—enabled surgeons to successfully eliminate an aneurysm that ruptured when Amanda Anderson was just 18 months old.