

Teen Survives “Fatal” Brain Injury

By Helen Listerman



Cynthia Africk, MD



Michael Prayson, MD

After Jade Roch von Rochsburg’s car skidded on an icy road, flipped over and landed on her, an emergency crew took the 17-year-old girl to the Upper Valley Medical Center in Troy. Because of the severity of her injuries, Miami Valley Hospital’s Mobile Intensive Care Unit, an advanced ground ambulance, quickly transported Jade to MVH, the region’s only Level I Trauma Center. (The severe weather had kept CareFlight grounded.)



Jade Roch von Rochsburg (left) enjoys an outing with friend Stephanie Karnehm. Jade’s recovery from traumatic brain injury has been long, steady . . . and remarkable.

Jade has no memory of the car accident that nearly claimed her life on Feb. 6, 2007. In fact, the last memory she had of life before the accident was a school dance on Jan. 21. The first memory she had of life after the accident was two months later as she was being transferred from a bed in the advanced care unit at MVH to a slant board – a means of acclimating patients from a horizontal to a vertical position.

Such amnesia is common to those who have suffered traumatic brain injury (TBI). However, Jade’s parents, Trenda and Walter (Skip), remember every moment of their daughter’s ordeal, including the four months she spent at MVH.

“The first few days were touch-and-go, and we feared that we would lose Jade,” recalls Trenda. “I am so grateful to the doctors, nurses, and therapists at Miami Valley Hospital who did not – would not – give up on Jade.”

Foremost among those was Cynthia Africk, MD, section chair of Neurosurgery at MVH and clinical associate professor, Wright State University Boonshoft School of Medicine, who was on call when Jade arrived at MVH. “It appeared to be a fatal injury,” recalls Dr. Africk,

Playing Wii with her mom Trenda (right) is a fun way for Jade to improve her balance and coordination.



who describes Jade's TBI as one of the worst she had seen during her 16-year career. "Given the extent of her injuries, she should be dead."

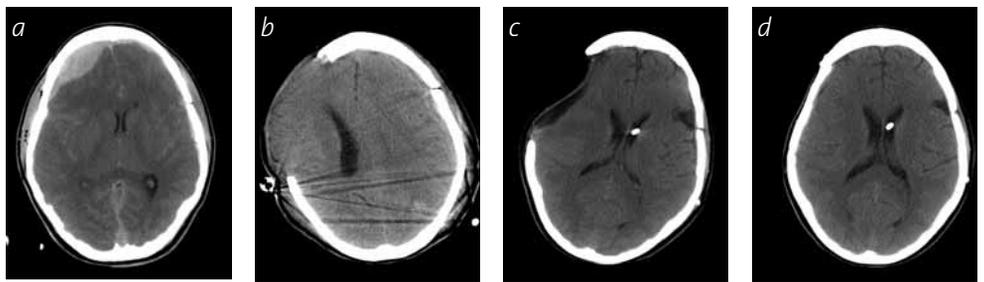
Brain scans revealed a blood clot along with significant swelling of the brain tissue. Despite the odds against Jade's survival, Dr. Africk was determined to operate.

"She had youth on her side," says the neurosurgeon in retrospect. "She had Dr. Africk on her side," says Jade's mother in retrospect.

In addition to her brain injury, Jade suffered multiple broken bones. But those would have to wait. Dr. Africk and her team rushed Jade into surgery and removed a section of Jade's skull to accommodate the swelling and prevent the brain herniation that would have killed her.

Following surgery, Jade was put into an induced coma to decrease brain metabolism and lower intracranial pressure. Not until she was brought out of the coma three weeks later, was Michael Prayson, MD, director and section chair of Orthopedic Trauma at MVH and associate professor, WSU Boonshoft School of Medicine, able to perform surgery on her pelvis and right shoulder. Later, Jade had two more orthopedic surgeries to remove screws and plates.

All told, Jade underwent six surgeries at MVH, including insertion of a shunt six weeks after her initial surgery to relieve buildup of spinal fluid, a common side effect of brain injury. On April 25,



CT scans of Jade's brain show (a) initial swelling and fluid buildup (b) skull flap removed to ease swelling (c) shunt inserted to relieve fluid buildup (d) skull flap replaced.

Dr. Africk replaced the bone flap she had removed from Jade's skull on the day of the accident. (The bone flap had been frozen and preserved under sterile conditions at the local tissue bank.)

Preparing for the Road Ahead

While brain surgery saved her life, and orthopedic surgery mended her broken bones, it would take many weeks of intensive inpatient and outpatient rehabilitation to restore Jade to her former life. Jade had to learn to move, talk and regain her cognitive skills.

Lacking only one-fourth of a credit to graduate from high school, Jade completed the requirement while hospitalized.

To meet Jade today, one would never know that she survived a near-death trauma. She looks and acts like any other young woman on the brink of adulthood.

"Not buckling my seatbelt almost took my life. It caused me to miss a big part of my senior year of high school, which I had looked forward to all through school. But, I have my life and a future to look forward to," says Jade.

This past spring, Jade completed her first college class at Sinclair Community College. Her mother, who had been at Jade's side through her daughter's long hospital stay, drove her to classes twice a week. She also drove her to outpatient therapy sessions at MVH, where Jade fine-tuned her motor skills.

Jade also began to fine-tune other "motor" skills – she enrolled in a driving simulation program. Given a second chance at life, Jade is preparing for the road ahead.