Katherine's slow, miraculous recovery
By Evelyn Barge, Staff Writer
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Katherine Wolf approaches the second-floor landing of a friend's Culver City home.

From on high, she sounds out a greeting in a strained but pronounced voice, before lightly descending the curved staircase to the living room.

Each move is aided by her husband, Jay, who is 27. He walks backwards, one step ahead, supporting Katherine's slight frame with every cautious stride.

Like most things in Katherine's life now, it is a slow but steady dance - and, by all accounts, a miraculous one, too.

A little more than a year ago, Katherine, then 26, collapsed in her family's Malibu apartment; She had suffered a massive hemorrhagic stroke after an arterio-venous malformation, or AVM, ruptured in her right cerebellum and brain stem.

During a marathon 16-hour emergency surgery at UCLA Westwood Medical Centers, a team of doctors led by Dr. Nestor Gonzalez removed the vascular malformation, and with it some vital portions of her brain, including much of the cerebellum.

After 40 tumultuous days in the intensive care unit, three months in acute rehabilitation and an overall 14 months of gradual progress, Katherine is now making a recovery at Casa Colina Centers for Rehabilitation in Pomona.

Though life-saving, the delicate brain surgery did leave Katherine with some serious deficits - though one of them was not her upbeat sense of humor.

"My memories, my personality and my faith are all as strong as before," she wrote on a blog that chronicles her journey. "I can still tell you our frequent flyer miles numbers, our credit card information, and even Jay's grandparents address with the ZIP code in Florence, (Miss.)"

While Katherine's cognitive skills are completely intact, she is unable to walk, and the right side of her face is paralyzed, the result of an intracranial nerve that was sacrificed to slow the tide of bleeding in her brain.

"Katherine was the most active, dynamic overachiever," said Katherine's mother, Kim Arnold. "Now she's in this position of enforced stillness. Everything external about her is different; Everything internal about her is the same."

In late April, again with a team of UCLA doctors, Katherine elected to undergo facial reanimation surgery in the hopes of regaining some movement and muscular tone on the right side of her face. If the surgery is highly successful - a relative measure that will come with time - she
may even recapture one thing she had hoped to never lose: her smile.

Last year, the AVM rupture came seemingly out of nowhere, though such malformations are congenital, meaning Katherine was born with it. Just six months prior, Katherine had delivered her son James through natural childbirth.

"It was there all along," Arnold said, "a ticking time bomb that none of us ever knew was there."

Because of the large size of the AVM and its location, the prognosis was worse than grim. Even a successful surgery to decompress the brain bleed and remove the malformation could have had devastating effects, Gonzalez said.

"It's a very delicate, bad place to have a vascular malformation," Gonzalez said. He worried that while the surgery might save her life, she might wind up in a vegetative state.

The extreme pressure caused by collections of blood inside the head had forced several inches of Katherine's brain to herniate down through the base of the skull and into the spinal column.

"When we see something like that, people usually die," Gonzalez said. "Even when they survive, they don't do very well."

There was no way to tell if the young mother would ever wake up again after surgery. No way, that is, until Katherine responded to a nurse's commands and wiggled her toes and fingers less than 24 hours after leaving the operating room.

"The usual thing that I would expect is for her to take several days to give any sign there was still some functions left behind," Gonzalez said.

A nurse later told Katherine's mother that her daughter's survival was "like winning the lottery," Arnold said.

After beating those odds, Katherine most recently returned to the operating room for another epic, 13-plus-hour surgery - this time to graft nerves and stimulate their growth in the paralyzed side of her face.

"The main factor was without surgery, my face would have no chance of healing on its own," Katherine said.

The two-part surgery was performed by plastic surgeons Dr. Joan Lipa and Dr. Brian Boyd, along with head and neck surgeons Dr. Rinaldo Canalis and Dr. Vishad Nabili.

"It's really the first stage of a longer surgical process for her to try to get her smile back," Lipa said.

For the young woman with an arresting smile and bright blue eyes - who not long ago had a successful career as a model and actress - that would mean more than a small victory.

Led by Canalis and Nabili, the first procedure was a nerve transfer, taking a small part of one of the nerves that gives movement to the tongue and hooking it up to the paralyzed facial nerve, Lipa said.
"We're hoping that she'll start to get some power that goes through that nerve to give tone to those muscles," she said.

The second half of the surgery, performed by Lipa and Boyd, was a cross-facial nerve graft. Surgeons removed a nerve from Katherine's leg to be used as an extension cord, connecting a branch of working nerves on the left side to the paralyzed side.

Later, after the nerve has had a chance to grow, doctors will go back and hook it up to a muscle - likely transplanted from the inner thigh - essentially rerouting the nerve impulses that trigger a smile into the paralyzed area of Katherine's face.

"The nerve grows about a millimeter per day, so we wait, wait, wait," Lipa said. It will take about another six months to begin to see results from either procedure.

Virtuous patience, though sometimes difficult to endure, has paid off before for Katherine.

Much of that progress has been made at Casa Colina, where Katherine has been working with therapists since August in their residential and day treatment programs.

Katherine and husband Jay credit the team at Casa Colina with being "hugely responsible for her recovery so far," Jay said. "They don't have any other program like it in the country."

There, she has regained, piece by piece, bits of her former self - from strengthening a weakened voice, to gradually relearning to swallow different foods.

Each victory was a communal one. As she began to conquer swallowing issues, "she started bringing in doughnuts for all of us," laughed Rodger Brasier, her case manager at Casa Colina.

In early June, her feeding tube was finally removed.

At a recent celebration in Los Angeles marking the one-year anniversary of when "Katherine Lived," the 27-year-old took to the microphone and spoke before the large crowd, despite feelings of insecurity surrounding her new voice, which was weakened by the nerve damage.

Now, Katherine says she is speaking up whenever she can.

"I have actually been told by several family members that I need to stop talking so loud," she joked on her Web site.

It may be there, in her blog, that Katherine has discovered her most powerful voice.

The site has received hundreds of thousands of visitors, many who come to read her testimony and offer prayers for recovery.

"Deep underneath the tides of emotion is just a bedrock faith that all this is being used for good, and that God has not abandoned Katherine," Arnold said. "He's working all this for good."
Her mother also keeps a blog that has drawn followers and support from around the world.

"I think that's why this happened," Katherine said, "so my life could be encouraging and God could use the Internet to spread my story."

Read Katherine Wolf's blog at www.katherinewolf.info

Read Kim Arnold's blog at www.katherineawlwolf.blogspot.com

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