

STROKE

She thought she knew all about strokes. After all, she's an expert.

But what happens when a doctor suddenly becomes a patient?

BY MARYANN BRINLEY

“I REMEMBER THINKING, ‘I’m in bed in a neurosurgical intensive care unit and I’m not the doctor doing the rounds. I’m a patient and the other patients around me look pretty crummy.’”

A stroke expert in the UMDNJ–New Jersey Medical School Department of Neurosurgery, Oriana Cornett, MD, was two months from completing her two year-long endovascular neurosurgical fellowship in April 2010. She was 37, had normal blood pressure, no personal or genetic history of heart disease or diabetes and no warning signs of the catastrophe that would alter the course of her life.

SHOCK





Cornett had been so healthy that in Manhattan, where she lived with her husband, they would often run six and a half miles in Central Park. Yet, there she was in a neurosurgical ICU on a Friday evening – after a day in which time had stood nearly still while a cryptogenic stroke played weird, wild havoc in the right side of her brain. Cryptogenic? That means a “big I-don’t-know” kind of stroke, Cornett explains. “It was an M1 occlusion. Sixty to seventy percent of the time, an M1 occlusion in someone as young as I am is a killer.”

Looking back on the experience during an interview in her office in the Doctors’ Office Center, Cornett is upbeat. An optimist, she laughs at the irony of a stroke doctor having a stroke. She has spent the last year working hard to regain movement on her left side and doing stroke research back at work. “I’ve learned a whole lot about having a stroke but I don’t recommend having one.” She props up her left leg on the desk. She wears a brace to stabilize her left ankle while walking. Her left hand is a work in progress. “I’ve recovered my face, which gives me a lot of hope because my face was severely affected. My patients used to ask, ‘Am I going to be okay, Doc?’ I would say, ‘I hope so but I don’t really know.’ The stroke has given me a whole different perspective.”

Here’s what happened on that Friday. Cornett had been scheduled to attend a conference in the angiography suite at UMDNJ–University Hospital at 7 a.m. “I wake up and see that it’s 8:08 a.m. I’m late. I’m never late, especially for this regular conference which was the favorite part of my week. The fellows can ask all the questions we normally couldn’t cover in a busy week.” Routinely run by NJMS associate professor and program director Charles J. Prestigiacomo, MD, and assistant professor Chirag Gandhi, MD, the Friday morning meetings were “something I loved.” At home, she hops out of bed and hurries to the bathroom. Reaching for toilet paper, her left hand doesn’t work. Then it’s her leg. In the mirror, “my face is all snarly and I think, ‘This can’t be good.’” She falls to the bathroom floor. This stroke doctor isn’t thinking stroke.

She tells her husband, “Something is wrong with me. I can’t walk.” Yet, she refuses to let him call for help, insisting, “I’m the doctor here. I know what I’ve got and it’s not a stroke. Go to work.” He helps her back to bed and she recalls, “I made him leave saying, ‘You know, honey, I think I’ve got this thing called GBS. I’ll be fine.’” She’s not fine.

Meanwhile, she explains, “There is a feature of some strokes called neglect. This is a right brain event. You don’t realize you have a problem at all. I’ve had patients with right side strokes who became totally psychotic.” Cornett doesn’t believe that she had complete “neglect” because she was aware that something was wrong but she kept thinking, “I’m just too young and healthy to be having a stroke. It’s got to be something else.” She was convinced it wasn’t life-threatening. Perhaps it was from her dinner at a Greenwich Village restaurant the night before. “I wouldn’t know what cocaine looked like. You could have told me it was parmesan cheese. Even some rare or uncommon side effect to a common vaccination was more likely than a stroke for someone as healthy as me.” Her sense of time slows to a crawl. Hours feel like minutes. “My perception of time was way off.”

Two days earlier, she had received a vaccine booster for tetanus, diphtheria and pertussis. Her blood pressure had been low, 104 over 40, but, “Low is normal for me. I got the shot in my left deltoid and by Thursday, there was a little swelling and pain at the injection site so I looked it up and discovered that in rare instances, Guillain-Barre syndrome (GBS) can result.” GBS, which can be life-threatening, will cause slow, ascending paralysis in a pattern totally different from stroke. “I was slurring my words and it had happened fast. A stroke is sudden so my symptoms were completely wrong for GBS.”

For hours that day, while Oriana Cornett was in bed and later on the floor—after falling on the way to get a drink of water—the stroke in her brain destroyed brain cells. As Charles Prestigiacomo explains, with any stroke, “Within minutes, decisions must be made about what needs to happen. Any stop or pause in the chain results in a waste of time and precious brain cells.” At UH, a Brain Attack Team (BAT) is always a pager away from immediate action. The window of time between the onset of a stroke and receiving treatment has opened wider for some patients but when Cornett passed the three, six and

then eight hour mark, she lost her chance to receive intravenous tissue plasminogen activator (tPA), intra-arterial medication to break up the blockage, or to undergo an intervention where a surgeon uses probes inside the vascular system to mechanically dislodge a clot.

When she heard her husband's key at the front door, she was relieved. "What are you doing on the floor?" he asks. "I've fallen and I can't get up," she answers, adding "don't make any wisecracks." So confused about time, Cornett asked for the phone in her purse to let them know she wouldn't be at work. "I thought it might be 9 in the morning. It was 7 in the evening." He telephoned UH, described her situation and was told to call 911 immediately. "My husband was mad at me, scared to death and angry with himself, especially there in the beginning when he wasn't sure if I was going to make it," she admits.

When the emergency medical team arrived, she told them, "I know it looks bad but I'm a stroke doctor and this can't be a stroke. Trust me." At Mount Sinai Medical Center in Manhattan in the ICU, Cornett maintained that disbelief. When a CAT scan came back normal, she said, "I told you so." Yet, she points out, with any stroke, a

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CAT scan can look normal for hours afterward. It's only when swelling develops that the picture changes.

An MRI, more sensitive to strokes, told a different story. "I didn't know if I trusted what the doctor was telling me. I looked at her thinking, 'Holy moly, I've had more experience than you do. I spent three years studying and looking at strokes.'"

What also ran through her mind was a question quite contrary for an expert in endovascular neurosurgical procedures who was highly skilled at threading catheters into blood vessels. She found herself wondering, "If I really did have a stroke, would I want that tPA? It can cause bleeding. Do I really want someone going into my brain to yank out a clot? Some people die as a result." This physician who had offered these treatments to patients all the time was thinking like a patient. "Overall I know that people do much better with treatment than without. I even kept telling my husband, 'Don't let them stick a needle in my back for the GBS spinal test. I really don't want that needle.'"

Early the next morning, when Chirag Gandhi sat by her bedside at Mount Sinai, she got it. Her husband had slept on the floor beside her bed.

"How bad is it?" she asked Gandhi. Prestigiacomo, who was away on business at the time and contacted by phone, "couldn't believe it."

"You have a sizable infarct, an M1," Gandhi explained. "The good news is that you probably won't need a hemi-crani" – the surgical pro-

cedure to remove a quarter of the skull.

"A hemi-crani? Chirag, what did you say?"

An artery in Cornett's otherwise healthy brain had been completely blocked. "I have all the beautiful vessels of a young, healthy woman except for one. Everything, my heart, my lungs, my carotids are fine...except for that one, which was occluded." It had caused a massive stroke and when the swollen brain has no place to go but down, it can compress the brain stem which controls breathing and cardiac function. She was still in danger.

"Brain herniation can result. You become so lethargic that you can't keep your eyes open so you slip into a coma and die." That explained why she had been on neuro-check every 15 minutes. "We had often talked about patients in this way but now we were talking about me. It was so shocking and it was only then that it started to sink in: I can't move my face. I can't move my arm. I can't move my leg. And my husband has tried pinching me and all I can feel is this weird sense of nebulous pain coming from I-don't-know-where-exactly."

When the hospital's medical team arrived in her room, she was mapping her own stroke. "I was registering everything. Sitting there in bed, I thought, this is pretty big. I am experiencing it right here and now." When asked by the team if she had neglect, she told them she realized she had a problem with her left side. She passed several other neurological tests. Asked to draw a clock, right-sided stroke victims may only draw half the face, trying to squeeze all the numbers onto that side. In a test known as A cancellation, the patient crosses out all the A's on a page of letters. Someone with neglect can only cross out A's on the right. Yet, Cornett showed some signs of neglect. She couldn't move her eyes left and recalls thinking, "I have to remember this because it is fascinating. I had always wondered what neglect felt like. You don't know your left side."

When one doctor expressed concern about her morning sleepiness, she responded, "I'm not herniation-tired. I can wake up. I just didn't sleep well." Surprised, someone remarked, "Did you hear what she said? She's not herniation-tired!"

Oriana Cornett was still the doctor. Ten days in acute hospital care and then months of physical therapy in rehab followed. "I loved therapy and walked the very first week after the stroke...with a lot of help." She recovered her facial muscles and some left arm strength using mirrors. "My left eye had been wide open. My smile was crooked. In the mirror, I would move my right arm and then stare at the left arm to make it move. It was wild." Describing her deficits in computer circuitry terms, "I liken my problems to software issues. With time passing, I also have hardware problems because my muscles are weak."

To return to working in the angiography suite, her arm would have to be back to full function. "I loved the work we did but I'm hopeful now about getting back to seeing patients soon. I have a lot to give, especially understanding what they have gone through. Stroke recovery is complicated and we have different levels of problems. Just let me tell you what I've learned."