Car crash leaves Ebola researcher with own struggle

Lindsay Kalter  Friday, November 27, 2015

Dr. Pardis Sabeti of the Center for Systems Biology at Harvard University, speaks during a seminar: “Ebola in West Africa: Separating Fact from Fiction”, at Massachusetts General Hospital, in Boston, Wednesday, Sept. 17, 2014.

Photo by: Chitose Suzuki
Pardis Sabeti is one of the world's great genetic scientists — hailed by Time magazine as a Person of the Year, and as the “Rock Star Scientist of Harvard” for her groundbreaking Broad Institute research into Ebola. But since July, the 39-year-old researcher quietly has been fighting her own battle after surviving a near-fatal accident that left her body battered. She broke her silence to tell her story to Boston Herald health reporter Lindsay Kalter.

Pardis Sabeti came to consciousness on the side of a steep Montana cliff draped over a bed of rocks like a rag doll.

“I'm OK!” she opened her mouth to say.

When nothing came out, she knew she wasn't.

“I just remember people calling out to me,” Sabeti said. “They were trying to get me to talk, to breathe, because they didn't know if I was going to make it.”

“I thought, 'I just have to breathe, let them know I'm alive,'” she said. “I wanted to call out, but I couldn't make a sound.”

Just two months earlier, in May, Sabeti was in West Africa fighting fearlessly on the front lines of the Ebola outbreak that left more than 11,000 deaths in its wake.

But nothing could have prepared her for her next battle — a car accident that catapulted her 15 feet onto boulders, giving her a concussion, shattering her pelvis and left knee, and breaking her right knee.

“Boston is such a cerebral place. You get the sense that, 'As long as my brain works, I'm fine,'” Sabeti said. “It's the first time I realized I needed my body.”

Sabeti was a passenger on an ATV tour, hours after leading a discussion on the future of genetics. In a moment that's now a blur of fleeting images and sounds, the vehicle clipped the curb and was sent careening down a cliff, smashing into two trees that stopped her from a potentially fatal descent.

But the instant Sabeti's body met those boulders, her frenetic and hyperproductive existence as one of the country's foremost infectious disease specialists came to a screeching halt.

“What's fascinating about an accident is, you're just in your body,” Sabeti said. “When you're recovering, there's nothing outside the room you're in.”

Fearless researcher

Before the accident, Sabeti seemed to be everywhere at once.

The medical geneticist — a professor in the Center for Systems Biology and
Department of Organismic and Evolutionary Biology at Harvard University, on the faculty of the Center for Communicable Disease Dynamics at the Harvard School of Public Health, and a senior associate member at the Broad Institute — has been lauded in circles far beyond the medical community. Her work has been highlighted in publications from The New York Times to Smithsonian magazine, and she was named one of Time’s 100 most influential people in April.

When she wasn't in West Africa collecting data, Sabeti would start her day by rollerblading the four miles from her Kenmore Square home to work in her lab each morning. From there, she would shoot off to various locations for back-to-back meetings with collaborators and students. After work, she would often play a game of squash or do some more rollerblading — this time with her husband, also a researcher at the Broad Institute.

Nighttime rarely brought rest; rather than curling up in bed, she would respond to the avalanche of work email she had received throughout the day.

A computational biologist and geneticist, Sabeti had tunnel vision from the time the Ebola outbreak was identified in March 2014: she was going to help resolve the crisis, even if it meant putting herself at risk.

She led a team of researchers who took samples from patients at the outset of the epidemic, and sequenced the genome of the virus to identify better ways to diagnose and treat it. That research also shed crucial light on the spread of Ebola across West Africa: it was being transmitted from human to human, not via mosquitoes or animals.

It was painstaking research. She had sleepless nights, cried tears of frustration and sadness for those affected, and mourned the loss of West African colleagues who contracted the virus.

“She wasn’t sleeping at all. She abandoned her basic needs because people were hurting and dying and in need,” said Megan Purdum, communications coordinator for the 36-person Sabeti Lab. “She put it all on the line.”

On the rocks

Even on the side of a cliff — her body badly broken and her voice too weak to yell — Sabeti felt compelled to act. As she waited 45 minutes for firefighters to retrieve her, she softly sang to herself and chanted words of healing to quiet the pain radiating from her bones.

Sabeti was flown to Harborview Medical Center in Seattle after the accident, which was the nearest Level 1 trauma center. She underwent four grueling surgeries over seven days.

In the early days of her recovery, her body was racked with such pain that she turned to her mother and begged for death.
“It’s the worst nightmare for a mother,” said Nancy Sabeti, who came from Florida to be by her daughter’s side. “What can you do? In front of your kids, you have to be strong,” she said. “If you cry, you leave the room, go cry, and come back.”

The harrowing days gave way to terror-filled nights. In her sleep, she would relive the accident in distorted and horrifying vignettes.

“At night, I’d start twitching. It was like firecrackers going off in my nerves,” she said. “When I’d sleep, the entire sequence of the accident would play out in various ways. I’d dream of these Stanley Kubrick-style versions of the accident.”

Sabeti said she recalls being massaged — one of the most important pieces of her recovery, she said — and felt the traumatic memories of the accident being released.

“It was like an exorcism,” she said. “I’d just cry and cry, and by the end, there was no more to cry.”

**A long journey**

Sabeti still manages to work 40 hours a week, including 20 hours in the lab, but her days look much different now.

For the first time in her life, the scientist — who emigrated from Iran as a child with her family and went on to become a Rhodes scholar and an MIT grad with a Harvard medical degree — is focused on her body, not the work of her mind.

In the morning, instead of slipping on her rollerblades and zipping to the lab, Sabeti stretches to unwrench her stiff body and relieve some of the pangs and tingling that move throughout her legs. She’ll complete up to five hours of cognitive or physical therapy, which includes pool time at Spaulding Rehabilitation Hospital, resistance stretching, and massage.

“In an instance like this, I want to leave no modality behind,” Sabeti said.

In a way, she was lucky, said her surgeon, Dr. Reza Firoozabadi.

“With that significant of an injury, she’s quite fortunate to not have sustained abdominal, thoracic and brain injuries,” he said.

She now has five stainless steel plates helping to hold her body together, Firoozabadi said.

And Sabeti’s need for constant movement is serving her well in her recovery.

Nathan Yozwiak, a project manager in the Sabeti Lab, cited Sabeti’s “resistance to inaction” as his only concern about the researcher several months ago in an annual colleague review.

“Pardis is high-geared toward action and perpetual motion,” the review read.
Looking back on those words, Yozwiak said, they take on a new meaning.

“It’s been kind of amazing. In a way, she’s bringing the same determination and focus that she uses to pursue scientific research and global health problems and using them toward her own physical rehabilitation.”

Sabeti looks ahead with both the pragmatism of a scientist and the optimism of a successful problem-solver. She often refers to the Stockdale Paradox — named after Vice Adm. Jim Stockdale, a U.S. military officer held captive for eight years during the Vietnam War, who said optimists must also confront reality.

“Never confuse enduring faith with the ability to face devastating facts,” she said.

**The rock star**

Sabeti will return to teaching her life sciences course this spring. The thought of getting back in the classroom helps motivate her to heal.

“It's my jam,” Sabeti said of the class, remembering her students with a smile. “Whenever I get down, a student will do something to make me happy.”

In the meantime, she's continuing both her mental and physical recovery. The lead singer and bass player in the indie rock band Thousand Days, she is using music as an outlet.

The time she spent on those rocks is the inspiration behind her newly written song, “Breathe in Breathe out.”

“Come on, breathe one more breath,” the lyrics say. “Let them see there is life yet.”

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