A Second Chance

Lucy Linden and Darby share a special bond. "She felt my hand, and somehow knew something was wrong. She stiffened her back and never moved...holding me up," says Lucy of her friend.

FOR LUCY LINDEN, DECEMBER 29, 2008, SEEMED AT first like any other day. A retired schoolteacher, she was at home in Indian Wells. Her husband Bob and his real estate partner were getting ready for a meeting, and Lucy was making them lunch. She started to put a jar of mustard back into the refrigerator, and suddenly it fell from her hand.

"I remember thinking, 'How did that happen?'" Lucy recalls. "Then,my right side started to buckle. I automatically put out my left hand to steady myself, and there was my daughter's dog Darby, right by my side. She felt my hand, and somehow she knew something was wrong. She stiffened her back and never moved… holding me up."

Her husband heard the broken glass and called out to see if she was all right, but Lucy was unable to reply because she could not speak.

"When I didn't answer, he came running. He and his partner recognized that I was having a stroke because I could not talk, and the right side of my face was drooping," says Lucy. "They called 911 immediately."

Lucy and Bob have been together since they first met on Cape Cod in 1961. Bob was in the Air Force, and Lucy had gone to the Cape to work for the summer.

"Bob came into the place I was working and asked me to dance. At first I told him 'no'. But there weren't many people, so I gave in, and said 'yes'," Lucy smiles. "While we were dancing Bob said, 'You are the girl I'm going to marry.' My first thought was — 'my mother warned me about guys like you.'He was right! We have been together for more than 48 years."

When Lucy arrived at Eisenhower, Neurologist Bishoy Labib, MD, and Interventional Radiologist Mehran Elly, MD, members of the Eisenhower Stroke Program team, were already waiting for her. They had been notified that a potential stroke patient was arriving.

Dr. Labib immediately ordered a CT (computed tomography) scan and an MRI (magnetic resonance imaging) of Lucy's brain, and an angiogram of her head and neck. The tests revealed that Lucy had suffered an ischemic stroke, which is caused when a blood clot blocks blood flow to the brain.

"We looked at Lucy's images and realized that because of the location of the clot, which was in a major blood vessel that supplied the left side of her brain, she could suffer major damage if the blood flow was not restored," Dr. Labib explains. "The MRI also showed us that only a very small part of the brain was damaged, but that a large part was at-risk.We knew it was not too late to intervene."

Dr. Elly likens the blood flow to the brain to a stream. If the stream is blocked close to its source, everything downstream is affected. Similarly, a clot near the origin of the blood vessel that supplies the brain will affect all of the functions that are controlled by that part of the brain, so the potential for devastating damage is quite high.

Tissue plasminogen activator (tPA) is a drug that dissolves blood clots and is used to treat ischemic strokes. Dr. Elly administered the tPA directly to Lucy's clot using a catheter and an ultrasound probe called an EKOS®.

"As the 'clot-busting' medication is going through the catheter, the EKOS probe administers ultrasound waves, which shake the structure of the clot," Dr. Elly explains. "Think of the process as melting the clot, and shaking it at a high frequency, which causes it to breakdown more quickly."

Lucy's clot began dissolving immediately, restoring the blood flow to Lucy's brain. Lucy says she remembers the procedure, and watched the whole process on a monitor.

"It was truly amazing. I will never forget it," Lucy says. "I could see the clot on the screen, and then I saw it dissolve. Immediately, I could move my fingers; I could move my toes; I could talk again. At that moment, I felt that I had been given a second chance at life."

Following her treatment, Lucy was in the critical care unit at Eisenhower for only three days. After several months of physical therapy, Lucy strengthened the muscles on her right side, which were weakened by the stroke. Lucy swims and does strength and balancing exercises in the pool to keep her muscles strong.

Dr. Labib says Lucy has had an amazing recovery. "Lucy had some weakness on her right side, some very minimal speech problems," shares Dr. Labib. "But because we followed the stroke protocol we have in place, we were able to treat Lucy quickly and effectively."

Only 20 minutes had elapsed from the time Lucy arrived at the Tennity Emergency Department until the team reviewed the first diagnostic images to determine her treatment. "If my husband had not been home and gotten me to the hospital right away, and if the Eisenhower team had not moved so quickly, I would be dead or paralyzed," says Lucy.

Lucy believes that if she had known more about strokes, she might have recognized the warning signs (please see box on page 34). Prior to her stroke, Lucy had a series of episodes that she now knows were transient ischemic attacks or TIAs. TIAs are episodes in which there are signs or symptoms of a stroke that last for a short time. For Lucy, each time, the TIA symptoms resolved quickly. Lucy also had atrial fibrillation, a risk factor for stroke.

"I am so fortunate to have had the amazing medical team and technology available at Eisenhower," Lucy says. "They not only saved my life, but they also prevented me from having the serious disabilities that so many stroke patients face. I cannot say enough about Dr. Labib and Dr. Elly."

"It's a personally rewarding experience for all of us to see someone come to the ER devastated by a stroke, and then treat them and see them improve within moments," shares Dr. Elly, one of three Interventional Radiologists practicing at Eisenhower. "By moving quickly, and using the new technologies that are available to us, we can dramatically change the rest of their lives."

Stroke Symptoms

- One-sided weakness, numbness or paralysis
- Blurred or decreased vision
- Sudden confusion, and problems speaking or understanding what others are saying
- Dizziness or loss of balance
- Sudden severe or unexplained headache

Anyone who experiences these symptoms should call 911 immediately

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