

New Hope for Pulmonary Embolism Patient

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February 25, 2020

Robert Christian, 45, is an active guy. He has played ice hockey since he was in third grade, loves hunting and is passionate about riding his motorcycle—which is what changed his life in May 2018.

He'd just returned home to Middletown, New Jersey from a 700-mile motorcycle ride to and from Myrtle Beach, South Carolina. He participated in the annual Bike Week that found him riding around the area and sightseeing with about 250,000 other motorcycle enthusiasts.

Robert had attended the event before, but this particular year, it rained the entire time. The unfortunate weather didn't stop him from riding, though. By the time he got back home, after riding for 12 hours straight, he couldn't stop coughing—so much so that his wife, Jennifer, insisted he go to a walk-in clinic, where he was diagnosed with pneumonia, given some medications and sent home.

A Turn for the Worse

Sometime between 2 a.m. and 3 a.m., his coughing woke him up and he felt like he couldn't breathe. He began experiencing excruciating pain in his rib area, so Jennifer brought him to the Emergency Department at Bayshore Medical Center.

“It felt like somebody took a screw driver, stabbed it in my ribs and started to tighten screws that weren't there,” he says.

The Emergency Department team ran diagnostic tests, which showed he had extensive bilateral pulmonary emboli—blood clots in his lungs—likely caused from sitting on his motorcycle for 12 hours without a break. He was told he was lucky to be alive. “I thought I should go buy a lottery ticket!” Robert says.

Habib Khan, M.D., a vascular surgeon and vice chair of the Department of Surgery at Bayshore, recommended a percutaneous thrombectomy—a minimally invasive procedure to remove blood clots—which is a new treatment protocol that reduces complication risks.

“Dr. Khan is one of the nicest and coolest doctors I've ever met,” Robert says. “He explained the whole process in detail, and I felt very comfortable with him [operating on me].”

What Is a Pulmonary Embolism?

Pulmonary embolisms are blood clots that travel to the lungs, most often from a pelvic or leg vein, says Dr. Khan. Risk factors for developing blood clots include:

- Prolonged immobilization
- Trauma

- Recent surgery (orthopedic surgery or injury)
- Heavy cigarette smoking
- Orthopedic injury that results in a cast that must be worn for six weeks or more
- Active cancer, which can cause people's blood to clot more easily
- Genetic variations that cause thicker blood
- Initiation of hormones (contraceptive therapy is high risk especially in advanced age, obesity and if combined with active smoking)

Symptoms of blood clots in the legs include:

- Swelling
- Leg pain
- Bluish discoloration of the skin

Symptoms of pulmonary embolism include:

- Trouble breathing
- Chest pain
- Dry cough

A New Type of Treatment

With an embolism as extensive as Robert's, the goal is to dissolve the blood clot, otherwise it can cause long-term complications such as shortness of breath, even with normal daily activities. Traditional treatment is to provide a large dose (100-plus mg) of "clot busting" medication. This is effective but can cause significant risk of internal bleeding, says Dr. Khan.

The newer treatment is to give the patient a much lower dose (10 to 20 mg) directly into the clot via small catheters inserted minimally invasively. Over a six- to 12-hour period, the lower-dose medication "melts" the clot. The procedure takes approximately an hour, and the catheter can be removed at the bedside rather than returning to the Angio suite. Since the medication dose is lower, the risk of bleeding and long-term complications are significantly reduced, Dr. Khan says.

Following his procedure, Robert remained in the hospital for three days for observation and was put on a blood thinner for a year. He stopped playing ice hockey and riding his motorcycle during that time, but now that he's off the blood thinner, he is back to both activities. But when he goes on his next big motorcycle trip, he'll be taking more frequent breaks.

Dr. Khan is in the process of developing a Pulmonary Embolism Response Team (PERT) at Bayshore to streamline the process of identifying, triaging and treating patients with extensive pulmonary embolism who meet the criteria for intervention.

Learn more about the surgical services at Bayshore.

Dr. Khan is a vascular surgeon who practices in Holmdel and Neptune. To schedule an appointment with him, call 732-212-6598.

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