



VASCULAR SURGERY

Second Opinion Leads to Rare Discovery

At just age 18, Zack Fingerhut developed debilitating calf pain that impaired his ability to walk more than a few blocks.

Shown: Zack Fingerhut was an avid athlete, but at just age 18, a rare vascular condition threatened his ability to walk. The advanced vascular surgery capabilities available only at an academic medical center like Robert Wood Johnson University Hospital (RWJ) New Brunswick saved Zack's life and got him back on his feet.

Zack was stunned. It was halfway through the first semester of his freshman year at Rutgers, The State University of New Jersey, and he could not get to class. "About a month after I first noticed it, it got to the point where I'd walk a few seconds and then feel this unbelievable pain in my calf," he recalled. "It would freeze up. My foot would go numb. I couldn't move."

He visited an orthopedic surgeon. Questioning his initial diagnosis of exertional compartment syndrome, a swelling of leg muscles that essentially starves the leg of blood circulation and can result in cramping, Zack sought a second opinion from Shawn Sieler, MD, Clinical Assistant Professor of Orthopedic Surgery at Rutgers Robert Wood Johnson Medical School. Dr. Sieler had previously performed knee surgery on Zack.

Dr. Sieler suspected popliteal artery entrapment syndrome (PAES), a rare vascular disease that affects the legs of some young athletes. "As soon as I saw him walk and noticed that his right foot turned dark purple, bluish, I knew it wasn't exertional compartment syndrome," Dr. Sieler remembered. "I personally never had seen a case of popliteal artery entrapment syndrome, but his symptoms were text book."

Dr. Sieler urgently referred Zack to Saum Rahimi, MD, Assistant Professor of Surgery and Chief of Vascular Surgery and Endovascular Therapy at Rutgers Robert Wood Johnson Medical School and RWJ New Brunswick. Zack didn't flinch at the idea

of visiting a vascular surgeon; he sustained injuries as an athlete, so undergoing tests was nothing new.

An MRI and ultrasound of Zack's right leg confirmed zero blood flow from his knee to his foot. "The gastrocnemius muscle in his calf inserted his bone in an abnormal location, causing impingement of the popliteal artery, the main artery that runs through and behind the knee. The pain manifests when leg muscles demand more blood flow and a popliteal artery that is narrowed or blocked cannot meet that demand," Dr. Rahimi explained. "Unfortunately, it's a very challenging diagnosis to make because by the time anybody figures out what's going on, the artery is badly damaged, which was the case with Zack."

PAES is so rare, according to Dr. Rahimi, that he sees one case every year or two. "The majority of them have been in runners," he explained. "These young athletes never think they will need vascular surgery. Vascular surgery is a specialty of an older population, but these patients exercise so much that they have very developed gastrocnemius muscles, which makes PAES worse."

There are individuals born with PAES, he added, but it may not become clinically relevant because they have enough space for blood to flow in the artery.

To release the muscle, Dr. Rahimi made S-shaped incision in the back of Zack's knee to expose the vessel, visualized the muscle

where it was compressing the artery and removed a portion of the muscle.

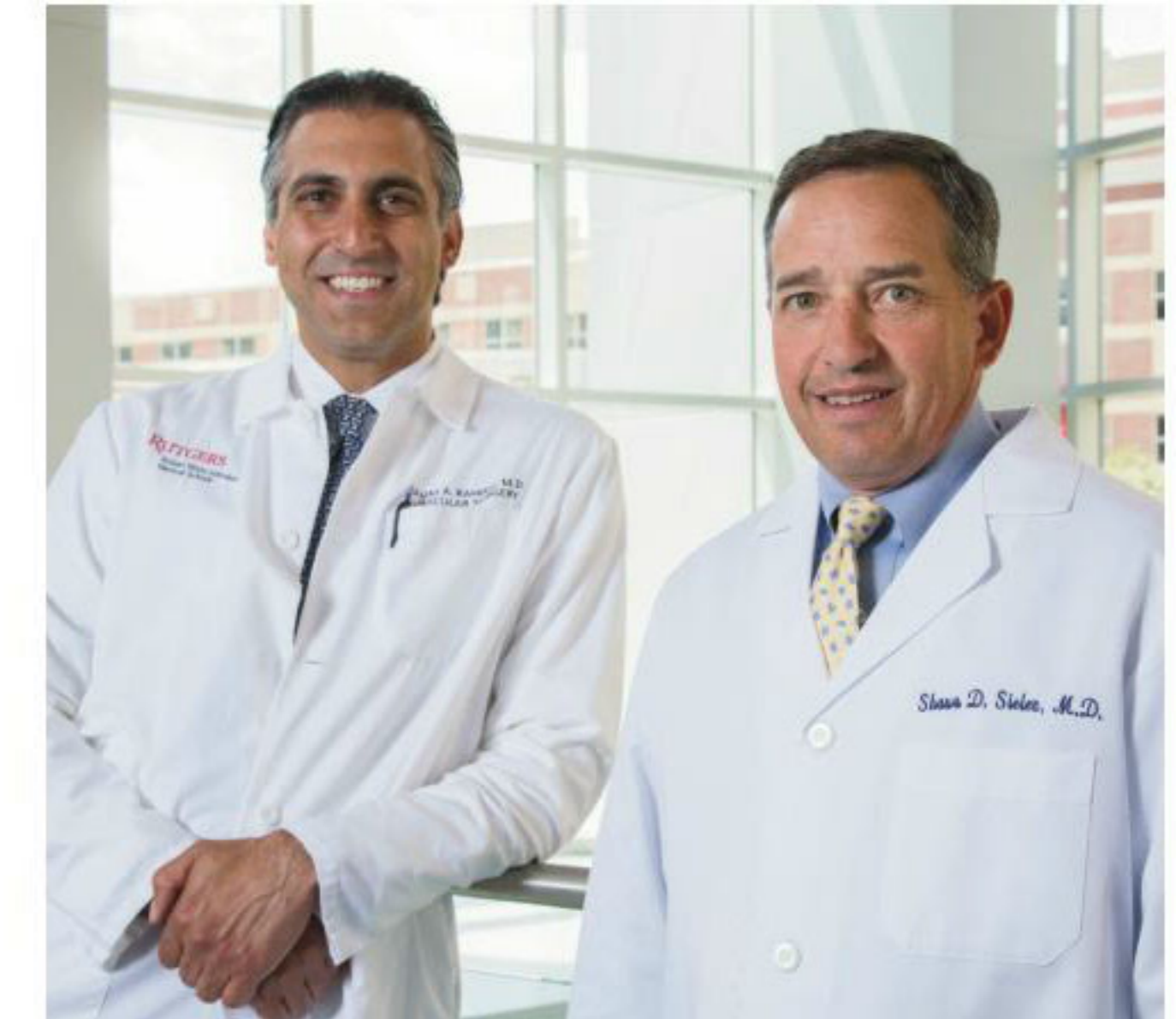
"Then we had to make a decision about the artery, because Zack's MRI showed no blood flow above and below his knee," Dr. Rahimi recalled. "In the OR, we could see the damage. The artery, which is made up of layers, was constantly being traumatized by his muscle. Every time Zack walked, that vessel was being squeezed until, eventually, there was enough damage done to the inner layer of the blood vessel that circulation was blocked."

Dr. Rahimi bypassed the artery, removing a five-inch segment.

Zack said his experience at RWJ New Brunswick was great. "Dr. Rahimi made me feel comfortable, and the team was very good to my parents. Even after my surgery, everyone was checking in to see how I was doing," he recalled.

A week after his surgery, Zack was back on his feet. "To this day I have limitations, but these are small losses for a bigger victory," he said. "I can walk, I can run and I can be on my feet for an extended period of time. Even if I couldn't run, the fact that I can walk again is good enough for me."

Visit www.rwjuh.edu/vascular or call 1-888-MD-RWJUH.



Shown: Shawn Sieler, MD (right), Clinical Assistant Professor of Orthopedic Surgery at Rutgers Robert Wood Johnson Medical School, examined Zack Fingerhut at his North Brunswick practice and determined Zack's condition was serious, so Dr. Sieler immediately referred him to Saum Rahimi, MD, Assistant Professor of Surgery and Chief of Vascular Surgery at Rutgers Robert Wood Johnson Medical School and an attending vascular surgeon at Robert Wood Johnson University Hospital New Brunswick.