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Angel on his shoulder

Fall leads Knoxville man to doctor who invented 'Dog Bone' implant

It was last Sept. 26 that 80-year-old Thomas Avera of Knoxville saw the newspaper article about a dog bone.

Actually, it was a story about a dog bone-shaped artificial shoulder implant invented by Dr. Paul Brady of Tennessee Orthopaedic Clinics at Parkwest Medical Center. But Avera was so impressed by Brady's knowledge that he saved the article and made a vow. "When I read that, I said, 'That guy's pretty smart. If I ever have anything wrong with my shoulder, he's the man I'm going to see,'" Avera recounted.

That time came sooner than expected.

Thirty-seven days later, Avera's fall down a slippery slope while blowing leaves landed him in Parkwest's emergency department and, ultimately, Brady's office, with the second-worst shoulder injury the orthopedic surgeon had ever seen.

"A rotator cuff has four muscles that become tendons and those tendons attach to the bone," explained Brady. "A typical rotator cuff tear involves one tear, a really bad rotator cuff tear involves two, a horrific massive one involves three, and Mr. Avera's was three-and-a-half. His was the second-worst injury I have seen. I did have one patient who had torn four, but that was because of a fall from a 30-foot ladder – a much worse fall than Mr. Avera's."

For Avera, the nightmare began Nov. 2 between 8 and 9 in the morning. "I was blowing leaves with a backpack leaf blower," Avera recounted. "I wanted to start early because with a little dew on the ground I wouldn't have all the dust. But I stepped on a little wet slope, slipped and fell. I fell sideways on my right shoulder and didn't have time to put my arm out to catch myself or anything. I fell full force. When I hit, I knew I had done some damage."

He flagged down his wife, Dot, who was mowing a nearby field and told her he had fallen. "I asked him if he was hurt, and he said yes," said Dot. "For him



Thomas Avera's right shoulder was left hanging only by skin and soft tissue after a fall while blowing leaves last November.



Avera fashioned this T-shaped device from PVC tubing to aid in his rehabilitation.

to say 'yes,' I knew he had to be hurt pretty badly."

Still, Avera declined his wife's offer to call for an ambulance and insisted that she drive him to Parkwest instead. "Big mistake," said Dot. "He passed out twice before we got to the hospital."

At the emergency room, Avera was put under anesthesia, his shoulder reset and his arm put in a sling. Then, he was off to see Brady, who was attending patients at his Lenoir City office that day. Even without an appointment, he got in.

"I like to take care of things quickly, particularly injuries like that," said Brady. "His would've been a nightmare – if not impossible – to repair had we waited."

After allowing several days for Avera's swelling to subside and an MRI, Brady went to work. With Avera under anesthesia, Brady rotated Avera's arm around, looking for a point of resistance. There was none.

"I could rotate his arm all the way around and just keep go-

ing," Brady said. "There was very little attachment. Really, the only thing holding it on was the skin and some soft tissue. He didn't have much, if any, rotator cuff – it was just hanging from his torso."

Avera's shoulder was filled with fluids to allow the insertion of a small, arthroscopic camera that enabled Brady to better see the torn cuff. He then began pulling the tendons back to the bone, securing them with synthetic calcium screws and sutures. "The screws become part of the bone," said Brady. "They don't disappear. They don't dissolve. They just become part of the bone."

"One of the most interesting

things about Mr. Avera's case is that he had an injury where some surgeons would have chosen to do what is called a reverse shoulder replacement," said Brady, noting that it's a procedure that's been approved in the United States for seven years.

But, he added, reverse shoulder replacements are normally prescribed when a patient has a massive tear of the rotator cuff, no shoulder function and arthritis. Avera, however, had no arthritis.

"That's where I differ from some others in that I usually try to make every effort to fix a rotator cuff rather than do a shoulder replacement," said Brady. "I

think doing it the way we did it is much better than a shoulder replacement. Not to mention that my general philosophy is 'God's parts are better than man-made parts.' So, if I can do anything to preserve natural anatomy and restore natural anatomy, I'll choose that every time."

"However, I do shoulder replacements – frequently," he added. "There are times when there really is no other option, but Mr. Avera's case, more than almost any I've ever done, really highlights that if you just try to restore a patient's normal anatomy, a lot of times they'll end up doing fantastic."

"Fantastic" is also how Thomas Avera describes his shoulder today. Six weeks after the surgery, he began going to rehabilitation three times a week and then, later, by himself at home. He even fashioned a T-shaped tool out of PVC tubing that he uses in exercises to improve his shoulder mobility and reach.

After all this time, he continues with his 15-minute workouts twice daily. The shoulder, he says, will never be as good as it once was, but it's getting better all the time thanks to the exercises.

"You can't say it enough – you use it or lose it," he said. "In a case like this, rehabilitation exercise is the key."

"After it's fixed properly," added Dot. "And Dr. Brady fixed it right."

Thomas Avera says he asked Brady before the surgery if he'd be implanting one of his Dog Bones, but was told that it is only for clavicle surgery.

Asked if he was disappointed he didn't get the Dog Bone, Avera replied, "Hey, that invention is supposed to make your shoulder several times stronger than normal. You know, I saved that article thinking that Dr. Brady was who I would want working on me. Maybe the Lord had something to do with it. I believe in Divine intervention and Divine healing, too."

For more information or a physician referral, call 374-PARK.

Brady: Best to seek help early for rotator cuff injury

While Thomas Avera's rotator cuff injury was the result of a major accident, Dr. Paul Brady says many people may have a torn rotator cuff and never know it until it becomes so painful they seek help.

"In about 80 percent of rotator cuff tears, you can't put your finger on when they happened," said Brady. "It's one of those things that can happen slowly over time, and a lot of patients wait until they can't sleep, can't comb their hair or whatever and they wait until the last minute to go to the doctor."



Dr. Paul Brady

aren't just something that a baseball pitcher or tennis player goes through – they are often the result of a repetitive motion over time.

"Sometimes, it's just a lifetime of activity – wear and tear – or bone spurs can irritate the rotator cuff and weaken it," he said. "In the natural aging process, all of our tendons get a little weaker over time. If we stay active, that process is much slower. So, the more active

you are, the less weak your tendons are going to become. People who become very inactive, their tendons become almost brittle. Think of a nice fresh rubber band

– you can hardly break it. But if you have one that sits in the drawer a long time and you pull it, it just crumbles. That's an extreme example but it's not far from the truth."

Another common cause of rotator cuff injuries, Brady says, are lawnmowers or other outdoor equipment that start with the pull of a rope.

"Particularly, if it 'catches' on them or if the rope breaks – those are two things I've seen in a bunch of patients," said Brady. "They say, 'As I was pulling it, the rope broke and my arm gave and I knew something happened.' So, be careful starting your lawnmower."

Brady says shoulder or arm pain, pain at night and pain with overhead activities are all signs that you may have a rotator

cuff injury. While those symptoms are also common in bursitis, Brady says people experiencing pain that lasts for more than three to four weeks and can't be controlled with anti-inflammatory drugs such as Ibuprofen or Naproxen, should see a doctor.

"It would be nice if patients would seek treatment a little earlier because the literature is very clear – if you treat these things when the tear is early or when the tear is smaller, patients do better than if you wait a long time," said Brady. "I guarantee you – if Mr. Avera had waited a long time, he would've not done well with arthroscopic surgery. He probably would've had to have a reverse shoulder replacement and even then, he wouldn't have done as well as he did."



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