

Mystery Solved – and Resolved

Fort Sanders Regional surgeon removes rare tumor that affected patient's blood pressure

Seated on a hay bale next to a trailer covered with a checkered cloth, Donna Blake holds several ears of corn. It's the farm stand where she and her husband sell the fresh produce they've grown.

"The heat really took a toll this summer," Blake says. "It's turned the shucks kind of brown, but the corn is fine on the inside."

She isn't complaining. Blake is just happy to be able to enjoy farm life again after her surgery at Fort Sanders Regional Medical Center for an uncommon condition. Today her health is restored, and she's able to enjoy her grandkids and the home she has shared with her husband for more than 40 years.

Unexplained Symptoms

"Several years ago, I started having blood pressure spikes," Blake says. "I would be walking or sitting and it would just spike, then it would drop way down to normal or below."

The blood pressure spikes and rapid heartbeat often came with a pounding pain in the back of her head. Surgeon Michael D. Kropilak, MD, says Blake was suffering the effects of a pheochromocytoma, a rare tumor of adrenal gland tissue.

"She had a tumor that can give you significant hypertension, and it

can make you feel really bad," Dr. Kropilak says. "It secretes chemicals like epinephrine and norepinephrine, causing blood pressure to go up."

Dr. Kropilak says many people who have these tumors are never diagnosed because the symptoms are so much like those of other conditions. Blake lived with the symptoms for almost five years before her family doctor helped her solve the medical mystery.

A CT scan revealed a mass on Blake's adrenal gland, and her family doctor sent her to Dr. Kropilak. While pheochromocytomas are uncommon, Dr. Kropilak knew exactly what to do.

"The interesting thing with this one is that you actually have to give medication before you operate to block the chemicals that the tumor's secreting," Dr. Kropilak says. "In surgery, when you touch the adrenal to remove it, you're going to have to dissect it a little. You don't want [the patient's] blood pressure to go up."

A Minimally Invasive Procedure

Dr. Kropilak was able to remove the mass with laparoscopic surgery, a minimally invasive method of surgery that he's used since 1991.

In most cases, the patient can return home within a day of the

surgery. Recovery is quicker, too.

"The adrenal gland sits on the kidney and it's way in the back," Dr. Kropilak says, "so it's nice to know you can go in through small incisions and actually remove the adrenal tumor, and do it almost like you're doing a laparoscopic gallbladder surgery."

High blood pressure can lead to critical health problems like heart disease, stroke and diabetes. That's why discovering and removing the tumor was so important.

Today, Blake's blood pressure spikes are gone, and so are the intense headaches that came with them. Her blood sugar has also returned to where it needs to be.

"He did it," Blake says. "He got it done laparoscopically, it was a great success, and I was really pleased with his expertise."

Dr. Kropilak says that Fort Sanders Regional offers many types of complex surgeries, and primary care physicians can provide referrals for patients. Blake has undergone surgical procedures in Nashville in the past, and says it was a relief to be able to have this delicate surgery so close to home.

Blake has very simple advice for anyone who may be suffering "mystery symptoms" like hers: "Just go to a good surgeon, like I did!"



Donna Blake suffered mysterious blood pressure spikes and pounding headaches before her surgery at Fort Sanders Regional. Now she's back to feeling fine on the farm.

A primer on adrenal glands and tumors

They might not be mentioned as often as internal organs like the heart and lungs, but adrenal glands are important to the overall function of the body.

Adrenal glands are small, they're shaped like triangles and one sits on top of each kidney. The outer part is the adrenal cortex. The inside is the adrenal medulla. Each part helps the adrenal glands interact with the hypothalamus and the pituitary gland in the brain, and control hormones.

From a surgical standpoint, Michael D. Kropilak, MD, says adrenal tumors can generally be grouped into four categories:

- **Nonfunctional adrenal mass**, which are usually left untreated
- **Cancers** that can go to the adrenal
- **A primary cancer** of the adrenal gland or an adrenal cancer (rare)
- **Functional adrenal tumors** like pheochromocytomas, which secrete chemicals that can cause a problem throughout the body



Dr. Michael D. Kropilak

The 10-Percent Tumor

Pheochromocytomas have been nicknamed "10-percent Tumors."

- 10 percent are malignant; 90 percent are benign.
- 10 percent are bilateral (found in both adrenal glands); 90 percent show up in only one of the two adrenal glands.
- 10 percent are extra-adrenal, meaning they are found in nervous tissue outside of the adrenal glands.
- 10 percent are found in children.
- 10 percent happen to people in families where someone else has had the same type of tumor.
- 10 percent come back after treatment.
- 10 percent are diagnosed after the patient has a stroke.

While 90 percent of pheochromocytomas happen in in the adrenal glands, they can appear in other parts of the body:

- In the sympathetic nerve chain along the spinal cord
- Over the distal aorta, the main artery from the heart
- Inside the ureter from the kidney
- Inside the urinary bladder

If you experience unexplained symptoms, see your doctor. If he or she says you might need surgery, ask for a referral to Fort Sanders Regional Medical Center.

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