A Tricky Diagnosis

“I was short of breath after walking up one flight of stairs,” she says. “That was strange.”

A month earlier, she had learned how to do an echocardiogram, an ultrasound imaging procedure like those that show a new baby in a mother’s womb. Dr. Shih did an “echo” of her own heart and saw that it was surrounded by fluid. She took her blood pressure and discovered it was dropping rapidly. Dr. Shih wasted no time in getting to the emergency department. The doctors were unable to stabilize her or diagnose her condition. Her heart was failing, her blood pressure was plummeting and the lower chambers of her heart were beating crazily.

“She was,” says one of the doctors who treated her, “plunging into death.”

The Cincinnati doctors called Cleveland Clinic Heart and Vascular Institute and arranged to transfer her there. A special plane was summoned.

Almost as soon as Dr. Shih reached Cleveland Clinic, she went into cardiac arrest. Robert E. Hobbs, M.D., was the cardiologist on call that night. He quickly diagnosed her condition: giant cell myocarditis – a rare disease that affects mostly young people and causes the body’s immune system to attack the heart itself.

“I was impressed by the fact that even before the biopsy, Cleveland Clinic doctors suspected giant cell myocarditis,” says Dr. Shih.

Dr. Hobbs confirms that it is “a tricky diagnosis. If you haven’t seen it before, you won’t suspect it.” The enormous number of cardiac cases seen by Cleveland Clinic specialists enables them to diagnose rare conditions based on previous experience with the disease.

There is only one treatment for giant cell myocarditis: rapid heart transplant.

(Continued on page 2)
But there was no donor heart at hand, and Dr. Shih’s heart was going under fast.

Fortunately, Cleveland Clinic Heart and Vascular Institute had an alternative: ventricular assist devices (VADs). These implantable artificial hearts can take over for the real heart and perform its pumping function for days, weeks or months until a donor heart can be found.

Dr. Shih was rushed to an operating room. At the very door, she once again went into cardiac arrest and was again revived. Heart surgeon Nicholas Smedira, M.D., was able to implant two ventricular assist devices, one for each lower chamber of her heart.

After surgery, Dr. Shih was taken to intensive care, in pain and weakening quickly. The VADs helped her heart continue to beat while she was placed on the transplant list under the highest priority. (In 2005, 27 patients were implanted with one or another of six different ventricular assist devices at Cleveland Clinic.)

The tragic fact is that too many people in Dr. Shih’s position never get a heart transplant. If a donor heart does not become available in time, the patient dies (that’s why it’s important to be an organ donor).

But providence was on Dr. Shih’s side. Twelve days after being admitted to Cleveland Clinic, a donor heart had become available. But Dr. Shih knew that it was too soon to jubilate. First, it needed to be seen if the donor heart was a match for her own tissue type. If it didn’t match, her body would reject it. For five hours, she and her friends and family waited for the results of the lab test. Then she was told the good news: The heart was a match.

“A nurse held my hand as I was put under anesthesia and held my hand all the way into the operating room,” says Dr. Shih. Six hours later, she had a new heart.

“This is one of the more dramatic stories of how a pump and transplant can truly save a life,” says Dr. Hobbs. “It was a close call. If it weren’t for an aggressive team approach with mechanical support, she may have died.”

Today, Dr. Shih is in the midst of a long recovery, which includes some ups and downs and returns to the hospital. On the whole, however, she is progressing well.

“The outcome has been great,” she says. “I was so lucky to come to Cleveland Clinic. Everybody was so considerate. They’d do little things to make me feel better. Even washing my hair. That’s a big deal when you’ve been in a bed for two weeks and can’t wash it on your own.”

Because she will need to take immunosuppressant drugs for the rest of her life, Dr. Shih has had to let go of plans to become a pediatric cardiologist. But an enormous network of friends in several cities is helping to keep her spirits up, and Dr. Shih is even keeping an on-line diary of her recovery so friends and supporters can check up on her (http://haveaheartbenefit.com/blog/index.htm). On her 30th birthday, she celebrated her first six months of her new heart. “The survival rate at 3 years is 75 percent,” she writes, “and since I am a bettin’ woman, I’ll take those odds!”

Her most recent entry is the happiest yet: a surprise marriage proposal. She writes, “I am a fiancée!”
Cleveland Clinic Heart and Vascular Institute is continually pioneering new treatments and technologies for the benefit of heart patients. From the world’s first published coronary artery bypass, to the discovery of the first “heart attack” gene, Cleveland Clinic is at the leading edge of cardiac care. Here are a few Cleveland Clinic Heart and Vascular Institute historic “firsts” from 2005 alone:

**First in utero catheter intervention in the Midwest**

A Cleveland Clinic team performed an intrauterine transcatheter balloon valvuloplasty to correct aortic valve stenosis, a serious congenital defect in the heart. Correcting this defect before the baby is born reduces the possibility that the heart may develop abnormally as a result of the defect.

**First endovascular tricuspid valve implant**

Cleveland Clinic surgeons implanted a customized stent-graft tricuspid valve in a patient minimally invasively, via catheter. The valve is contained in a flexible scaffold and adjusts to the variable diameter of the venous system, while the valve annulus remains a fixed diameter.

**First U.S. trial using stem cells to treat patients with heart attacks**

Cleveland Clinic researchers conducted a phase I clinical trial to test whether injections of a drug, which causes a mobilization of stem cells from the bone marrow into blood, are safe and can lead to improved left ventricular function following major heart attack.

**First U.S. implant of a new type of miniature sensor for measuring pressure in the abdominal aorta**

The device is used to monitor the success of a minimally invasive repair of an abdominal aneurysm. By monitoring the pressure inside the aneurysm sac, the sensor has the potential to indicate success or failure of the procedure to protect the patient from rupture of the aneurysm.
A Heart Attack was Just the Beginning

Nancy Meehan went to the Emergency Department at Cleveland Clinic for what she thought was a digestive problem. She had stomach pain and reflux. She had no idea she was having a heart attack.

“They did an angioplasty to clear the blocked vein in my heart and sent me home,” says Ms. Meehan. “My lab tests all appeared normal.”

Unfortunately, a heart attack was not the end of Ms. Meehan’s troubles. There was more going on in her body than met the eye.

“A week later I became very ill,” she recalls. “It turns out there was a blockage in my intestines. I developed gangrene. I had to return to Cleveland Clinic, where surgeons needed to remove half my colon. There, I met a doctor who became my guardian angel.”

Ms. Meehan thought she had put her health problems behind her, with the heart attack and colon surgery. But this doctor suspected a more profound condition was still at work.

“I kept pushing this doctor away,” says Ms. Meehan, who admits now she was in denial. “I was very angry at the time. All my life I’ve been extremely active and had phenomenal endurance. All of a sudden, here I was in the hospital. I’d had a heart attack and half my gut removed. I was shocked and depressed. So when she said, ‘We have to look for more,’ I said, ‘No we don’t!’ I didn’t want any more tests. But this doctor was very persistent – thank God.”

In the meantime, Ms. Meehan was recovering from colon surgery. Back at Cleveland Clinic for a postoperative checkup, she mentioned the “pushy” doctor to her surgeon. He said, “I suggest you listen to her. Unless you want to see me again.”

Ms. Meehan resigned herself to further tests. These revealed what the other doctor had suspected: severe peripheral artery disease.

Just as the blood vessels around the heart can be blocked by fatty deposits, so can blood vessels in other parts of the body – including the legs, neck, and around the internal organs. This condition may be painful and lead to gangrene – and possibly the need for amputation.

Ms. Meehan’s problem was serious. Her mesenteric artery, which supplies blood to the liver, kidneys and stomach, was blocked. Cleveland Clinic...
Erectile Issues May Have Heart Link

No one used to talk about erectile dysfunction. Then came the advertising. Consumer marketing for Viagra and drugs like it made erectile dysfunction, or ED, a household word. Now we think we know all about it. But do we? The truth is ED can be a symptom of a possibly more serious condition: cardiovascular disease.

“ED shares a lot of risk factors that we as cardiologists see in terms of contributing to coronary disease or vascular disease,” says Chris Bajzer, M.D., a cardiologist in the Heart and Vascular Institute.

As a consequence of reduced blood flow, ED may be a symptom of coronary or vascular disease or diabetes. Men with diabetes are 50 percent more likely to get ED at an early age. According to Dr. Bajzer, 25 percent of ED is related to drug use, either prescription or recreational.

The onset of ED usually takes place between the ages of 40 and 70. About half the men in that age group may experience ED in anything from a mild to severe form. Some men may not be particularly bothered by it or are reluctant to discuss it and not report it to their doctors. But whether or not you want your ED treated, you should tell your doctor about it. It is an important piece of knowledge for your doctor to have in evaluating your overall health and risk of cardiovascular disease.

Please note that people with cardiovascular disease should speak to their doctors before taking any medications such as Viagra.

Heart and Vascular Institute surgeons performed what is called a mesenteric endarterectomy, clearing out blockages in the artery, placing stents and patching arterial tissue. (A stent is a tiny mesh cylinder that is placed in arteries at the site of a cleared blockage. It works like a scaffold to keep the vessel open for flowing blood.) Ms. Meehan also received stents at the site of blockages in her legs.

Now that she is recovering, she is taking medication to control her cholesterol and blood thinners to prevent clotting.

There are many risk factors for peripheral artery disease, including a genetic propensity. Ms. Meehan works as an executive secretary — a stressful job. She also smokes. Tobacco use, stress, diabetes, hyperlipidemia and high blood pressure are all major risk factors for the disease.

Treatment begins with modifying risk factors. This means quitting smoking and lowering cholesterol and blood glucose to within the recommended target range. A doctor may prescribe anti-platelet agents, such as aspirin. Exercise and weight loss also are important.

Ms. Meehan is taking steps to address her risk factors. “I’m watching my diet and am weaning myself off cigarettes,” she says. But with her history, she needs to be continually monitored. She is always at risk of another heart attack, a stroke or blockage around her internal organs.

Nonetheless, today, her doctors describe her as functioning very well. “I feel absolutely wonderful and normal,” she says. “My pain and discomfort are gone. I can do anything I want to do. I’m living a normal, active life. I would say to anybody that if you have any kind of symptom, pursue it and don’t let it scare you.”

Ms. Meehan says she owes her life to Cleveland Clinic Heart and Vascular Institute, and her doctor’s watchful eye. “If it hadn’t been for her persistence and caring, I wouldn’t be here today.”

Signs of Peripheral Artery Disease

A variety of symptoms may indicate peripheral artery disease depending on the location of the blockage or narrowing:

A blockage in the leg may cause leg pain that begins when you walk, but goes away when you rest.

A blockage in the leg may cause burning or aching feet even at rest, or toe or foot sores that do not heal.

A blockage in the intestine may cause abdominal pain after you eat, nausea, vomiting, weight loss, constipation or diarrhea.

If you suspect peripheral artery disease, don’t delay. See your doctor!
Belly fat is different from fat in other parts of the body, says Stanley Hazen, M.D., Ph.D., Head of Preventive Cardiology at the Cleveland Clinic Heart and Vascular Institute. Belly fat is also called visceral fat. It's not the soft fat you grab with your hand to “pinch an inch;” it's inside your abdominal wall, enveloping your organs. Visceral fat wraps itself around the liver, disrupts insulin production and promotes diabetes, which promotes heart disease and much else.

The fat on your legs and buttocks is passive, storing energy until your body needs it. It is not a great threat to your health. But visceral fat is metabolically active. It changes the body chemistry, lowering good cholesterol and raising the bad. It also promotes inflammation, which is rapidly being recognized as the root of coronary artery disease.

Visceral fat can affect your heart by promoting the buildup of gooey plaques in the walls of the coronary arteries. At the same time, it pumps out hormones and proteins that inflame these hidden plaques. The inflamed plaques can burst into the bloodstream. Cells and molecules bind at the site. These form a plug and trigger the classic heart attack.

**Here's the good news:** Exercise works. Walking 30 minutes a day, six days a week, will stop the growth of visceral fat. Add more exercise to that – jogging, for example – and your potbelly actually begins to shrink. In fact, when you begin aerobic exercise, visceral fat is some of the first to go. (Remember, always speak with your physician before starting an exercise program.)

Naturally, prevention is the best strategy. If you don’t have a potbelly, don’t get one. Start exercising now, and eat plenty of fiber to slow the absorption of fat.

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**Potbelly pigs may be cute. Potbelly stoves may be warm. But a protruding abdomen on a man or woman is a deadly threat to the heart.**

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### Eat Hearty

**Peach-Berry Smoothie**

This is a refreshing, nutrient-rich smoothie perfect for an on-the-go meal or as a nutritious snack. The flax seeds add texture and heart disease-fighting omega-3 fatty acids.

**How Does Your Fat Measure Up?** There are blood tests to measure visceral fat, but waist size is a good measure, too. For men, a waist size over 40 spells trouble. For women, it’s over 35. But even if you have skinny arms and legs, you can have a potbelly, and that’s not good.

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**Nutrition Information per serving**

Calories 310, Total fat 3.5 g, Saturated fat 0 g, Trans fat 0 g, Cholesterol 5 mg, Sodium 125 mg, Carbohydrate 62 g, Dietary fiber 6 g, Protein 10 g

**Developed by Melissa Ohlson, MS, RD, LD, Preventive Cardiology and Rehabilitation**

Makes one serving. Preparation time: five minutes.

- ½ cup skim or 1% milk
- ½ cup nonfat vanilla yogurt
- 1 cup ice cubes
- 1 tablespoon ground flaxseed
- ½ cup frozen raspberries, strawberries or blueberries, no sugar added
- 2 canned peach halves (in extra light syrup or own juice) or 1 whole peach, peeled

**Directions**

Place all ingredients in a blender or food processor. Process until smooth.
Retired Teacher Saved by Once “Off-Limits” Surgery

Former third-grade teacher Nancy LeMoine didn’t know what was happening when she developed sudden chest pain. Her last guess would have been acute aortic dissection. In this condition, blood works its way through a tear in the innermost layer of the aorta, carving out a false channel that undermines the structure of this critical vessel and may lead to a fatal rupture.

Emergency airlifted to Cleveland Clinic, Ms. LeMoine was rushed into surgery with the Aortic Center team. Determining the extent of the dissection, they removed the damaged portion of the vessel and reconstructed the aortic arch.

The aortic arch has long been considered “off-limits” by many cardiac surgeons because of the complexity of operating there. But the Heart and Vascular Institute has one of the largest aortic practices in the world and has experience with every aortic repair and replacement technique.

Two Blood Thinners vs. One

A Cleveland Clinic-led international study has found that long-term therapy with low-dose aspirin plus another antiplatelet agent, clopidogrel (Plavix), is not more effective than aspirin alone in preventing heart attack, stroke and cardiovascular death in a broad patient population.

The majority of patients in the study, those who had already experienced a heart attack or stroke, or who had symptomatic blockages in their legs (peripheral arterial disease or PAD), did benefit from the dual therapy, demonstrating a significant 12.5 percent reduction in their risk of heart attack and stroke. Unexpectedly, researchers also found that the subgroup of patients with multiple risk factors for heart attack or stroke but who did not have established cardiovascular disease may have experienced some harm, including higher rates of severe bleeding.

“There are several important findings from this study,” says Deepak L. Bhatt, M.D., lead author and Director of the Cardiovascular Trials Unit and Associate Director of the Cleveland Clinic Cardiovascular Coordinating Center. “Although the study found that clopidogrel plus aspirin was not effective in patients with multiple risk factors only, it may be effective in secondary prevention or in preventing a second heart attack or stroke in people who have already experienced one of these events or who have PAD. This is a large population that is in need of improved therapies.”
Heart Risk: The Sibling Factor

Your risk of heart attack, stroke or cardiovascular disease may be raised by up to 45 percent if you are middle-aged and your brother or sister has had a cardiovascular event, according to a recent National Heart, Blood, and Lung Institute study.

“Be sure to include your sibling’s health when sharing your family history with your physician,” recommends Terrence Tulisiak, M.D., a cardiologist in the Heart and Vascular Institute.

“Other risk factors include age, high blood pressure, high cholesterol, excess weight, smoking, lack of exercise and diabetes. All of the above should be considered when assessing your overall risk.”

If your brother or sister has had a heart event, you need to be extra mindful of lifestyle risks like smoking, weight and blood pressure. A physician can suggest lifestyle changes and medical treatments that may minimize your risk.