I GOT OUT OF BED AND FILLED A HOT WATER BOTTLE, THE MOST ANCIENT OF REMEDIES, THINKING TO SOOTHE MY CHEST PAIN FOR A FEW MINUTES BEFORE GETTING DRESSED FOR WORK. I ASKED MY HUSBAND, STILL IN BED HIMSELF, TO MASSAGE MY BACK FOR A MOMENT. IN THIS QUIET WAY DID THE MOST DRAMATIC HEALTH SAGA OF MY LIFE BEGIN.

a beating heart

by Jane Myers

The foothills of the Sonoma Valley appear, from a distance, to be gently rolling, graceful. But if, as a visitor, you decide to go for a stroll in the soft light of a late fall afternoon, as I did during a family Thanksgiving get-together two years ago, you quickly discover that the hills are not as gentle as they appear.

Thinking myself quite fit, I was surprised to discover that the walk up Lawndale Road near my daughter's house was not an easy one. But it was my very fit son, not me, who suggested we cut short our intended route on a Sunday afternoon. "There's too much traffic on this road, and too many hidden curves," he said. "Let's go back."

Photo: Pat Bauer   Photo Art Direction: Rolfe Tessem of Lucky Duck Productions

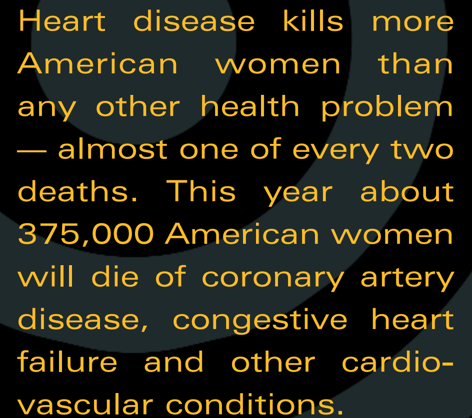
I didn't protest. What he didn't know was that the exertion of climbing, however gentle the slope, was causing me to feel a dull pain in my sternum — under my sternum, actually, although I couldn't have described it that precisely — a pain I didn't remember ever feeling before. I didn't say anything to him, but it wasn't that I was being coy; it was simply a pain that didn't seem worth mentioning. I thought no more of it.

But walking to work a week or so later, up the "hill" on Washington Street between First and Ashley in Ann Arbor, I had to stop for a moment because of the pain I felt — again a dull but distinctive ache in the area of my sternum. Now I thought I had a pain worth mentioning, but not one to be unduly concerned about.

My annual checkup with my internist at a nearby community hospital just happened to be scheduled within the next week, so I didn't call to make a separate appointment. When I saw him — a physician I had been seeing for several years for routine checkups and whom I had inherited when my previous internist of many years retired — I reported that my left arm was a bit tingly as well. "Are you still feeling that lightheadedness you reported to me more than a year ago?" he asked. "Yes," I said. "It comes and goes, but, yes, I still feel lightheaded from time to time."

"You've pulled a muscle or you have pleurisy," he said. "I'll do an EKG, but I know it will be normal. You can schedule an echocardiogram if you like, but that will be normal, too. I'm 99 percent sure there's nothing wrong with your heart." When he went to leave the examination room, it being nearly five o'clock on what had been a very busy day for him, he forgot about the EKG. I yelled after him, "You were going to do an EKG," and, with my reminder, he went to find the technician to perform the test. "See, see this," he said triumphantly to me a few minutes later, holding the paper with the rhythm of my heart traced on it. "See that line? It's perfectly normal, just as I said it would be."

I come from a long line of relatives on both sides — eastern European Jews and French Canadian Catholics — who live into their 80s and 90s with all their faculties (and bodies) intact. A cousin of my father (who himself lived to be 85) lived within three months of turning 100, when he simply fell over dead in the hallway of his daughter's house in Chicago. Spending his last days reading his way through the encyclopedia (he was as far as "H" the last time I had seen him), he kept up his strength as he moved through the alphabet by eating Ritz crackers and peanut butter. My Uncle Walter, now 93, still works full-time, running the mail order company he founded 70 years ago, and managing 19 employees.



Being in my early 60s, what did I have to worry about? Sitting in my office the week after my examination, having made the appointment for the echocardiogram, and still feeling the sternum pain I had reported to the doctor, I sat with my colleague looking for "pleurisy" in the medical dictionary I had on my desk. We shook our heads. It didn't sound like anything I could possibly have, and I didn't think I'd pulled a muscle either. But the doctor had seemed so sure.

On the morning of December 7, 2001, a week after my examination, I woke up with a new kind of pain — in addition to my sternum pain I now felt fairly acute back pain, like cramping. I got out of bed and filled a hot water bottle, the most ancient of remedies, thinking to soothe my chest pain for a few minutes before getting dressed for work. I asked my husband, still in bed himself, to massage my back for a moment. In this quiet way did the most dramatic health saga of my life begin.

The next thing I remember is my husband helping me up from the kitchen floor, moving me to a nearby sofa in the next room. "You passed out in front of the refrigerator," he said. "You had put the container of yogurt on the counter. You were making terrible noises. I thought it was the garbage grinder with a spoon caught in it."

He posed questions to me to see if I had my wits about me, and discovered that I seemed mildly disoriented, surprised that it was Friday. When I ask ➤

him about the experience today, he recalls his extensive first-aid training in Viet Nam ("Clear the airway, treat for shock") that allowed him to respond calmly, and says he at first thought I had suffered a stroke, or perhaps fallen and hit my head on the nearby brick hearth.

Photo: D.C. Goings

Rebecca Cunningham

I called my secretary to tell her I'd be a bit late into the office. "I collapsed on the kitchen floor," I reported to her as though this were quite an everyday experience. "John says I have to go to the ER before I can come to work." I dressed myself and walked down the long flight of steps leading to our driveway. I climbed into our Jeep with no difficulty. As we headed toward Ann Arbor, a 15-minute ride, John asked me where I wanted to go — to the hospital where my internist practiced, or to U-M. "Let's go to U-M," I said. The fact that the University Hospital was 20 minutes closer was not part of my or his conscious calculation. I simply thought I might as well go where I knew many people on the staff.

I remember climbing out of the car and into the wheelchair at the entrance to the Emergency Department. I felt odd, but could describe my feeling no more specifically than that. I remember the faces of two women (admitting clerks?) behind a counter. And then the next thing I remember is an amazing tableau — seven or eight white-coated men and women, standing in a line at a distance from the gurney on which I was lying, each of them gazing in my direction with identical looks of sustained awe. (Several people have asked me if I experienced the white light described by some people in near-death experiences. I did not. It was the faces I remembered both before and after, and still remember vividly.)

"You were very lucky," said the cheerful bustling nurse writing notes next to my bed. "You just had a V-fib. That's the first one I've seen like this in 20 years." A sympathetic fellow, who identified himself as an EMT (I later learned he was also a medical student on rotation in the ER), was equally appreciative of the spectacle. "I've been doing this for 10 years," he said, "and I've never saved a V-fib. They're always dead or in a state beyond V-fib by the time I get to them."

I spoke recently with the emergency physician who had saved my life, Rebecca Cunningham; she told me that she indeed remembered me and that morning. To have a patient arrive in the ER talking — and to leave talking after a ventricular fibrillation — was, she said, nothing short of spectacular. Often ventricular fibrillation leads to oxygen deprivation and irreversible brain damage; even in the best of cases the patient will usually need to be sedated and put on a ventilator for a short time to restore breathing. Of course, much more common for emergency physicians and their staffs is to receive patients who don't survive, having suffered cardiac arrest outside the hospital, or with such massive and irreversible brain damage that they don't live for long.

A couple of things stood out in her mind: "Most people who have the rhythm you had don't walk in through the admitting desk into the ER," she said.

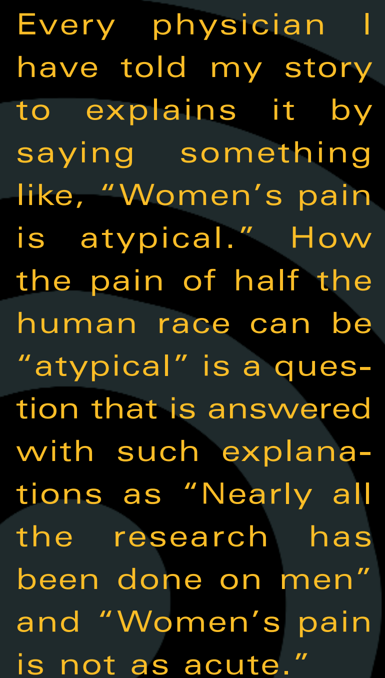
“Rather, they are carried in with ambulance crews performing CPR. But you were talking to the nurse who was attaching the heart monitors when your heart stopped beating appropriately.” She quickly knew, she said, that all was not normal. “One of my more experienced nurses, Jeff, was with you when your heart went into ventricular fibrillation. He called me in a tone I’d never heard him use before. A cardiac arrest in a patient who comes into the ER walking and talking generates a fair amount of excitement!” The time from my arrival to my being reborn with the miracle of electricity in the form of a defibrillator was probably five minutes or less, the doctor estimates. It’s why she loves emergency medicine, she tells me: “I like those acute moments, those discrete time packets.”

I learned a lot in the days that followed: a ventricular fibrillation means that your heart stops beating and starts to “fibrillate” or vibrates in a useless, misfiring way. It can be caused by the reduced blood flow created by an arterial blockage, as mine was. Having an episode at home as I did and then coming back to consciousness is extremely rare. I also learned that our diagnostic tools for seeing arterial blockages are not as advanced as we might like, that I had two big blockages in the main aorta supplying the heart. And I learned that by-pass surgery, which I had two days later, can make everything better again; that, happily, the University of Michigan Health System exhibits all the greatness we have been reporting it to have for the past four years in this magazine.

And I learned from Dr. Cunningham about the challenges of “seeing people in an undiagnosed state” and trying to figure out what is wrong with them. I was easy. But a patient who comes in with chest pains who has a prior history of blood clots in the lung, acid reflux, seizures, cancer, any number of things, can greatly complicate the diagnosis. And conscious patients often bring their own theories. “I took care of a psychiatrist in the throes of a heart attack who insisted it was his anxiety,” she says. “He really wanted me to give him anti-anxiety medication, even though his blood test and EKG clearly showed he was having a heart attack.”

I had known for years that my cholesterol was higher than it should be. On my maternal side there was plenty of known genetic susceptibility to cardiovascular weaknesses. My mother suffered an aneurysm and subsequent heart attacks and minor strokes in the year before she died of heart failure at 71. My grandmother died of a heart attack, but not until she was 85. So I was fairly vigilant. I exercised, I ate right, I took Lipitor (one of the statin drugs) and estrogen. I was happy, I loved my work, my husband, my children, my dog, my life. I was a model health citizen, or as close to “model” as I could get.

Sudden cardiac arrest is one of the leading causes of death in the U.S. Fewer than 5 percent of victims survive. It’s easy to see why. Why did I make it when so many others do not, and more importantly, why didn’t my internist pick up any of the clues that suggested I was in mortal danger? Cardiac surgeon Sherwin Nuland, in the first chapter of his wonderful book *How We Live*, explains the survival of a woman whose aneurysm of the splenic artery was diagnosed as a muscle spasm: “Her will to live was the thing that saved her — and our determination not to lose this battle.” What he fails to answer, however, is why a woman who reported an agonizing “explosion” inside her chest while swimming one day is told by an ER physician that evening that she merely had a muscle spasm. And why she must wait until four weeks later, when, near death, she ends up in the ER again, this time with most of her blood in her abdomen instead of in her arteries and veins, for the problem to be discovered.



Every physician I have told my story to explains it by saying something like, “Women’s pain is atypical.” How the pain of half the human race can be “atypical” is a question that is answered with such explanations as “Nearly all the research has been done on men” and “Women’s pain is not as acute.”

Every physician I have told my story to explains it by saying something like, “Women’s pain is atypical.” How the pain of half the human race can be “atypical” is a question that is answered with such explanations as “Nearly all the research has been done on men” and “Women’s pain is not as acute.” Men, of course, die in large numbers of sudden cardiac arrest as well. The Winter 2003 issue of the Johns Hopkins medical school alumni magazine included a story about the deaths of three physicians on the faculty of Hopkins, aged 47, 50 and 51, who all died of sudden cardiac arrest within a six-month period in 2002, two of them within a few weeks of my attack. ➤

Obesity, high blood pressure, smoking, a history of yo-yo dieting — all have been identified as factors increasing one's risk of dying of sudden cardiac arrest. (Of those, only smoking was on my list — about 35 years' worth, but most of that very light — one to two cigarettes a day — and none of it within the five years before my "episode," as my husband took to calling it.) As my highly philosophical cardiologist said, "There are much worse ways to go. Cardiac arrest is quick and painless." But many of us would reckon that even a quick and painless death is more desirable at 85 than at 65 or 55 or 45.

What does my experience teach us? Certainly, one thing is that if you experience chest pain, even dull "atypical female" pain, you should not be content with a diagnosis of pulled muscle or muscle spasm. You should remind your physician that a healthy heart (as I do indeed have) does not necessarily mean healthy arteries. The term "cardiovascular" means exactly that: cardio and vascular, heart and vessels, and that both merit attention.

Most heart pain, in men and women, is dull. It is not excruciating. It does not hurl you to the floor. It presents itself in a quiet, persistent way. It should not be ignored. If you have a condition that might be considered acute, it's best not to visit your physician on what is billed as a routine annual visit when he or she might be less inclined to think "unusual." And it might be wise to call an ambulance if you are presented with an acute situation, such as my collapse in the kitchen. (My husband, a former police reporter, had made a calculated decision not to call 911, knowing that the fire department serving our rural area had at one point falsified records about the EMT training of their staff.) Of course, neither of us had even the slightest notion that sudden cardiac arrest was on the horizon.

There is every reason to assume that a woman, just like a man, may be in dire danger from a cardiovascular-related problem. With age, the differences in mortality between men and women when it comes to heart disease become quite insignificant. The *National Vital Statistics Report* for September 2002 indicates that in the age group 65-74, 30.1 percent of male deaths were caused by heart disease; for women the number is 24.7 percent. In the 75-84 age group, the number of male deaths caused by heart disease was 32.2 percent; in women the number was 30.6 percent.

"Dr. Paganini," my husband took to calling him. A bow to his artistry and all. But being a surgeon, literal-minded, serious, Dr. Pagani only said, "I've never been a musician, although my daughter does play the violin." With a reputation for a fearsome presence in the operating room, though all softness and light to his patients, he and his team perform nearly 200 highly complex open heart surgeries every year. A semi-professional hockey player in his youth, the slams and shots, the powerplays and breakaways, the bodychecks and caroms of those days were a far easier kind of combat than the intricate life and death battles he fights on behalf of his patients every day. *—JM*

Heart disease kills more American women than any other health problem — almost one of every two deaths. This year about 375,000 American women will die of coronary artery disease, congestive heart failure and other cardiovascular conditions.

It should be noted here that not all cardiac arrest is the same. What we call a "heart attack" is usually a myocardial infarction typically resulting from coronary occlusion, that is, the "death" of heart muscle caused by a blood clot, an air bubble, or some other circulatory problem. CPR can help keep such a person alive until medical help is available. A person suffering a V-fib, however, can best be helped to a restoration of normal beating by means of an electrical shock; thus the recent push to have defibrilla-

Photo: D.C. Goings

Frank Pagani

tors available on planes, in airports and malls, and in private homes.

What about my internist's inability to connect my chest pain, tingly left arm, lightheadedness, age and family history of maternal cardiovascular disease to the probability of a cardiovascular problem? Physician decision-making, from my very limited but chastened perspective, is a far more complex phenomenon than has been understood to date. It is wise for all of us, patients and physicians alike, to enter this realm with humility. Patients should be both compassionate about doctors' powers, which are not unlimited, and cognizant of the fact that they themselves, the psychiatrist on the gurney excepted, often know their own bodies quite well.

I now believe there are more mysterious dynamics involved in diagnosis than any research has examined to date. In addition to all the wildly difficult challenges of understanding the human body, there are wildly difficult challenges related to the fact that physicians are human beings just like their patients.

Further understandings will come from the studies of academic physicians such as those here at Michigan. Roland Hiss, M.D., former chair of medical education in the U-M Medical School, has spent his long and dedicated career pondering the question: When does a "teachable moment" occur? When is the physician receptive to learning? How can he or she be helped to know more, to see more, to gain from daily experience? There is much more we need to know about how this happens or doesn't happen.

The most important lesson my experience teaches, of course, is to enjoy each day as it comes, to make sure that the life you're living is the life you want to be living. Sudden cardiac arrest is a far greater threat to most women (and men) in America than many other diseases we tend to fear. The "discrete time packets" within which Dr. Cunningham works are, perhaps, a good way of thinking about our lives — small moments, one by one, wondrous, magical, the gift of life given to us over and over again, all of it made possible by a beating heart. m

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