Good Old-fashioned Medicine

Susan L. Kaplan, Ph.D.

As I pulled into our driveway that summer evening at the conclusion of my bike ride home from work, I felt a sudden stabbing pain in my right chest. Climbing the stairs to my second floor bedroom, I began to feel light-headed. I was breathing in and out rapidly but the air didn't seem to stay in my lungs and I began to panic that I might be having a heart attack. I hurried back downstairs and told my adult son as calmly as I could that I needed him to drive me immediately to Urgent Care at our local clinic. "Mom, are you all right?" he asked, looking up from the TV.

"I honestly don't know," I replied, hoping for his sake that I wouldn't pass out in the car on the way.

At Urgent Care, the nurse took my blood pressure and the doctor on call examined me. He asked whether I had fallen off my bike or hit anything with my chest. I replied "No" to both questions. Ignoring my shortness of breath, which by that time had improved somewhat, he diagnosed "right-sided ribcage strain" and instructed me to ice the area several times a day. He gave me an ace bandage and recommended that I take Advil, adding that it might take several weeks to heal. I felt relieved to receive such a benign diagnosis.

A few days later, I developed a fever of 102 degrees. I went to see my internist, who suspected pneumonia. She ordered a chest x-ray, which confirmed her suspicion. She prescribed an antibiotic and advised me to take the rest of the week off work.

Nine days after my bike ride, I called my uncle, a retired internist in another city, to thank him for a birthday gift. Uncle Mel asked how I was feeling. "Not very well," I replied. "My doctor thinks I have pneumonia."

"Oh," he said, "then you must be coughing a lot."

"I'm not coughing at all," I replied.

There was a moment's pause. "Then I doubt its pneumonia. Have you been short of breath?"

"Yes, as a matter of fact, I have."

"Weren't you and Ron in Europe last month?"

"We were."

"Have you coughed up any blood?"

"Well, yes, I did cough up just a tiny streak of blood a couple of days ago, but I didn't think anything of it so I never mentioned it to anyone."

There was a silence on the line and then he said, "It sounds like a pulmonary embolism to me, Susan."

"A pulmonary embolism--what's that?"

"It's a blood clot that usually starts in a leg as a deep vein thrombosis (DVT). Then it breaks off and travels through the blood stream until it ends up in one of the lungs. The immobility of a long plane flight or post surgery makes it more likely to occur. I don't mean to frighten you, Sue, but if it happens again, it could kill you."

"What should I do?"

"Go to the Emergency Room immediately and ask for a D-dimer blood test and a CT scan with contrast. These will show whether you've had a clot."

At the hospital ER, I requested the D-dimer and the CT scan. The doctor in charge looked at me skeptically and said he didn't think I needed the scan but he'd do the D-dimer test and proceed from there. The D-dimer came back at 3846 (normal is under 451) and he ordered the scan. The results came back quickly and revealed two blood clots in my right lung. I was admitted to the hospital and the antibiotic and hormone replacement therapy I had been on were stopped; Coumadin and Lovenox, two blood thinners, were begun. My internist came to see me the next morning. Apologetic about having missed the diagnosis, she admitted that it had never occurred to her. I was released from the hospital that afternoon to continue treatment at home, but my life had changed. I now had a life-threatening condition and was on a blood thinner that required weekly testing. Any activities, such as skiing, where a bump on the head could cause a hemorrhage, were now too dangerous and had to be curtailed.

Why did my doctors in Palo Alto miss the diagnosis of PE while Uncle Mel was able to nail it, by telephone no less? Despite the fact that PE is the third most common cause of death in the US, the diagnosis is missed more often than it is made.[1] PE remains a sort of "zebra" condition--that is, a condition that is rarer than other illnesses ("horses") that have similar symptoms.[2] My doctors focused on the "horses" and remained oblivious to the dangerous "zebra" in the room. With their limited vision, they failed to ask the discriminating questions to make the correct diagnosis and jumped to erroneous conclusions. When Uncle Mel, always regarded as a brilliant clinician by both colleagues and family, heard that I had a "coughless pneumonia," he knew something didn't add up.

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[1] Feied, Craig, MD and Jonathan A. Handler, MD, "Pulmonary Embolism." Emedicine. June 7, 2006.
[2] Groopman, Jerome. How Doctors Think. Boston: Houghton Mifflin, 2007.

At that moment, a flash of intuition brought PE to his mind, inspiring the questions that led him to zero in on the correct diagnosis, which was confirmed by the CT scan. His ability to make the diagnosis likely reflected a combination of clinical insight and familiarity with "zebra" conditions from many years of medical practice.

After eighteen months, a normal D-dimer enabled me to go off Coumadin and resume my usual activities. Uncle Mel's quick thinking in that summer phone call may well have saved my life.

Susan L. Kaplan, Ph.D. is a clinical psychologist practicing in Palo Alto, California.