

# STANFORD MEDICINE

Summer 2010

SPECIAL REPORT

## The Healing Hand

*Putting the Physical back in the Physical Exam*

“WHAT DO YOU NOTICE ABOUT THIS PATIENT?” ABRAHAM VERGHESE, MD, ASKS THE FOUR TRAINEES AS HE NUDGES THEM CLOSER TO THE BED. THE PATIENT, A 44-YEAR-OLD WOMAN, SMOOTHS HER BLONDISH HAIR AND ADJUSTS HER HOSPITAL GOWN TO COVER HERSELF.

Well, her sclera [whites of her eyes] look a bit yellow, one volunteers. Verghese, a professor of medicine, nods. He gently picks up the patient’s hand and points to her palm and how it bears a curious pattern — islands of intense redness on a background of pale white skin. “That’s palmar erythema,” he says. He leads the student to feel a distinct raised and thickened tendon in the



palm. It is called Dupuytren’s contracture, and it occurs in patients with liver disease. Now he feels the patient’s pulse and remarks how it is forceful — indeed, it can be felt not just with the fingertips but simply by holding the wrist in one’s hand as if trying to pull the patient up. It is a “bounding” pulse, a sign of a wide pulse pressure that can occur with liver dysfunction. These are common observations, Verghese tells me later, and though students may know about them in theory, they may not have recognized them in practice.

The professor, with the patient’s permission, exposes the skin just under her collarbones, revealing curious red, star-shaped markings. These are spider angiomas, fanning out like the threads of a spider web. The students lean in to glimpse the unusual blood vessel patterns, which they’ve never seen before. These and a host of other findings are the classic signs of liver disease, says Verghese, the senior associate chair for the theory and practice of medicine.

“It would be unfortunate to use technology to tell us something that’s clear on the first blush,” he tells the trainees. “That’s why this bedside practice is useful to us. It helps us ask better questions of the tests we order.”

These bedside teaching sessions, which he conducts with students every Wednesday, are part of a department-wide effort, spearheaded by Verghese, to resuscitate the vanishing art of the

bedside exam. As doctors increasingly rely on imaging and other new technologies, they have strayed from the practice of diagnosing disease on the basis of a physical exam.

What has been lost in the process is not only the time-honored, meaningful ritual of the doctor-patient encounter, which itself can be reassuring and therapeutic for the patient, but also critical information about the patient's condition, which is available at once, often days before a test (if ordered) reveals the same result.

Vergheese, who considers the body a text of sorts, and considers the skilled exam a form of basic medical literacy, has made it his mission to revive this kind of literacy nationwide. He credits Ralph Horwitz, MD, professor and chair of the Department of Medicine, who recruited him to Stanford three years ago, for giving momentum to the effort to help reshape the way medicine is practiced.

“We order tests so easily because, as my colleague [health economist] Alan Garber, MD, PhD, has said, our health-care system feels like the ‘menu without prices’ — we can order filet mignon every night. No one really stops to consider what a test costs or who is paying,” Vergheese says. Reversing the trend is a daunting challenge, but he believes no effort is more important for medicine's future.

“I VIEW THE BEDSIDE EXAM AS RITUAL, AND RITUALS ARE ABOUT TRANSFORMATION. THE PERSON BECOMES VULNERABLE AND INVESTS GREAT AUTHORITY IN ANOTHER.”

- ABRAHAM VERGHESE, MD

“We make huge errors of oversight because certain conditions are staring us in the face — and we miss them,” he says.

#### VEERING AWAY FROM THE BASICS

There was a time not so long ago when the doctor's senses — hearing, vision, touch and even smell and taste — as well as skill at gleaning a patient's history were the anchors of the diagnostic tool kit. Clinicians relied on simple gadgets they could carry, such as reflex hammers and stethoscopes.

The movement away from the history and exam emerged in the 1970s with the rise in advanced imaging techniques, such as ultrasound, CT and MRI scanning, and echocardiograms to detect heart problems.

“I began practicing in an era when we didn't have a CT scan. If a patient came to the ER with abdominal pain, a bedside exam was vital for determining whether they had appendicitis or some other condition,” says Charlotte Jacobs, MD, emeritus professor of medicine and former senior associate dean of education and student affairs.

Now, a patient with abdominal pain may be shipped off to a CT scanner, which may — or may not — yield information of value. But often it is only the hand examining the patient that reveals where the patient is most tender and where the attention needs to be directed. The expensive new

tools aren't useful in every case, and for CT scans and some other imaging techniques, there's risk from radiation exposure to consider.

After his arrival in 2007, Verghese, with Horwitz, introduced the Stanford 25, an immensely popular "grand experiment" in which trainees in internal medicine get focused instruction on 25 essential exam skills [see page 24]. He also organized a national conference, the first Symposium on the Bedside Exam, at Stanford last fall, bringing together some 40 master clinicians from around the country who are interested in rejuvenating bedside skills.

Speaking nationally on reviving the bedside exam, he has struck a chord. More than 1,000 physician educators attended a talk on the subject at the annual meeting of the Association of American Medical Colleges in November 2009.

"I was mobbed by people wanting more details," he says. "The irony is that these skills have been around for at least 100 years. The problem is that they have fallen into disuse."

The physical exam skills of American clinicians are deteriorating, the result of powerful converging forces.

"It has nothing to do with the lack of interest or this idea that it's not useful. It has to do with how medical problems are defined," says Steve McGee, MD, a professor of medicine at the University of Washington who attended the Stanford conference and is among those advocating for change. "Our understanding of clinical problems has become more and more scientific, and patient problems have become subdivided more and more, so that what people look for is the objective data to decide what category to put people in," adds McGee, author of the widely cited textbook, *Evidence-Based Physical Diagnosis*.

Verghese says the physical examination skills of today's internists have declined in part because their proficiency isn't required for certification to practice. The American Board of Internal Medicine's exam is multiple-choice, and applicants are never grilled on their clinical skills. So internists can treat patients without ever proving that they know how to find a spleen or check the reflex in an ankle, he says.

"The public would be scandalized if pilots were allowed to fly without ever having been in the air with a seasoned examiner; medicine's standards should be no lower," he wrote in a December 2008 perspective in the *New England Journal of Medicine*.

And then there's the problem that might be at the root of it all: In former days, doctors simply had more time to spend with patients.

"We're asked to do more and more in the same amount of time," says David Simel, MD, vice chair of the Department of Medicine at Duke University and chief of medicine at the Durham-VA Medical Center. "It has had a negative impact on the ritual. Our ability to just sit there and listen to a patient is limited."

With so many competing time demands, it is a daily challenge to make the physical exam a priority, says Tyler Johnson, MD, an intern at the Palo Alto Veterans Affairs Health Care System.

“My experience as an intern is that you’re so busy, it’s so much easier to fall back on a lab value,” Johnson acknowledges. “In the process, you lose the power that comes with the physical exam.”

Mastering the art of the bedside exam requires practice, repetition and feedback, all of which take time.

“It really takes years of practice to become an expert, at least 10 years of meaningful practice,” says Simel. “Compare it to sports, where coaches can go through it over and over and can review the game playback. We don’t get the opportunity to do that in medicine.”

#### HANDS-OFF MEDICINE’S RISKS

Drummond Rennie, MD, a professor of medicine at UC-San Francisco and deputy editor of the *Journal of the American Medical Association*, takes a particularly dim view of Americans’ increasing reliance on technology.

“There is an emphasis on tests in this country which is staggering,” Rennie says. “The American public has fallen in love with tests, no matter how harmful, useless and expensive.”

Rennie maintains that doctors in Great Britain, Australia, New Zealand and some other countries do a far better job of the physical exam because they don’t look to test results for all the answers.

“There is a marked difference in emphasis and the immediate consequence is that if you downgrade the history and the physical you can make spectacular mistakes and you never get to know the patient,” Rennie says.

McGee agrees that a lot of mistakes are made because of lack of attention to physical detail. For instance, some doctors confuse signs of heart failure with pneumonia in hospitalized patients, particularly if they rely on X-ray results that show airspaces in the lungs filled with fluid, an ambiguous finding. The patient with heart failure, however, would have other signs that would show up on careful examination, such as elevated neck veins, an extra heart sound, a rapid heart rate or weight gain, he says.

Many useful and simple hands-on diagnostic practices have fallen by the wayside, says former education dean Jacobs. For instance, a thyroid tumor can be detected by gently feeling the gland in the throat, yet a lot of primary care physicians don’t do this simple exam anymore, she says. Similarly, a rectal exam may detect a colon cancer, yet some doctors have abandoned this low-tech procedure in patients who have had a colonoscopy, which is done only every five to 10 years.

As an oncologist, Jacobs also teaches trainees the importance of a careful lymph node exam in cancer patients. If a cancer patient has enlarged, firm lymph nodes, an experienced clinician could measure the nodes, note their location and examine the patient regularly to gauge the patient's response to therapy.

“There are a number of oncologists who don't bother to do that, and it's foolhardy,” Jacobs says. “They just order a CT scan once a month. I see patients in consultation from the outside, and in the reports on what happened on examination, all I get is a stack of CT scans, no physical exams.”

One of her particular pet peeves, she says, is the failure of physicians to use an ophthalmoscope to examine the eyes of a cancer patient with signs and symptoms of a cancer that has spread to the brain. A look at the disc in the back of the eyes will tell the clinician if there is an increase in pressure in the brain, a sign of the cancer's spread.

“Trainees will sheepishly say they don't know how to do the exam,” Jacobs says. “They last did it in medical school. The excuse is that they're going to do a scan anyway.”

#### THE IMPORTANCE OF TOUCH

In moving away from the bedside exam, clinicians not only lose valuable information but they also miss out on what some physicians view as an important transaction with the patient.

“I view the bedside exam as ritual, and rituals are about transformation,” says Verghese. “The person becomes vulnerable and invests great authority in another. The patient disrobes and allows touching — that is a very significant ritual. If the other person's skills are not up to the investment of authority, nothing happens.”

Touch alone and the focused physical attention of the clinician can aid in the healing process, says Daniel Sedehi, MD, chief resident in internal medicine at Stanford.

“For the patients, physical contact — the laying on of hands — has therapeutic benefit, for psychosocial and physical reasons,” Sedehi says. “My belief is that the physical exam allows patients to relieve some of their stress. If they're not talking to and seeing their physician, they're kind of left in the dark. I think our culture has been that people expect the physician to examine them. Without that, the emotions may run wild.”

He says that most trainees chose the practice of medicine so they could experience that important human bond — not spend their time staring at a computer screen or a radiology film.

“I don't think the majority of people entering internal medicine are going into it so they can look at an image,” Sedehi says. “They want to learn how to use all their senses in working with a patient. That's what is exciting. I think those skills have fallen out of favor because ordering tests is functionally easier, and the time limits us. In the pursuit of efficiency you shouldn't forget to be human.”

## THE SCIENCE OF THE PHYSICAL

Part of the process in reviving the physical exam is determining what aspects of the exam are useful and what are not. As an editor at *JAMA*, Rennie instigated a series called “The Rational Clinical Exam,” which examines various patient scenarios in a systematic way, based on history and the medical literature, to validate what works. The journal has published more than 80 articles in the series, now available as a book.

“I think the series has pushed educators to think a little more about what they teach in the physical exam,” Simel, his co-author, says. “So rather than teaching the entire physical exam from head to toe, we are using it to figure out what sorts of things you must do and what things are worthless.”

Verghese says he also plans to build a web-based repository of clinician anecdotes about common mistakes and signs missed during the exam process. This could serve as a physician guide to potential pitfalls. It was one of the ideas that emerged from the fall symposium at Stanford.

“We agreed there is a whole litany of errors we’re not catching — subtle errors,” he says. While advocates say there is clearly an interest on the part of clinicians and educators in rejuvenating the bedside exam, Jacobs says there are a number of factors that could help bring about change. Physicians must be comfortable doing all aspects of the exam, and that takes repetitive training. If they see colleagues regularly using their clinical skills, that will reinforce the value of hands-on practices among peers, she says. Physicians also will be more likely to perform a bedside exam if it is linked to reimbursement, she says. And public expectation may play a role, as people begin pressuring their doctors to give them a careful physical exam, she says.

“There is nothing like public pressure to bring about change.”