HEALING ARTS

Learning to Read

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In 2012, I left radiology residency to pursue internal medicine training. As a medical student, I had been drawn to radiology's diagnostic challenges and its attention to detail. But it wasn't long after beginning radiology training that I realized I missed treating patients. When I broke news of my decision to leave, my colleagues were skeptical: after more than a year away from clinical medicine, was I sure I wanted to do this?

Nevertheless, my first morning back as a senior medical resident went well. I had spent the night before excitedly reading about the patients I'd be caring for. Morning rounds felt at once novel and suddenly familiar—the easy cadence of conversation as our team walked down the hospital corridor; the expectant look on patients' faces as we entered their rooms.

Around early evening, after my attending (and, it seemed, everyone else in the hospital) had left for the day, doubt crept in. Less than 3 weeks prior, I had been comfortably reading X-rays and CTs. Now I was on call and supervising two newly minted interns. My pager beeped interminably. Sure, I could interpret a stat portable chest radiograph...but a 12-lead EKG in a patient with atypical chest pain? Or an arterial blood gas?

Before, from the relative isolation of a leather office chair and a darkened room, I had a faint sense of what it meant to be a clinician. This—being a medical resident on call—was something else entirely. I thought of the final lines of Sinclair Lewis' *Arrowsmith*, which so ably captured that feeling that all physicians, facing a seemingly insurmountable body of knowledge, must know well: *I feel as if I were really beginning to work now*. In that moment, however, Lewis' words took on an ominous tone.

Mr. H was my first admission that night. He had come to the emergency room because over the preceding few months, he had noticed a steady decline in his exercise tolerance. He had always been active (he was a roofer by trade), but now, walking more than a block required him to pause and hunch over, hands on his knees, to catch his breath. Mr. H hadn't seen a doctor since he was in the military. Hadn't had to, he said. "I've always been healthy."

The ability to discern "sick" from "not sick," I had heard so many times, is among the more valuable things that one learns during internship and residency. In the case of Mr. H, however, he didn't *look* sick—not in the way that I had grown accustomed to seeing: on a stretcher, being wheeled into the scanner

for a trauma survey. Instead, he sat upright and proudly recounted how he had never smoked a day in his life, and how last year he and his wife had joined a gym.

But Mr. H's placid exterior belied ominous findings—namely, his oxygen saturation, which was 93 % at rest and dropped to below 80 % when I walked with him up and down the corridor. Breathing heavily, he steadied himself against the wall about ten feet from his room. He looked scared. If there had been any doubt about whether Mr. H was sick, it had since evaporated.

I pored over the chest X-ray he had received in the ED. Was that a nodule? Were those reticular markings at the bases? I agonized over what to do next. The list of possible diagnostic tests seemed endless. I finally settled on a CT, convincing myself that if Mr. H had something catastrophic in his chest, a CT would surely pick it up.

By the time Mr. H received his scan, it was well past midnight. I scrolled through the images, afraid of what the next slice would reveal. My mind raced through the possibilities. Sarcoid. Interstitial lung disease. Lymphoma. Finally, after what seemed like an eternity staring at the screen (and after calling the nighthawk radiologist for reassurance), I sat back in my chair and rubbed my eyes. Nothing. His scan was clean.

It was late. Rounds were in a few hours. I walked back into Mr. H's room to give him the results of his CT.

"Well, Doc?" he asked with a wan smile. He hadn't slept.

I froze, struggling to find a way to tell him that about a thousand dollars and 20 millisieverts of radiation later, I was no closer to figuring out what was wrong. I mumbled something about waiting on more results and left his room. His gaze trailed after me. In the hall, I steadied myself against the same wall that Mr. H had leaned on hours earlier.

The next few days would reveal that he suffered from pulmonary arterial hypertension. He received an echocardiogram and underwent right heart catheterization. His disease was pretty advanced. I kept telling myself that his was an illness that no conventional radiologic study could reliably

detect, and that another resident would have done the same thing overnight.

But truthfully, during those next few days, I was in a fog. While the pulmonologists exchanged terms like “endothelin” and “nitric oxide,” I perseverated on the events of the night I met Mr. H, replaying them in a continuous loop: my less-than-thorough social history (had I *asked* about pet birds?), my (no doubt incomplete) physical exam. I had re-entered medical residency with rusty clinical skills, to be sure; but I thought this deficit might be counterbalanced by my ability to read images.

Yet, had my reliance on this ability caused me to overlook Mr. H’s diagnosis?

When I was a radiology resident, my attendings would sometimes tell me that becoming adept at interpreting images required learning how to read all over again. For instance, when looking at a chest X-ray, forget what you learned in medical school—i.e., “A is for airway, B is for bones”—instead, look at the study as a whole. The scan comprises a map, or better yet, words on a page; it’s up to you to glean their meaning.

Now, as I approach the end of internal medicine residency, I know that the same can be said of patients, their stories, their faces. Looking back, I think I know why: to acquire that *sine qua non* characteristic that the best medicine doctors possess—the ability to elicit a patient’s history and arrive at a diagnosis—one has to learn to read patients with the same level of nuance. The etiology of patients’ illnesses can be found in poring through their images, but it’s also buried in their histories and etched in their expressions.

Now and then I’ll hear a bit about how Mr. H is doing. He wears continuous oxygen. The word “transplant” is frequently mentioned. Hearing these updates always grounds me, reminds me how far I’ve come since that night—and also how far there is to go.

It’s all part of learning to read.

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