The art of medicine

The marathon of diabetes

Midway through my first year of medical school, at a moment when my medical knowledge ranged little beyond the peregrinations of the seventh cranial nerve, my classmates and I were paroled from the windowless lecture hall in which we had been interred for the past 5 months and grouped together for a "clinical session". The adjective clinical didn't indicate the presence of actual patients, of course. Rather, it meant that we would aggregate around a stack of textbooks and attempt to communally puzzle through a printed case presentation that simulated an actual patient.

The sheet of paper in our hands informed us that our patient was a male in his 50s, with diabetes, hypertension, and gout. He had been admitted to the hospital with chest pains. Electrocardiogram, laboratory results, and other incomprehensibles were attached. Before the widespread use of online medical databases, researching even these barebone facts of our patient required tedious scanning of the onion-skin pages of our august medical tomes. Our progress was unimpressive, despite the faculty member roaming the room, prodding the intellectually astray.

At the appointed end-time, each group presented its suggestions for medical care. It was clear at that moment why our handlers allowed us to minister only to pickled cadavers—we were a mess. Finally, our professor delivered the long-waited summation of the case, revealing the teaching points that our self-directed learning was supposed to have generated. Most of these clinical pearls were lost upon me at the time, but I do remember him prefacing his explanations by saying that diabetes was one of the most common diseases out there. He said it in the subtended manner meant to imply that this was basic fact, and then proceeded to expound forward.

But I was stuck on his initial statement. Common? Diabetes one of the most common illnesses? In my entire life I had known of only one person with diabetes, and even then I didn't really know her at all. It was the sister of a classmate at school. I hardly ever saw the sister, but heard the skin-curdling rumours from the grapevine that she received shots every single day for her diabetes. I occasionally caught sight of her—a fragile wisp with the cornsilk hair and reserved bearing of a tertiary character in a Thomas Hardy novel. She was a ghostlike presence in the neighbourhood, too delicate for outdoor rough-and-tumble, often missing school because of illness, who remained far from the madding crowd during my entire childhood. And that was the sum total of my exposure to diabetes, until the bizarre statement of my professor about diabetes being one of the most common diseases.

Common, I snorted to myself. This professor obviously didn't know what he was talking about. He wasn't a real doctor anyway, just a repurposed microbiologist conscripted to shepherd us know-nothings through the small-group learning session meant to assure us of the progressive pedagogical nature of our institution. Nevertheless, I had to keep up appearances of being in the know, so I nodded sagely along with the professor as he spoke about the widespread prevalence of diabetes. (I had the similar requirement of pretence at the end of the presentation when we learned that our unfortunate patient died of a cardiac arrest. The professor lamented how young the patient was at his time of death. I again conspicuously nodded—empathetically now as well as sagely—while inside I was thinking, "Mid-fifties? That guy was old! What is this professor talking about?")

And so I ploughed through the rest of my medical school courses, clear in my conviction that diabetes was rare and that 50 was an appropriately ripe old age for death. It would have been impossible for that medical student to comprehend that not so many years later she'd be spending nearly every waking hour submerged in diabetes—and, of course, celebrating the youth and vitality of her 50-year-old patients.

But here I am, a general internist in a general medical clinic. I'm not an endocrinologist or even one of those internists with a special focus on diabetes. I'm just a standard-issue primary care doctor, and yet it seems like nearly every patient of mine has diabetes. And if they don't have diabetes, it feels like it's just a matter of time.

When I think about diabetes and the way that it has needled into every corner of so many medical specialties, it almost feels like an infectious disease rather than a metabolic one. In fact, it has the mushroom-cloud sensation that HIV and AIDS had in the 1980s and 1990s. The mortality might not be as rapid, but there are days when it seems almost as inevitable. Back in those dark years, everywhere you turned, every organ system and endothelium you examined—there was that industrious and vile microbe, blithely pillaging its host.

And so it feels with diabetes—the retinopathy, the neuropathy, the nephropathy, the gastroparesis, the autonomic dysfunction, the atherosclerosis, the foot ulcers, the immune dysregulation, the hepatic steatosis. Is there a toenail or ribosome out there that is not suffused by the tenacious diabetic tentacles?

Okay, I'm waxing hyperbolic. But it's hard not to, especially after a long day in the clinic in which diabetes feels relentless and obstinate. I watch my patients struggle with obesity—the sledgehammer that drives most cases of diabetes today—and it seems nearly impossible to succeed. Our society seems to have stacked the odds against them at every turn.

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Just the other day I took care of an older woman who had been struggling to keep her weight and her glycated haemoglobin (HbA1c) on this side of pathology. Her daughter recently lost her job, though, and the plummeting of the household income had an instant effect on her health. Fresh produce was too costly to be a regular part of her diet, which now slid back to the staples of potatoes and white rice. Like clockwork, her blood glucose spiralled upward.

It's not all bleak, of course. Some of my patients have great success with treatment. A few have completely turned their lives around, singing the praises of quinoa, kale, and physical activity. Their successes are inspirational to me, and often to other patients.

But most of my patients dwell in the frustrating middle zone. They've made sacrifices and changes. They've put in the effort, but the results are slight. The last 30 pounds are intractable. The HbA1c hovers stubbornly above 8%. The insulin dose creeps relentlessly upward. The pill count for the associated hypertension, hyperlipidaemia, and cardiac disease edges into the double digits.

I try to stay optimistic, to keep encouraging the incremental changes my patients are making. But it's hard not to feel defeated. The latest and greatest medications don't offer appreciable changes. Each new one on the market seems like little more than a costly rearrangement of deck chairs. The main developments that have delivered significant improvements in glycaemic control to some of my patients have come in the area of plumbing, be it of their insulin syringe or their gastrointestinal tract.

The insulin syringe, with its frightening needles and complicated mechanics of loading, routinely scares off my patients. They'd gladly suffer the side-effects and pill burden of multiple oral agents rather than venture anywhere near a syringe. But the insulin pen, with its hardly feelable needle, has changed this. It doesn't require a nursing degree to use and doesn't look like drug paraphernalia. Plus all those patients with retinopathy can now set the dose correctly.

The other salutary plumbing adjustment, of course, is bariatric surgery. For years I was a sceptic. The absurdity of surgically correcting our societal pressure to overeat all the wrong foods rubbed me the wrong way. I couldn't decide if the bariatric tune-up was worthy of Franz Kafka or of Oscar Wilde. But now that I've seen the lives of some of my patients dramatically turned around, I've come to accept bariatric surgery as a legitimate tool in the armamentarium, though certainly not the first one I grab for.

But bariatrics and insulin pens aside, diabetes remains a frustrating slog for both doctors and patients. It can sometimes seem as if the world is conspiring against us, between the ubiquitous presence of super size, super cheap, super lousy food and the even more ubiquitous sloth-inducing technology that limits our muscular fitness to the flexor carpi radialis. There are days when I consider the idea that we'd have more success with diabetes if we simply exterminated white rice and soda vending machines from the face of the earth.

But then in waltzes Mr Hokama. At his first visit, his blood glucose was in the high 300s and he could have earned frequent flier miles with the number of trips he was making to the bathroom to urinate. He was reluctant to start insulin, but with my cajoling, pleading, and negotiating, finally consented. Around this time he also took up ballroom dancing and now dances for 2 hours nearly every day. Between the rhumba and the insulin, he has handily corralled his glucose into a manageable zone, and each time he comes in for an appointment, I am duly impressed. White rice, though, hasn't disappeared from his diet. "I'm Japanese", he reminds me with a gentle smile. "Sushi does not work with brown rice." I concede the point.

It's easy to become nihilistic about diabetes, so overwhelming is the burden of medical care for these patients. My old professor was right, and even prescient—as old professors so often and so annoyingly turn out to be. Diabetes has come to define the working lives of many doctors today. It can seem as though the tide will never turn. But perhaps thinking about the tide is simply too much for the individual doctor. Those in the clinical trenches can really only think in terms of individual patients.

Mr Hokama keeps me inspired. As do my other patients, whose fortitude can be impressive, especially in light of the daunting odds. HIV infection eventually evolved from a sprint to a marathon. Diabetes always was a marathon, however the incline of the track steepens noticeably by the day. Doctors and patients press up that incline together, panting, often daunted, but ever striving.

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