

Creativity in medicine

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“My leg’s given out on me,” said Edgar, the metal sculptor, with his fringe of white hair growing like a collar around his bald head.

He peered through his round, steel-rimmed glasses, sitting across from me, his long legs twisted awkwardly and uncomfortably before him. While working on a particularly large bronze piece on Sunday morning, he felt a pop in his lower back, then severe back pain and weakness in his left thigh and leg. I made a diagnosis of a ruptured L3-L4 disc, confirmed it by examination, and then by MRI, and sent him on to the department chair of neurosurgery, who scheduled him for the indicated laminectomy.

When it flowed this way, practicing neurology felt exhilarating, like singing an aria. A careful history generated a diagnosis, supported by the examination and verified by laboratory tests, and a proven cure was prescribed. There was no room for doubt or second-guessing, as a well-trained mind and body crafted the right solution, hit the perfect note. Of course, unlike Beethoven’s Ninth, in medicine, our compositions sprang from good, evidence-based science, and not from the well of creativity. Or so I once thought.

For Edgar’s wife sought a second opinion and sent him to *her* neurologist, a phenomenal clinician with 40 years of experience, who called to say that *he* didn’t think surgery was necessary. I was unconvinced. This was the standard of care for a large traumatic disc with focal signs and not operating quickly could lead to permanent weakness.

Yes, said Dr. Great Clinician, this was true as a rule, but he wanted me to reconsider my position. We both knew, he said, that Edgar was exceptionally fit, and we both concurred that the weakness in his leg didn’t prevent him from walking. And while it was true that the disc was large and compressive on the MRI, would I agree that the rest of his spine looked great?

“Yes,” I said, suspiciously. What was my colleague driving at?

Based on this reframing of facts, said Dr. Great Clinician, the better recommendation was bed rest for a week, with steroids for inflammation, and physical therapy. I was shocked and I let Edgar know my reservations. Even so, Edgar followed Dr. GC’s advice, cancelling his impending surgery, and 2 months later was

back to working on his large sculptures without ever having gone under the knife.

What happened? How had I gone so wrong? Although both Dr. GC and I had access to the same history, we each chose to focus on different aspects of it, he on our patient’s overall level of fitness, I on the acute trauma. We elicited the same clinical signs and looked at the same MRI, but I focused on the infirmity, while my colleague also factored Edgar’s excellent health into his equation.

Despite identical data, we each *created* different stories and solutions. My colleague’s approach could be termed holistic, inspired, or inventive, but I prefer the term creative medicine. Given the same musical notes and instruments, Beethoven and Mozart created different arrangements, and using the same language, Whitman and Frost crafted vastly different poems. Was the practice of medicine so dissimilar?

Fast forward a decade, and now I, like Edgar, have a bad back. I sit only in the middle at movie theaters, have groceries delivered rather than risk “putting my back out,” and for days at a time lie in bed with a hot pad, terrified of moving, until the latest flare-up subsides. A houseguest’s luggage shifted this precarious balance. As I lifted her case into the trunk of my car, I felt something pop in my neck. The pain hits a high note and stays, along with weakness in my left arm, and a large, acute C5-C6 disc herniation is seen on the MRI my neurologist obtains. He prescribes traction, bed rest, muscle relaxants, and analgesics, all to no avail.

An internist friend, square-jawed and annoyingly healthy, proffers the following opinion: “You have been working very hard lately,” he says, “and you are a type A person. I think there is a link between your stress and your back pain, and I think the disc is incidental.”

To say that I am outraged would be an understatement; I literally choke with anger. I feel patronized and dismissed, and the irony of it all is that my board certifications are not only in neurology and pain medicine, but also in psychiatry. I, of all people, know of the link between stress and pain.

But once I calm down, Edgar with his fringed hair pops into my mind. What if I am wrong again? What if my neurologist and I had arrived at a diagnosis and treatment without making room for the creative,

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what if it was true that I did have a disc herniation, but that recent stressors exacerbated my symptoms and signs?

At 2 AM that morning, lying sleepless in the dark, spectacularly contorted to accommodate my back, I read about stress, muscle spasms, and back pain on the Internet. I reason that subspecialty training can be surprisingly myopic, and reading outside the box, no matter how heretical, can't hurt. I read that disc disease can be thought of as an inevitable consequence of bipedalism in humans. I read that the brain may channel external stress to the injured area, sustaining perpetual muscle spasm and pain.

Hmmm, I think, is Dr. Square-jawed Internist the creative diagnostician here, taking into account the "story of me," folding in this ingredient to come up with an appropriate treatment? This feels like a radical departure from my evidence-based training. In fact, it feels almost like quackery or shamanism. But by 4 AM, I am inexplicably lulled into a deep sleep, comforted by the idea that my back is not permanently injured. With this switch in my mental narrative, my pain never returns in quite the same way, and in a month my bad back is a thing of the past.

No one is more incredulous than I.

Creative thinking again provided an effective solution where an uninspired, dare I say purely evidence-based approach, failed. Niamh Kelly,¹ in *Academic Medicine*, starts off her paean to medical creativity with the question "What are you doing creatively these days?" Creativity in clinicians, Kelly writes, fosters "critical reflection and an integration of the physical, mental, psychological, and emotional self." Creativity confers the ability to practice individualized good medicine, as opposed to formulaic safe medicine, and elevates the likes of Great Clinician and Square-jawed Internist to the stratospheric heights of

medical excellence. They spirit out the right diagnosis and treatment, even as a computer fed the same facts (or a clinician thinking in a programmed way) flounders.

It is impossible to become Michelangelo if one keeps painting by numbers and colors inside margins. I often lament the dearth of great clinicians in my generation. Are we stifling, by an overreliance on evidence-based, checklist care, the ability to truly think? Are our clinical Michelangelos and DaVincis a dying breed?

While evidence-based medicine needs to remain the backbone of our medical approach, creativity lends it the wings that allows patients to fly into health. As we move into an era where we have ever more evidence at our disposal, and a greater push to create "pathways" where diverging from these protocols is considered bad patient care, if not grounds for denial of reimbursement, how do we nurture those creative instincts we know define truly superb clinicians?

How do we instill in our future physicians this creative spirit, which by its very definition eludes measurement, that gold standard of modern medicine? How do we blend the art of thoughtful diagnosis into the rigid recipes of formulaic approaches? As Einstein and Infeld² state in a chapter titled "The decline of the mechanical view," "The mere formulation of a problem is often more essential than its solution which may be merely a matter of mathematical or experimental skill. To raise new questions, new possibilities, to regard old problems from a new angle, requires creative imagination and marks real advances in science."

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