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Critical appraisal is a skill that takes practice: our patients are counting on us

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REFLECTION:

Critical appraisal is a skill that takes practice: our patients are counting on us

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Medical students are taught to think a little like chess players: our hands are on the task before us, but our minds are on the next best move—the second-line drug, more specific imaging, contingencies. And we hope that we never reach the medical hinterlands where treatment options have been exhausted, where the next best step leaves nothing but thin air underfoot.

She was my first patient during the second month of my Internal Medicine rotation, sweet, gentle, and grieving the recent death of her beloved husband. At 63 years old, she had a medical history few would envy: diabetes, hypertension, a kidney transplant requiring immunosuppression, lower right leg amputation, stasis ulcers, and now a resistant UTI. This most recent misfortune had necessitated strong antibiotics, which opened the door to a belligerent and dangerous bacterial infection in her gut. Treatment options were running out. During rounds, I heard the attending mutter something about a “colectomy” if the infection persisted or recurred. My heart sank. There had to be another option for this patient who had already endured so much.

I searched the medical literature for a paper that might provide a novel approach to preventing *Clostridium difficile* recurrence, something that might save a stretch of colon and my patient’s dignity. I came across studies claiming the probiotic yeast *Saccharomyces boulardii* helped treat and prevent severe recurrent *C. diff*. I wondered if there was good evidence that a probiotic yeast could provide an alternative and effective means of treating or preventing *C. diff* recurrence by recapturing the mucosal real estate.

I appraised a 170-patient trial that claimed to be randomized and controlled, titled “The search for a better treatment for recurrent *Clostridium difficile* disease: use of high-dose vancomycin combined with *Saccharomyces boulardii*,” by Surawicz CM et al. A practiced eye would notice a myriad of problems with the study right away. It did not include immunocompromised patients. The protocol for antibiotic therapy wasn’t randomized. Further, the dose and duration of antibiotic were not controlled for in the study. The high dose vancomycin group had a 30% dropout rate. This article was more after-the-fact Monday morning quarterbacking of data than substantive research. In the end, with the help of a seasoned critic, I realized the study was seriously flawed.

Striking out on my own for answers was tedious, sometimes frustrating and, ultimately, absolutely necessary. I am more butcher than surgeon when it comes to dissecting research papers. But someday, my patient’s colon, kidney, or life may depend on my ability to choose or rule out a treatment.

The exercise crystallized my understanding that critical assessment of research is not merely an academic exercise, nor is it a skill to be trotted out only in extreme, worst-case scenarios. Like writing strong patient notes, it’s a skill that should be regularly performed and continually honed, so that it is well-practiced at the moment it is most needed.

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