

The right path of scientific evidence

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What is wisdom? We could define it as practical wisdom, doing what has to be done well and not doing what does not need to be done, rightly or erroneously. Wisdom is good judgment, yet it is well recognized that beliefs frequently obstruct it.

Similarly, it is difficult to contradict beliefs that provide benefits; this applies to doctors and everyone else in the medical-industrial complex.

Current scientific evidence is divided into two strands: one scientific and one commercial. The current body of scientific evidence is separated into two strands: scientific and commercial. The second lurches between a proclaimed coherence—scientific in appearance—which is confirmed by the multiplicity of visible evidence of scientificity and a hidden coherence, in theory, “well-intentioned.” There is scientific rhetoric that contributes to the efficacy and strength of the imposed mythos.

As physicians, we must be able to ask skeptical questions, to cast doubt on the unquestionable certainty of the “great representatives” and current charismatic leaders of modern medicine, who appear to be the fathers of institutionalized truth and who frequently reproduce hegemonic thought while subordinating to private interests. I encourage young professionals to emulate their (excellent) instructors while maintaining critical judgment and, ultimately, not succumbing to the Cartesian ideal of purity worthy of emulation or unquestioning obedience. I believe that we must dissect, gut, and scrutinize scientific evidence that is offered as a finished truth, packaged, canned, and ready to be crowned as the absolute surgical indication that supports and justifies the use of a particular implant or trendy approach. Let us avoid becoming part of an iatrogenic vanguard marked by fanaticism. Let us remember that most revered novelties have been, are, and will be rapidly buried and forgotten.

On the other hand, it is important to remember that the entire history of science is a graveyard of failed attempts to achieve absolute and unshakeable certainty. However, we owe ourselves as eternal students to that graveyard of failed attempts. The researchers who have taken responsibility for these failed attempts are not the fathers of failure, but rather the opposite. They are the ones who prevailed despite their failure. In this sense, Evidence-Based Medicine provides the physician with the evidence that validates certain diagnostic-therapeutic actions over others. This invites them to articulate the evidence to substantiate an action. Thus, in medicine, a technique called convergence of evidence is used, but the underlying problem is both the validity and legitimacy of such imprecise evidence. Finally, in critical skepticism, the strength and imperfection of that evidence are called into question, and that means reasoning.

This act of reasoning about one’s own conclusions and looking for potential flaws in the process is known as reflection; it displays an awareness of the existence of error and that uncertainty is always present.

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As surgeons, we not only process information, but also create our own paradigms. As a result, both the context we live in and the profession we carry out are not external to us but are active developers of scientific evidence and current knowledge. Blessed are those researchers who seek to deepen our grasp of orthopedics and traumatology. However small and ephemeral their discoveries and contributions may seem, they have been, since ancient times, the most eminent reflection of the sense of scientific curiosity that fuels the culture and art of our specialty.