Evidence-Based Medicine and Clinical Judgment: An Imaginary Divide

The study by Pereira et al. (1) and the accompanying commentary by Ben-Yehuda (2) once again bring to the fore some often-raised arguments against evidence-based medicine. Detractors of evidence-based medicine tend to imbue “clinical judgment” with an aura, which barely falls short of the divine, by attributing intangible powers to clinicians. This view of clinical judgment is more about the clinician than about judgment. In reality, individuals, clinicians, or otherwise, are swayed more by anecdotal experience (3); as a result, they are more prone to systematic errors while making judgments under situations of uncertainty (4). Evidence from clinical trials, if anything, adds objectivity, reduces bias, and refines a clinician’s ability to make decisions.

In the study by Pereira et al. (1), the participating clinicians were not in agreement with the random allocation in more than half the patients. As pointed out by the investigators, the different prevalence of 3-vessel disease and the complexity of lesions were primarily responsible for this situation. Stated simply, the clinicians were (justifiably) reluctant to send patients with complex lesions and 3-vessel disease for angioplasty, because they were aware of the data that these patients would not have the best results with angioplasty. Numbers permitting, subgroup analysis of the trial would probably bear out these clinicians’ concerns. Therefore, what has been somewhat mystically termed “clinical judgment” is nothing but the correct interpretation of available data by discerning cardiologists.

It is important for the scientific community to recognize that there is in fact no real disconnect between evidence-based medicine and an individual clinician’s judgment. Gone are the days when a few towering experts drew on personal experience to make clinical decisions. Good clinical judgment in the present day has evolved into the clinician’s ability to appropriately interpret and incorporate available evidence in the day-to-day management of patients. Of course, some clinicians will be better at this than others!

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REFERENCES


Reply

We appreciate Dr. Karthikeyan’s interest in our study on the predictive power of clinical judgment in chronic coronary artery disease (1). We agree with his opinion that there is in fact no real disconnect between evidence-based medicine and an individual clinician’s judgment and that evidence from clinical trials helps add objectivity, reduces bias, and refines a clinician’s ability to make decisions.

Clinical judgment, far from a mystical definition, is the result of a complex equation that takes into account objective data from biochemical tests, imaging studies, and a patient’s history. It also uses subjective information acquired by the physician over the course of the patient-physician relationship.

We disagree, however, with the view that the different prevalence of 3-vessel disease and the complexity of lesions were primarily responsible for the nonconcordance between a clinician’s treatment option and the randomization process. Furthermore, unlike what Dr. Karthikeyan affirmed, this has not been pointed out in our report. In fact, a careful examination of Table 3 from our study (1) would allow the observation that lesion morphology distribution in patients treated by percutaneous coronary intervention (PCI) was not significantly different between concordant and discordant groups, and even the discordant group treated by PCI had an almost 50% prevalence of patients with 3-vessel disease. Angiographic findings were certainly used in the decision process. However, it should be emphasized that the angiographic variables that were investigated explained a very small percentage of our model’s overall variance. This means that clinical judgment either uses other variables not investigated in our study or it is capable of deriving information from higher-order interactions using the variables available from imaging examinations (i.e., angiographic findings) and cardiovascular risk factors that a patient may present. In fact, it probably uses both and has the capability of integrating all this information into a single decision.

No simple statements can be easily made regarding what clinical, demographic, angiographic, or biochemical variables are being used (or in what way) by clinicians to make their decision in this particular scenario. An increased number of patients could potentially permit statistical power for exploratory subgroup and