EDITORIAL

Scientific misdemeanor—are we regulated enough?

Om Prakash Yadava¹

Received: 6 September 2017 / Accepted: 13 September 2017 / Published online: 3 October 2017
© Indian Association of Cardiovascular-Thoracic Surgeons 2017

Scientific misdemeanor is a universal malady and has probably brought more despair to humanity than war, terrorism, or any form of religion. A glaring and gory example is substituting fat in place of simple sugars in causation of atherosclerosis in 1960s, courtesy the multinational soda giants. We see the same replicated in matters of cooking oil, alcohol—most specifically red wine, use of eggs, and milk products. The list is endless with each product being promoted by respective stakeholders quoting selective research conducted with dubious methodology, in a doubtful milieu, and with malafide intent. This is a veritable plague rampant globally, but only the tip of the iceberg is reported. The only redeeming feature is that the tip is getting larger and larger as more and more such cases are being reported. We in India are not immune to it. In fact, I stick my neck out to say that we may be one of the bigger culprits, and the glaring example is atherosclerosis research coming out from Moradabad a few years back, which created more than its fair share of ripples initially, but was subsequently retracted by British Medical Journal and others. The magnitude of the problem is well recognized and accepted, and we all, including yours truly, have been shedding crocodile tears, but it is only now that attention is being focused on taking some concrete action. “Stroke” was the first journal to implement stringent guidelines to ensure publication ethics, transparency, reproducibility, and validity of research. Towing the line, “Circulation Research” too has announced “New initiatives aimed at enhancing the rigor, transparency, and reproducibility—and, thus, the overall

robustness—of articles published ...” [1]. They have taken the check list route of having some basic questions checked at the initial submission. If the paper is accepted, a more detailed second list, check listing certain parameters for rigor and transparency will be required. This will be published online with every article for the readers to refer to, for checking the robustness of the research and validity of conclusions drawn. Methodological weaknesses come under a special scrutiny under these new measures. The protocols used for randomization and blinding, both at allocation and evaluation stage, priori calculation of sample size, and the power of the study and the statistical methods used for data reporting have all been addressed and will most certainly lead to more rigor and replicability of the results.

But this certainly raises a question—would it lead to over-regulation and stifling of creative research? As such, research is bound by a lot of laws and a number of researchers do feel strongly about over-regulation but then these are only a very few of those master minds who produce hypothesis-generating exploratory research work or cutting-edge mechanistic research defining mechanism of action of a particular therapy. However, most of us are either re-researching or just producing an audit, and this nature of clinical research is severely besieged by plagiarism of ideas, thoughts, data, and even literary writing. So, even though a meaningful few may find this regulatory action a bit of an overkill, but the bourgeois class of researchers, who only add to confusion, waste of time, money, and precious resources, need to be bridled.

I do not mean to suggest that all this misdemeanor is ill intended. In fact to the contrary, I strongly believe that most of it creeps surreptitiously because of ignorance and lack of methodological rigor. But the bottom line is either way science, and in fact the humanity, suffers as the subsequent pool of genuine researchers, who instead of re-inventing the wheel, take the published research of their colleagues as the gospel

✉ Om Prakash Yadava
op_yadava@yahoo.com

¹ National Heart Institute, 49-50, Community Centre, East of Kailash, New Delhi 110065, India

truth and want to move forward, are led on to a wild goose chase, only to retract after precious years have been spent and huge amount of public and taxpayers' money has been spent before realizing the dubious nature of research by their phony predecessors.

Can we introduce these guidelines in IJTC? The answer is "Yes" and "No." "Yes" for long term, but "No" for immediate implementation. We are still struggling to get true original research, and most of our publications are either case reports or original articles more in form of audits rather than hard core basic research. And even these are numbered a few and far between. So, even though we may not be able to introduce these levels of regulatory stringency, we certainly can look into methodological and reporting aspects of the clinical research and we can sensitize our clinicians and researchers on some of these aspects by holding workshops and symposia on the sidelines of the national meetings. We need to change our mindset in which "chalta hai" has to be replaced by "attention to details," "rigor," and "transparency"—the buzz words for scientific "due diligence."

It is with this view of increasing our scrutiny of published material that we have launched a pilot of having a "discussion" at the end of selected original articles along with an invited editorial commentary by an expert, critically evaluating the paper and enumerating its strong and weak points and even fallacies. I hope readers will find this attempt at increasing the rigor beneficial. We also solicit readers to read every article published in this journal with an eye of a critique and write to us with their opinion on each paper. We would endeavor to seek the authors' response and publish them uncensored to generate a sense of enquiry and indulgence in the national mouth piece of cardiothoracic surgical fraternity of our country.

Reference

1. Bolli R. New initiatives to improve the rigor and reproducibility of articles published in Circulation Research. *Circ Res.* 2017;121:472–479.