Letter by Estol Regarding Article, “New Strategy to Reduce the Global Burden of Stroke”

To the Editor:

The authors of this interesting initiative propose the use of a Stroke Riskometer app as a new strategy for stroke prevention.1 Their idea is original and in line with current technological trends. It remains to be confirmed whether this effort will be successful in accomplishing what is an eminently clinical task. However, if results are not as expected, can we afford to add 10 more years of millions of dead stroke patients while experimenting with a new strategy? Shouldn’t we focus on already proven yet underused conventional vascular prevention programs?

The authors are correct about the immense value of new technology, but may not be considering that because advances are in fact so radical, this per se limits our capacity to accurately make forecasts about their success even in the short-term. In 1995, ≈150 million people worldwide had cell phones and just 20 years later, the number is close to 5 billion. Since 2009, 75 billion apps have been downloaded. Influenced by this technology revolution, the geographic centers of the world’s economy are rapidly shifting. By 2025, most large companies (>US$ 1 billion revenue) will be headquartered in what today are emergent economies, and those regions could be expected to develop their health systems. The magnitude of the aforementioned changes will have an impact calculated as 3000 times greater than the Industrial Revolution. Considering this unprecedented exponential change in the world, is it fair to speculate on the results of a 10 year project? Isn’t there a chance that the information sought with this particular endeavor will be soon independently available using Big Data analytics?

Many studies have shown that similar vascular risk factors affect people worldwide with minor regional and racial-ethnic differences.2 Therefore, the phenomenal failure we are seeing in effectively implementing primary vascular disease prevention is unlikely it is being caused by gaps in our knowledge about risk factors. The true gap has been in our capacity to translate vascular disease prevention knowledge into progress in this arena. Maybe, we have been aiming with the incorrect tools at the wrong target. Other stroke scenarios are evidence of similarly misguided dedication. Thrombolytics and telemedicine share a 2 decade history of massive efforts, money expense, and privileged presence at every stroke meeting to just now be showing modest progress. We have also failed to educate physicians in the understanding of stroke management, yet the FAST (Face, Arm, Speech, Time) approach is promoted for use among the general population with relative success mostly limited to developed regions.

Vascular disease prevention clinics have not been promoted as warranted. They are easy to organize and feasible even in underdeveloped areas. The need for an organized multidisciplinary approach in the form of vascular disease prevention clinics was one of the main conclusions at the meeting “Atherosclerosis: a XXIst century epidemic,” with leading experts from the different vascular disease fields at the Pontifical Academy of Sciences in the Vatican.3 The riskometer is, as every other score, a population-based risk analyzer. This approach does not consider individual genetic susceptibility, which accounts for a large proportion of the pathogenesis that remains unexplained by traditional risk factors. The difficulty to stratify patients according to vascular risk level results in a significant number of under or overtreatments. Arterial plaque area measurement is a novel method that reveals subclinical atherosclerosis burden and accurately predicts individual risk. Fuster et al recently showed this technique to be as accurate as the coronary calcium score.4 Plaque area measurement is noninvasive, inexpensive, and easy to perform even with portable equipment that should be part of a vascular prevention clinic armamentarium. Spence posited a change in the vascular disease approach paradigm, with the artery, and not the risk factors, as the target for treatment.5

The present collaboration group has presented a sound epidemiological project. It is true that current primary prevention strategies have not been effective. But they have not been adequately empowered either. Vascular disease prevention should be part of the main agenda at every stroke and other vascular meetings. Measuring risk factors should not blur our most immediate need to control them, and vascular disease prevention clinics, which could be developed at a global scale, are probably the most appropriate setting. In summary, rather than the enormous effort required to implement an unproven strategy, the clinical skills readily available should be adequately enforced to become the most effective primary prevention approach for stroke and other vascular disease. Most other initiatives have been proven to be penny wise and pound foolish…

Disclosures

None.

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References
