Medical research on the sick list

M. S. Valiathan

Evaluation of performance in science is a useful, and at times unflattering, exercise. Bibliometry is an evaluation procedure whose application is new to medical research in India. No wonder Arunachalam's report[1] based on Indian medical papers cited in *SCI* and his conclusion that a substantial mis-match exists between the needs of health in India and the research actually done had evoked considerable interest earlier. As the *SCI* covered just one medical journal from India, Arunachalam has repeated the study by using *Medline* as the source of data because a high proportion of medical papers are published in local or national journals[2]. His painstaking analysis not only confirms the mismatch noted earlier but also uncovers a disturbing picture of medical research in India. Admittedly bibliometry is handicapped, for example, by problems of classification between journals and diseases, correctness of reported data on mortality and morbidity and the bias of editors and indexing agencies. These difficulties do not, however, detract from the main significance of Arunachalam's study. He found that in seven years from 1987 to 1994, Indian authors published 19,916 articles in 1440 journals; of which 14,822 were published in journals whose impact was less than 1.0. Only 58 papers appeared in journals with an impact factor higher than 8.0 and some of these belonged to new biology and not mainstream medical research. Among the published papers, general and internal medicine claimed top position (2602), followed by paediatrics (1420) and pharmacology (1367) with seven other fields claming publications in three-digit figures. However, the top ten fields in Indian medical research did not include tropical medicine or respiratory diseases which rank high according to the mortality and morbidity statistics in India. Again, with more than 9 million blind including two million blind children, hardly any research was done in ophthalmology on the basis of publications. Oncology, cardiovascular and neurological diseases did not figure among the leading causes of mortality and morbidity according to the official data supplied to the WHO; yet 2068 papers were published in these disciplines. Even if some papers in tropical and respiratory diseases had been listed under medicine and paediatrics, and the Indian statistics on mortality and morbidity are not fully reliable, Arunachalam's findings do reveal a lopsided order of priorities in Indian medical research. A less serious but equally disturbing, finding is that no more than a small fraction of the 250 Indian medical journals received by the National Library of Medicine are covered by *Medline*. The analysis also brings out other interesting information such as universities and colleges leading in medical publications; CSIR institutions publishing more than the ICMR group and the DAE institutions excelling those under the Ministry of Health (excluding AIIMS and PGI) in publications.

Though Arunachalam seeks the explanation for the dominance of cancer and cardiovascular research in the affluence of patients, better facilities of tertiary hospitals, etc., the analysis does not get to the heart of the problem. The poor correlation between major health problems and the preferences of investigators has reasons which go deeper into the history and evolution of medicine in India. The originality and spirit of enquiry which characterize *Charaka Samhita* vanished by the early centuries of the Christian era and an age of stagnation began in Indian medical endeavour after the appearance of *Ashtanga Hridaya* in the 7th century. Long starved of new knowledge, India welcomed western medicine in the nineteenth century and quickly learnt to use its tools and methods without bothering to learn how to make the tools and methods. This failure, like a birth defect, became a handicap and ensured that successive waves of tools and methods from the West, and not societal needs, determined the medical agenda in India. In many ways, this is reminiscent of Indian scientific research in general: it remained aloof from the people and failed to power our socio-economic development which continues to progress by infusions of foreign knowhow. Once we begin to devise our tools and methods and apply them for solving the health problems around us, Indian medical research will gain speed and purpose and hopefully, bibliometric acclaim.

1. Arunachalam, S., Fifth International Conference on Scientometrics and Informetrics, River Forest, USA, June 1995.
2. Arunachalam, S., *Curr. Sci.*, 1972, **72**, this issue.

M. S. Valiathan is in the Manipal Academy of Higher Education, Manipal 576 119, India.