

Publications in high impact journals from India in the last two years—A reality check

INTRODUCTION

The magnitude of publication of new research has been considered as an indication of scientific productivity of a country.^[1] Although the volume of new publications in the field of anaesthesia from developing countries has traditionally been meagre, the picture is slowly beginning to change. An example of this change is a 2004 study by Baretto^[2] which found that scientific articles by Latin American authors had tripled between 1988 and 2001. The contribution of Indian authors to various international anaesthesia journals has been described as very minimal.^[3] It is about time that the contribution by Indian authors began to increase. Although the contribution of Indian anaesthesiologists in high impact journals has been studied in the past, the exact contribution of various academic institutes to the publications has not been studied. As India is a vast country with many centres of medical research, we sought to determine the present magnitude of research activity in the domain of anaesthesia among various institutions inside India. Hence we decided to examine the volume and the type of anaesthesia publication by Indian authors in six high impact anaesthesia journals in the last 2 years.

METHODS

Since this was a survey, an institutional ethical committee approval was not needed. The journals we

selected for our survey were on the basis of impact factor and they included the following: British Journal of Anaesthesia, Anaesthesia, Anesthesia and Analgesia, Anesthesiology, European Journal of Anaesthesiology and Canadian Journal of Anesthesia. These are the six anaesthesia journals with the highest impact factor in the field of anaesthesiology as per Journal Citation Reports (JCR) 2018. As we wanted to study only the present trends of research, we decided to collect data for the last 2 years only.

We manually scanned all the articles published in the said journals for the last 2 years (beginning from August 2016 to July 2018) and sought to find all the articles in which the authors belonged to an institute in India. We accessed the websites of the respective journals and browsed all the issues uploaded from 01 August 2016 till 31 July 2018 to check the academic affiliation of the first author and to determine the contribution of Indian authors. If any paper listed more than one institution, the institutional affiliation of the first author was taken. We excluded Abstracts of meetings, book reviews and retracted articles.

We sought to determine which institutions in India are contributing most to high impact anaesthesia articles. We also categorised the articles as randomised control trials, reviews, meta-analysis, case reports and case series, images, echorounds and correspondence (including letter to the editor and e-letters).

RESULTS

We could only find a total of 48 articles by Indian authors in these 6 journals over the last 2 years. We found 5 articles in Anesthesiology, 8 articles in Anaesthesia, 14 articles in Anesthesia and Analgesia, 4 articles in European Journal of Anaesthesiology,

4 articles in Canadian Journal of Anesthesia and 13 articles in British Journal of Anaesthesia.

Upon categorising the articles according to their type, we found that the majority of the articles were in correspondence/letter to editor/e-letter section, totalling 29 in number. Randomised control trials, considered to be one of the powerful tools in terms of the quality of evidence, were just 9 in number. There was 1 review, 1 meta-analysis, 3 echo round articles and 1 editorial. There were 4 miscellaneous articles [Figure 1].

We tried to determine the institutions from where these articles originated and found that majority of the articles came from established institutions of the country. The highest number of articles originated from PGIMER (Chandigarh), 9 in number. This included 3 RCTs. All India Institute of Medical Sciences (Delhi) provided 5 articles. AIIMS (Jodhpur) and Medanta Medicity provided with 3 articles each. There were 2 articles each from GMC (Chandigarh), JIPMER and AIIMS (Bhubaneswar) [Table 1].

Rest of the contributors were Tata Memorial Institute, University College of Medical Sciences (Delhi), AIIMS (Patna), Fortis (Kolkata), JIPMER, VMMC and Safdarjung Hospital (Delhi), Artemis Hospital (Gurgaon), Armed Forces Medical College (Pune), Pondicherry Institute of Medical Sciences (Puducherry), Rajiv Gandhi Cancer Institute (Delhi), Srichitra Institute of Medical Sciences (Kerala), Research and Referral Hospital (Delhi), Christian Medical College (Vellore), Vivekananda Institute of Medical Sciences (Kolkata) and others. Some articles had just mentioned the city of the authors without mentioning the institutional affiliations.

DISCUSSION

We found that the established institutions continue to lead the charge of new research in India. The newly established institutions, both public and private, are also contributing to new research in the country. As has been pointed out in earlier surveys, the contribution of our country to high impact anaesthesia articles remains highly inadequate.^[3-5]

On contemplating the causes for this poor contribution from our country, we could think of many possible causes. Many authors have suggested poor access to literature, lack of research training, lack of basic infrastructure, lack of incentive, poor

presentation in English and bias of journals to be the reasons for poor contribution from developing countries in high index journals.^[6,7] In addition, there are various ethical issues surrounding research in developing countries.^[8,9] Turk *et al.*^[10] in a study assessing the attitudes of a sample of Syrian medical students towards research observed that while most students demonstrated positive attitudes towards research, they suffered from lack of adequate training, shortage of research facilities and unavailability of research mentors. It has been suggested that medical

Table 1: Articles published from various institutions in the last 2 years

Name of institute	Number of articles published
PGIMER, Chandigarh	9
AIIMS, Delhi	5
AIIMS Jodhpur, MEDANTA MEDICITY	3 each
GMC Chandigarh, AIIMS Bhubaneswar, JIPMER	2 each
Tata Memorial Centre	1 each
University College of Medical sciences (UCMS) Delhi, AIIMS Patna, Fortis Kolkata, JIPMER Puducherry, VMMC Safdarjung, Artemis Hospital Gurugram, Armed Forces Medical College Pune, Puducherry Institute of medical sciences, Rajiv Gandhi Cancer Institute, Srichitra Institute of medical sciences, Research and referral Hospital Delhi	
CMC Vellore	

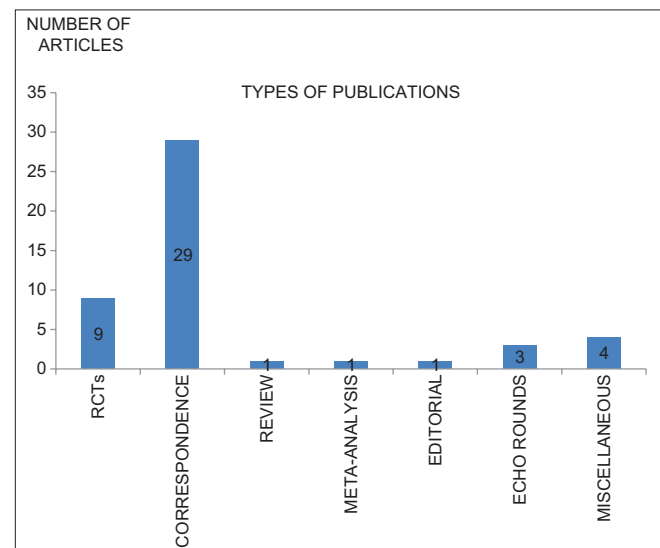


Figure 1: Articles from Indian authors published in the last two years; classified as per the article type. RCTs-Randomised control trial

students can be motivated to carry out research with appropriate encouragement from the administration and the faculty.^[11]

One finding that we could observe was that nearly all the articles came from a handful of major cities of the country. We believe this brings to light the limited access the rest of the country has, both to the recent literature as well as the new equipment and other research requirements.

Articles coming from newly established institutions are a welcome step as it demonstrates increasingly greater importance being provided to research in newer areas.

We ourselves, however, cannot absolve us of all the responsibilities for the present situation. Considering that there are more than 500 medical colleges in India, besides 1000 private teaching institutions with Diplomate of National Board (DNB) postgraduates, we will have to take at least some part of the blame. Do we give research adequate importance? Do we have mentors who can guide us in conducting high quality research? Do our institutions encourage research by providing all necessary help? Are the researchers given due recognition? And are we, to begin with, even genuinely interested in research? These are the questions we believe all of us seriously need to ponder over.

CONCLUSION

The contribution of Indian authors to high impact journals remains very low. Whatever contribution comes, it comes from a bunch of already established institutions.

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Conflicts of interest

There are no conflicts of interest.

Summit Dev Bloria, Ketan Kataria, Ankur Luthra, Pallavi Bloria¹

Department of Anaesthesia, PGIMER, Chandigarh, ¹Department of Anesthesia, GMC, Jammu, Jammu and Kashmir, India

Address for correspondence: Dr. Summit Dev Bloria,
c/o 3245/15d Chandigarh, India.
E-mail: summitbloria13@gmail.com

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