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## Ensuring practical feasibility and sustainability of research work: Need of the hour

Academics and research fields including that of health sciences are recognized globally by how much significant impact they exert in real practice. The clinical sciences are driven forward with new advancements due to impact of various research activities which keep on contributing to the development of new drugs, techniques, equipment, clinical working pattern and much more.

In the Indian scenario, the research activities in anaesthesiology are mainly carried out in a controlled environment of institutes. The impact and practical simulation of such practices in circumstances with limited resources and not so controlled environment is difficult to pursue. Moreover, few of these research activities are approved with the help of research funds sanctioned from institutional authorities or the government. As such the real benefit in terms of reproducibility, sustainability, feasibility, cost effectiveness and usefulness is difficult to achieve in real capacity in the non-institutional set-ups, where 65-70% of the surgical procedures are being performed daily.

Therefore, to involve anaesthesia practitioners into research activities is an herculean task as their priorities are different as compared to that of the academicians from the institutes. It is not possible to involve everyone to alter or modify the anaesthesia practice according to best clinical methodology, but making them aware about the better alternatives to the usual routine practice should be the basic aim. Conversely, many anaesthesia practitioners have developed their own methods and techniques for difficult cases under adverse circumstances which never get highlighted.

These can possibly kindle new research ideas and techniques which can have better impact on our daily

anaesthesia practice. Apart from research articles, even case series and reports as well as a letter to editor can have a significant impact on anaesthesia practice. Ideally, all these practitioners should be encouraged to submit rare or difficult case management which they achieved with limited resources and manpower. Even if these manuscripts are not published they can be an asset for the treasury of ISA (Indian Society of Anaesthesiologists) data repository which again can be read by majority. Further, involvement of practitioners can be done through development of Practitioner's ISA module and workshops, which can possibly sensitize them to the real virtues of research activities.

ISA city and state branches can be motivated to play an active part in these activities especially during their monthly meetings where they can discuss about any current research article published in IJA (Indian Journal of Anaesthesia) from practical point of view. Workshops can be conducted every 3-6 months by city and state branches. Pre-workshop reading material should include links of important research/review articles published in IJA over the last one year and relevant to that workshop. IJA session is doing well at national conferences. Similarly, a mini-IJA session can be included in all the state and zonal conferences with involvement of IJA editors.

The young researchers play a very important role in research activities. To perform emphatically, national platform have been provided to them by initiating so many new awards during national conference of ISA. Their involvement in research activities can further be boosted by making it mandatory to present research paper during state, zonal and national conferences which will be published in zonal and state journals apart from starting new awards at these conferences. Even during the final MD examination, question

paper should contain at least one to two research oriented questions. Apart from that, attending of one research methodology workshop during the three year residency period should be made compulsory. These things done collectively will definitely augment the impact of research activities on anaesthesia practice.

So much emphasis is laid on impact factor of journal, but the real impact of research activities on anaesthesia practice is never evaluated. Unfortunately, there are no definite qualitative or quantitative indices to measure such impact. Many research/review articles are published in IJA in one year whose impacts are difficult to measure at the ground level of anaesthesia practice. The main reason for this can be that many of these articles are just average articles and fill the void, while some are really good which stimulate the research activities across the nation as well as at global level also though to a very small extent. However, small a good research may be, but over time, it will boost the clinical advancements by starting a fission research activity.

This issue of IJA contains two special articles and one advisory on Corona virus (Covid-19). The advisory is from ISA NHQ and is directed to all the anaesthesiologists, intensivists and pain physicians and is meant to make all of them aware about the various do's and don'ts during this crisis of corona epidemic.<sup>[1]</sup> It has been prepared with inputs from many renowned academicians as well as clinicians who have been working to treat the affected patients ever since the entry of infection into our nation.

The first special article focuses on various aspects of anaesthesia and intensive care in patients either suspected or positive for Covid-19 virus. These articles are not meant for research impact but are mainly concerned with immediate impact on human minds to stay safe from this deadly pandemic. These articles truly reflect the role of anaesthesiologists and intensivists as the final frontier to combat the morbidity and mortality arising out of corona infection.<sup>[2]</sup>

The second special article focuses on the use of critical language during difficult airway management. This article reflects the need for development of a clear language which can be thoroughly understood by all the members of the team during CICO (cannot intubate cannot oxygenate) situation. A clear communication during these times minimizes the panic and allows smooth functioning and management with good

results and thereby decreasing morbidity and mortality arising out of difficult airway.<sup>[3]</sup> At present, the terminology used universally is not of much help as this language is perceived differently by different people in our nation. Hence, the development of our Indian terminology for such situations is the need of the hour and it will definitely have an impact on difficult airway management across the nation.

Lower back pain is very common in our population and is a very distressing experience. In one of the open label study being published in this issue, the authors have highlighted the formulation of self instructional module in the form of booklet for back care in such patients. The results of the study show significant reduction in low back pain with the help of a cost effective educational medium in the form of back care booklet as an intervention, along with usual pharmacological care in the clinical outpatient settings.<sup>[4]</sup> Such studies definitely add to the impact on daily anaesthesia and pain medicine as these booklets are very handy and can be widely used in peripheries, thereby enhancing the practical simulation of such researches.

There is a tendency among researchers to use drugs via various routes just to have a publishable content so as to satisfy various individual desires and professional criterions. In one of the studies, authors have compared the thoracic epidural anaesthesia (TEA) in post thoracotomy patients with combination of intercostal nerve block and TEA. No significant clinical or statistical difference between the two groups further established the fact that even negative or no result studies can have a practical impact on daily anaesthesia practice.<sup>[5]</sup> Further, such studies do convey an important message that in future no time, money or even manpower wastage should be done on adopting such interventions for clinical trials.

As anaesthesiologists we are always exposed to risk of one or another disease transmission in the operation theatre or ICU (Intensive Care Unit). Among these, needle stick injuries (NSI's) are the commonest of all.<sup>[6]</sup> One of the studies being published in this issue has also highlighted the grave concern of NSI's among anaesthesiologists of Maharashtra as they have observed an alarming incidence of more than 70%, which can possibly be extrapolated to other states of India.<sup>[7]</sup> Although a very small survey, such studies do have a practical impact among fellow anaesthesiologists from all over the nation so as to adopt appropriate measures in their own set ups to avoid such mishaps.

Such studies also warrant development of ISA Safety module and guidelines which should cover all the aspects and perils to which anaesthesiologists and intensivists are exposed in routine daily practice.

Usefulness and efficacy of drugs as adjuvant in regional blocks are being studied from a long time with varying results. In one of the published studies in this issue, authors have tried to assess the effect of magnesium sulphate used as an adjuvant in axillary plexus block. The significant results they obtained with addition of magnesium sulphate to local anaesthetics in axillary block again highlight the fact that adjuvants do augment the pharmacokinetics and pharmacodynamics of regional anaesthetics.<sup>[8]</sup> Such studies may not have much noteworthy academic impact, but practically do influence the decision of practitioners while using adjuvants for loco-regional anaesthesia.

Laparoscopic cholecystectomy is one of the most common procedure performed in surgical set ups. Invariably, we have seen that post-operatively patients do complain of some discomfort or the other in spite of adopting best anaesthetic and surgical modus operandi. In this study, authors have tried to allay these apprehensions in patients undergoing laparoscopic cholecystectomy by adopting 'enhanced recovery after surgery' (ERAS) approach and comparing it with commonly adopted traditional approach. They have observed significant results in patients who were subjected to ERAS approach recommended by Association of surgeons of Great Britain and Ireland. Such studies can be more impactful if the intellectual level, educational standards, job profile and other confounding demographic variables of patients are also assessed which definitely influence the recovery scores in these surgeries.<sup>[9]</sup>

As academicians, it becomes binding on all the researchers that the study being carried out in their respective set ups should be easily reproducible, feasible, and cost effective and can be imitated by majority without much difficulty. The famous Chinese proverb 'I hear, I forget; I see, I remember; I do, I understand' appropriately conveys the message that only simulation of research can enhance its impact. Practical impact of the study makes it much better even though it may look just an average study on reading.

If the study is able to change or modify the daily anaesthesia routine practice in a better manner, then the real aim of the study gets fulfilled and will

definitely please both the researchers and the editorial board members and reviewers. Our aim at IJA is to highlight and bring forth all such quality studies but the practical impact of the study or impact factor of the journal can be assessed only after a period of time when such studies gets published.

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