Challenges of Surgical Innovations in India

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Dear Editor,

We have been reading the section of Surgical Innovations and Techniques in the *Indian Journal of Surgery*. We feel all surgical innovations should come with thorough planning and gradual transparent implementation [1]. Truly, many new techniques and innovations may not be the result of a long-term indulgence for research. It may just be a serendipity. It can be called “hunches”, “a feeling in the bones”, “a feeling in the stomach”, “someone’s sixth sense” or “preposition of a theory”. Serendipity happens to those who have their mind working on it constantly. It is not a rain of fortune. Discovery of roentgenography, penicillin, and radiation treatment of cancer was not accidental discoveries though they have been said to be so. The respective scientist worked hard. Surgical innovations more likely to happen outside the norms of clinical trials and Indian Council of Medical Research guidelines [2]. Surely though, once the surgeon or its innovator has quietly imbued in himself the benefits of the innovation or may be the deviation from the usual practice, he could then follow on with the regulations.

The Jaipur Foot and Chitra Heart Valve Prosthesis are examples of cost-reducing innovations in prosthetic design. India has to gain a lot in biomimetics which we heavily import—eye lenses, cochlear implants, bone cement, joint prostheses, implantable stents, etc. These are the areas which we want to point through this letter, should be a matter of organized research as per ICMR²/medical devices [3] guidelines. The Stanford University and All India Institute of Medical Sciences New Delhi have together opened a facility where medical students, doctors, and even technicians are given opportunity to participate, oversee, and discuss new

instrument designs, developing new technologies and surgical innovations. All this becomes highly organized, transparent, and peer-reviewed research to develop new strategies and appliances. The second phase comes to patent these and then conduct the clinical trials. The process of surgical innovation can be lengthy due to various phases of clinical trials and permissions.

Laparoscopic surgery came to India as quickly as it was invented and complex laparoscopic surgeries are done at equal pace in India compared with developed countries. But for some reason, laparoscopic hernia repair has lagged behind. It’s because of a rather longer learning curve. Exercises, hands-on skills training, simulation suits, and incentives will be required to popularize some of the cost-effective innovations in India. We believe regularly reading the *Indian Journal of Surgery* innovations in the hands of our surgeons will happen both by serendipitous way if they continue to toil in one direction of their clinical work and by more organized manner through running randomized clinical trial protocols.

Compliance with Ethical Standards

Ethics permission is not required as this is an open review article.

Conflict of Interest The authors declare that they have no conflict of interest.

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