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## Guest Editorial

# When do surgeons need to change the conventional procedure?

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‘It is not who is right, but what is right, that is of importance’

**Thomas H. Huxley**

It is not surgical success that causes a surgeon to change what he or she does, but rather the complications. There is nothing that provokes us to seek alternate approaches more than experiencing a complication first hand. Complications give a second thought to surgeon to contemplate entire / in part the surgical processes, make changes to avoid future problems, or even abandon one technique to another. If a procedure becomes available that has equal or better success than its predecessors, but with significantly fewer complication risks, it will supplant other techniques to become the most popular. Better stated, surgeons and patient will migrate to the safest and most effective technique.

The rate at which a surgeon is able to avoid or manage complications defines his / her ability. Medicine and surgery are, and will always be, very much an art-an art that is never perfected, but in which we always strive for perfection. A wise surgeon takes every opportunity for personal improvement from his or her own challenging cases.

Following the old saying, “There is more than one way to skin a cat,” complications can be successfully managed with varied techniques.

Strabismus like the rest of ophthalmology and medicine is undergoing certain refinements and clarifications of many of its fundamental concepts and precepts as well as certain new surgical techniques. Any new device can also be inherently associated with ethical issues. It cannot be called perfect unless it fulfills the underlying aim for the benefit of patients. The purpose of strabismus surgery is to restore or create as nearly as possible parallel alignment of the eyes. Surgery of the extra ocular muscles is usually employed only when nonsurgical methods have failed to produce satisfactory alignment of the visual axis or when their use is not indicated. Generally surgery should be performed after vision in each eye has been maximized by appropriate means.

It should be clear in the mind of the innovators about the various limitations of the surgical procedure or their new technique. It has been observed that many cataract surgeons performed successful cataract surgeries in little children with the new techniques but without paying much attention for amblyopia therapy afterwards. Simply doing surgery and making visual pathway clear is not good enough as our aim is to maximize the vision, which may not be possible without amblyopia therapy. In fact the revival of vision is the final aim rather than only making the visual pathway clear which is a prerequisite for amblyopia therapy.

The diffusion of an innovation comprises of five stages: the launch by innovators followed in successive stages by early adopters, the early majority, the late majority, and,

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finally, the laggards (figure). Malcolm Gladwell explains social change as the result of circumstances in which ideas, products, messages, and behaviors spread like viruses through “word-of-mouth epidemics” that are set in motion by three types of individuals: “mavens,” who gather information and pass it on to others; “connectors,” who are sociable and bring people together; and “salesmen,” who have a talent for persuasion. The speed of diffusion accelerates to a peak (the tipping point), which occurs on average at 20% adoption. Any surgical technology that is avidly adopted and spreads rapidly without evidence of its comparative benefit runs the risk of being abandoned after objective examination.

So it is essential that these technologies should have the following established characteristics in order to be adopted by surgeons.

“Procedure is compatible with current practice and can be adequately supported in the available facilities and Surgeons can observe the procedure being done. The procedure can be offered to patients for a trial period before it is fully adopted. The procedure is a simple modification of an existing procedure or can be easily learnt by attending surgeons. Volume of cases presenting to the hospital and the expected demand from patients justify surgeons learning the procedure and Procedure will appeal to patients”

The usual critical dynamics in adoption and diffusion of new technology may be Patients’ demand for the technology, low cost to surgeons of learning and using the procedure (professional), Manufacturer’s aggressive promotion of the technology (commercial) and magnitude of benefit perceived by each stakeholder.

Before adopting a new technology, surgeons and institutions should carefully examine a new surgical technology in reference to the questions like: 1. Will the technology improve the quality of clinical care? 2. If so, will key early adopters be able and willing to promote its rapid and successful adoption? What is its likely rate of diffusion? 3. Are there incompatibilities with the social patterns and technologies that are already in place, and how can they be resolved? 4. Do we have the financial, human, and infrastructural resources required?

Reasons to be an early adopter may be the surgeon’s image, the culture of the institution, or a willingness to take a risk. However, those who are more conservative and sceptical may change only under pressure during the

late majority stage. These characteristics may ultimately determine the adoption or rejection of a new surgical technology, but the precondition that is often forgotten in the excitement that comes with change is the certainty that the new technology will improve the quality of clinical care for patients. If this precondition is not satisfied, the technology should be abandoned: even a logical and scientifically sound approach is no substitute for proof in practice.


Use of new surgical technology has the potential to provide the patients with the best possible care while reinforcing the professional vitality of the surgeon and the institution, boosting their image, and providing a competitive advantage. Conversely, that decision also has the potential to sully reputations, waste resources, and cause inadvertent harm to patients. Surgeons and institutions must therefore guard against “going with the tide” in adopting a technology without solid evidence of its efficacy and superiority over alternatives. In the final analysis, a surgeon’s skill and ability to perform a procedure well is unimportant, in fact irrelevant, if the procedure should not be done in the first place.

Dwelling on this issue, some points have been focused here and I am sure there are a lot of points still there. Overall I must say that any technique cannot be foolproof unless it fulfills the aim for which it is designed always having a possibility for further improvisation.

I am thankful to the honorable and dynamic chief editor Dr. R P Maurya for providing me the opportunity to write the guest editorial script for the June issue of this prestigious journal “Indian Journal of Clinical and Experimental Ophthalmology”.

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