

On the Five Perils of Modern Pediatric Surgery

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Anything new is known to bring in freshness, hope and excitement. However, the excitement should not be allowed to drown the inherent perils and disadvantages of the new entity. If science is all about new discoveries and inventions, then the rational part of science should systematically deal with the inherent demerits of the new finding. Whether modern medical discoveries confirm to these ideals is a source of concern. Pediatric Surgery, being a part of science, is no exception to this worrying trend.

*“It is always well, before handing the cup of knowledge to the young, to wait until the froth has settled.”*¹ Has this golden rule been adopted in case of endoscopic surgery, stem cells transplantations and gene therapy? Have we thoroughly examined the demerits of these new therapies before putting them into clinical use? Have we rationalized their use? Unfortunate fact is that a new therapy is indiscriminately applied with too much enthusiasm in all situations irrespective of the logicity. For example, open inguinal herniotomy can be done easily under regional anesthesia, by a subcutaneous route, leaving behind a tiny groin scar that can be elegantly concealed even by swim suits. Why should one do it laparoscopically under general anesthesia, by intra-abdominal route, leaving behind visible scars in mid-abdomen? Raffensperger² is right in observing that the modern outcome of pyloric stenosis diagnosed by ultrasonography and operated using laparoscopy may not be better than that of 50 years ago when none of these modern equipments were available. It may mean that machines and technology are slowly replacing human skill and intelligence. The consequence of it would be escalating cost of health care, which would make it unaffordable for a large sect of underprivileged. This may render modernity meaningless.

All new entries are good in some way and bad in some other way. Without optimization, new discoveries lead to wastage of resource. For example robotic surgery is good in avoiding tremor of human hand during delicate operations³. Ideally it is very suitable for microsurgery wherein hand tremors are tremendously magnified by powerful operating microscopes. Rather, it is now used as an advertisement strategy to attract patients needing any sort of operation. Without rationalizing the usage of a new discovery, science is defeated of its very purpose.

“Illogical conclusion” is another peril of modern science. For example, Akhtar⁴ is absolutely right when he recommends surgical reimplantation of ureter in the treatment of vesicoureteric reflux. Endoscopic injection of bulking agents (STING) may be esthetically

appealing; but it is not clear whether the reflux is abolished at the expense of causing antegrade obstruction to the ureter. Why should radiological disappearance of reflux be always considered as therapeutic success rather than a complication? The rational part of science has not exercised its legitimate right here. Another example of illogicality is *“Stealth Surgery”* wherein a cyst in neck would be excised through an incision in axilla using endoscopes. What is the wisdom of dissecting a large subcutaneous dead space, thereby risking hematoma, infection and prolonged operating time? Can't plastic surgical principles be adopted to leave an invisible scar in the neck?

“Improper prioritization” is nothing new to humanity. But its introduction to medical science is a recent phenomenon. It is undeniably superb to diagnose tethered cord by MRI. But is it not equally important to educate health-care personals to recognize the same by neurocutaneous markers? Despite having these markers in 80% of cases, the correct diagnosis was often delayed until permanent neurological deficit had occurred⁵. Balancing the modern developments and basic essentials is of paramount importance.

Dissociation of science from society is the greatest of all perils. A newly proposed treatment should be affordable to a majority of the population. Organ transplantations, although technically feasible even in developing economies,⁶ are of prohibitively high cost. Unless the scientific community works out cost-cutting methods, transplantation will be restricted to a select few billionaires and its benefits will continue to be denied to billions of world's population. Such an unpopulist discovery cannot be considered as a real scientific advancement.

Quick adoption of new discoveries without critical appraisal, failure to optimize the usage of a new discovery, illogical conclusions, improper prioritization and dissociation of science from society are the five important threats of modern pediatric surgery. They may stem from a variety of factors such as greed of individuals, pressure of industry, sensationalization of media and commercialization of health care. It is the duty of every medical doctor to fight against these evils and free the science from the clutches of it.

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