

Brutal Chevron to keyhole Laparoscopic Radical Nephrectomy — Time to transform!

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There is an ever increasing explosion of information in all sciences and health science is no exception. Thus health science has taken one form of 'Revolutionary Science'. Here an old concept is continuously being challenged by a new one and is leading to a phenomenon termed 'Paradigm Shift' as described by Thomas Kuhn.^{1,2} One such major 'Paradigm Shift' took place in the field of surgery during the 1980s and 1990s³ where Laparoscopy the key hole surgery started replacing traditional open surgery, the more invasive technique in various specialties. Initially Laparoscopy was limited only to diagnostic and simpler procedures. But now with technological advancement and improving expertise, it is becoming standard for many of the advanced reconstructive surgeries.^{4,5} In fact the world has moved to more advanced innovations as Natural Orifices Transluminal Endoscopic Surgery (NOTES) and inventions like Robotics.^{3,6,7} However, the progress of Laparoscopy in Pakistan is very slow. In Urology it is perhaps even gloomier. Only a handful of Urologists are practicing Laparoscopic Surgery and that even in predominantly simpler procedures.⁸ So there is an immense need to transform a generation to new skills which is not so new in the context of contemporary world.

The evolution process in Laparoscopy becoming the standard of care in various procedures all around the world experienced similar frictions as in any intellectual battle leading to a Paradigm shift. For instance the first Laparoscopic operation in humans was reported by Hans C. Jacobaeus of Sweden in 1910.⁹ But It was only in early 1950's, that Raoul Palmer published the first ever work on 'Diagnostic Laparoscopy'.⁹ In 1975, Tarasconi from Brazil performed the first organ resection (Salpingectomy) by laparoscopy.⁹ Likewise, despite after more than half a century struggle, Semm from Germany who performed the first appendectomy in 1981, faced great difficulty in recognition of his work. In fact his publication on the same work was first rejected by one journal and then accepted in Journal of Endoscopy.⁹ Prior to 1990, Laparoscopy was most frequently performed by Gynaecologists all over the world. In 1990, Ralph Clayman performed the first Laparoscopic Nephrectomy.^{9,10} After initial struggle, Laparoscopy has gradually evolved into highly technical

Laparoscopic Reconstructive Urology through increasing urologists' expertise and technological modifications.^{9,10}

It is understandable that time taken to master a skill in a particular procedure is certainly related to the interest and devotion of the individual surgeon. And it is equally true that Laparoscopy is known to have a long learning curve. One of the challenges in learning Laparoscopy is a different technical experience as against open surgery in terms of loss of depth perception, hand-eye coordination, small working space with limited instrument maneuverability and precise port planning.¹¹ Similarly financial challenges in terms of set up and team organization for institutions and compromised time and practice for individuals equally hampers the progress of Laparoscopy. Again urologists who are now becoming interested in learning laparoscopy are handicapped by very limited practice cases in the field like few diagnostics and varicocoelectomy as against General Surgeons who have the luxury of Laparoscopic Cholecystectomy. The other limitation that most of these urologists may encounter is a very low volume of operable cases per se in their initial phase of practice . But in reality, there is huge load of cases in Urology that can be operated laparoscopically in Pakistan, as is practiced in any part of the world. However there is limited number of Laparoscopy Trained Urologists and even among them none has stepped to advanced Laparoscopic reconstructive urology. Although the desire for excelling in Laparoscopy might be there but unfortunately the same heat is not felt in action and pace. So there is a need for 'Capacity building' in laparoscopic urology in Pakistan. Capacity building which is a conceptual approach to development, focuses on understanding the obstacles that inhibit people, governments, international organizations and non-governmental organizations from realizing their developmental goals while enhancing the abilities that will allow them to achieve measurable and sustainable results.¹² This terminology is perhaps less often used in the context of health care or surgical skill transfer in particular. But in the current scenario of laparoscopic Urology in Pakistan, where there are major organizational lacunae and poorly defined or nonexistent development processes, well

structured capacity building with clearly defined strategy is indeed the way to go about. In words of Ann Philbin, “capacity building involves a complex but well integrated system of developing and strengthening the skills, instincts, abilities, processes and resources that organizations and communities need to survive, adapt and thrive in the fast-changing world.”¹² In the context of Laparoscopy, process of developing and strengthening the skills, instincts and abilities would involve various guidelines and models like British Association of Urological Surgeons (BAUS) Guidelines for learning Laparoscopy, Indiana Minifellowship model, Step-ladder Approach by Jawaharlal Institute- India, Mutual-mentoring model etc.¹³⁻¹⁶ This section of Capacity Building is to a great extent dependent on individual motivation. The development and strengthening of processes and resources exceed the limitations of individuals. Here the vision and efforts of dedicated working groups, institutions and associations have to play a pivotal role in facilitating the transformation of generation of Urological surgeons to Laparoscopic Urologists. The details of processes involved in strategy planning and capacity building is certainly beyond the scope of this editorial. But the primary aim is to generate enough waves, translating into healthy and lasting laparoscopic transformation in Urology through collaborative efforts among motivated individuals encouraging internal referrals and mutual-mentoring, institutions like College of Physicians and Surgeons Pakistan (CPSP) and associations like Pakistan Association of Urological Surgeons (PAUS), Society of Laparoscopic and Endoscopic Surgeons of Pakistan (SOLES) and Pakistani Endourology Society (Affiliate of

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