

THE IMPACT OF A SERIES OF LAPAROSCOPIC SURGERY WORKSHOPS IN GYNECOLOGY PRACTICES- OBSERVATIONS IN A TERTIARY CARE HOSPITAL

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ABSTRACT

Objectives: To determine the impact of a series of Laparoscopic Surgery Workshops in Gynecology practices in a tertiary care hospital in Peshawar

Material and Methods: This was a cross-sectional descriptive study performed in the Department of Obstetrics and Gynecology at Lady Reading Hospital, Peshawar, Pakistan. From January 2018 to December 2018, four advanced laparoscopic workshops (of 3 days' duration) were arranged by the Department of Obstetrics and Gynecology. These workshops were designed to train practicing gynecologists on the fundamentals of various diagnostic and therapeutic laparoscopic procedures like visualization (of tubes, ovaries, uterus, and dye test), hysterectomy, cystectomies, salpingectomies, and adhesiolysis. Data related to the type, number of procedures, and complications (significant bleeding, re-opening, urological trauma, and gut perforation) were recorded before the introduction of the workshops (January to December 2017) and after the workshops (January to December 2019). The data were analyzed using SPSS- 23.

Results: In total, 391 laparoscopic procedures were done in 2018, of which 40 (10.23%) were therapeutic and 351 (89.76%) were diagnostic. After attending 4 workshops, the data from 2019 showed an increased number of both diagnostic and operative procedures. A total of 442 laparoscopic procedures were done, of which 66 (14.93%) were therapeutic and 376 (85.06%) were diagnostic. There was a 15% increase in the number of these procedures. The number of laparoscopic hysterectomies increased from 0 before to 16 after the training. No significant complications were observed before and after all these diagnostic and therapeutic procedures.

Conclusion: Advanced laparoscopic workshops provide an effective platform for training the gynecologists about minimally invasive surgical techniques. In our observation, the practicing gynecologists significantly increased the number of both diagnostic and therapeutic procedures after these advanced laparoscopic workshops.

Key Words: Advanced laparoscopic workshops, Therapeutic laparoscopic procedures, Laparoscopic hysterectomy

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INTRODUCTION

Over the past decade, laparoscopic surgery has become the gold standard for various surgical procedures. It has certain advantages, like the capability to reduce surgical trauma, reduce post-operative surgical pain, shorten the length of hospital stay and provide a safe and esthetically satisfying substitute to conventional open surgical methods¹. Indeed, laparoscopic surgery is considered the procedure of choice for cholecystectomy, appendectomy, colectomy, hys-

terectomy, and many more. It is linked with diminished postoperative pain, shorter hospital stays, quick recovery, and better cosmetics².

Many surgeons are interested in practicing laparoscopic techniques, but most of them lack expertise related to these procedures. Certain obstacles, such as recent technology, insufficient availability of training, concerns regarding the complications, and a lack of passion to negotiate learning curves make the transition to minimally invasive procedures challenging.

To teach practicing surgeons recent techniques, the concept of the workshops was introduced in 1977³. Workshops increase cognitive and psychomotor abilities. Regarding the introduction of laparoscopic techniques, the initial concerns over the adequacy of training grew after several reports of serious complications following the rapid and expansive adaptation of laparoscopic cholecystectomy^{4, 5}. Furthermore, due to the concerns regarding the suitability of laparoscopic procedures, short training courses need to be planned,

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especially to teach new surgical techniques. Expedient development in surgical techniques, as well as extensive application of endoscopic surgical skills, are needed to supplement the existing gynecological surgical techniques. The Royal Australian College of Obstetricians and Gynecologists and the Australian Gynecological Endoscopy Society have suggested that all gynecologists be appropriately trained in laparoscopic surgery.⁶

There are universally proven benefits of laparoscopy in terms of short hospital stays and early recovery. The need for laparoscopy is imminent in our setup to reduce hospital stays and prevent complications. This study is aimed to determine the impact of advanced laparoscopy workshops. The results of this study will have an impact on the need for further training in the field of laparoscopic techniques in gynecological setups.

MATERIAL AND METHODS

This was a cross-sectional descriptive study was done in the Department of Obstetrics and Gynecology at Lady Reading Hospital (LRH), Peshawar, Pakistan. LRH is one of the largest hospitals (1700 beds) in the province of Khyber Pakhtunkhwa. From January 2018 to December 2018, four advanced laparoscopic workshops (of 3 days’ duration) were arranged by the Department of Obstetrics and Gynecology. These workshops were designed to train practicing gynecologists on the fundamentals of various diagnostic and therapeutic laparoscopic procedures like visualization (of tubes, ovaries, uterus, and dye test), hysterectomy, cystectomies, salpingectomies, and adhesiolysis. Data related to the type, number of procedures, and complications (significant bleeding, re-opening, urological trauma, and gut perforation) were recorded before the introduction of the workshops (January to December 2017) and after the workshops (January to December 2019). Data related to the previous laparoscopic procedures were retrieved from the department’s registries, and a comparison was made with prospective data for the next year after the training. Data were analyzed using IBM SPSS-23.

RESULTS

In this study, we compared laparoscopic procedures before and after workshops. Before workshops in 2018, in our department, a total of 391 laparoscopic procedures were performed, of which 40 (10.23%) were therapeutic and 351 (89.76%) were diagnostic. Details of therapeutic procedures are given in Table-I. After conducting the workshops, there was an increased number of both diagnostic and therapeutic procedures. A total of 442 laparoscopic procedures

were performed, of which 66 were therapeutic and 376 were diagnostic. There was a 15% increase in the number of laparoscopic procedures. Table II shows different therapeutic procedures done after these workshops.

By looking into Table II, there is an increase in number as well as the addition of new procedures like laparoscopic hysterectomy, stage 4 endometriotic cystectomy, and dermoid cystectomies. Previously, we had patients who were candidates for total laparoscopic hysterectomies and other indications, but these procedures were performed less frequently because of a lack of expertise even though the latest laparoscopic equipment was available

Table 1: Therapeutic laparoscopic procedures before workshops. (n=40)

Procedure	Frequency	%
Salpingectomies	6	15%
Cystectomies	25	62.5%
Cyst aspiration	3	7.5%
Laparoscopic Ovarian Drilling	6	15%

Table 2: Therapeutic laparoscopic procedures after workshops. (n=66)

Procedure	Frequency	%
Salpingectomies	8	12.12%
Salphingoopherectomies	2	3.03%
Cystectomies	27	40.90%
Laparoscopic hysterectomies	16	24.24%
Cyst aspiration	2	3.03%
Biopsy	1	1.51%
Gonadectomy	1	1.51%
Plasma rich proteins ovarian injections	1	1.51%
Adhesiolysis	1	1.51%
Laparoscopic ovarian drilling	7	10.60%

DISCUSSION

Doctors in the field of surgery need to be knowledgeable and skillful, and they need to continuously develop and improve their skills to provide up to date care to patients⁷. A fundamental shift in the field of surgery occurred in the middle of the 1990s. A lot of surgeons realized the real benefits of laparoscopy and worked to upgrade their skills in this field. Many surgeons were of the view that laparoscopy was inferior to current open techniques and failed to convert their practices towards this goal. Learning new procedures is a part of surgical innovation and improvement, as well as the training of new surgeons. Training is certainly very important for learning laparoscopic skills. However, there are other aspects, and surgeon aptitude is one of these. Coaching is an important factor in influencing

the learning curve for laparoscopic training⁸. According to past research, post-residency training is very effective when using SAGES criteria⁹. Both didactic, as well as hands-on practices, are included in SAGES. According to Forgione et al.¹⁰ it is a combination that is effective in facilitating the acquisition of new surgical skills. According to O Cawich et al. there was an increase in the number and level of the surgical procedure after the introduction of a laparoscopic trained team, which is equitant to our results.¹¹ The difference in the study results was shown to be higher than ours. It could be because they were not performing laparoscopic surgeries before. Exposure and hands-on training under direct observation of experts played a pivotal role in improving the skills and confidence of our doctors. Our study showed the importance of providing training to surgeons in advanced laparoscopic techniques early in their careers to facilitate the acquisition. Based on the results of our study, it is recommended that surgical skills workshops continue to be a regular part of the curriculum in surgical residency programs. Laparoscopic skills are optimally acquired on an interval training schedule, which we also observed in our study¹². These workshops allow the residents to perform and master psychomotor skills repeatedly in a non-threatening environment without fear of failure or causing harm to the patients. Laparoscopic surgery has been replacing the open standard technique in several procedures. Advanced laparoscopic workshops provide an efficacious instrument for educating surgeons on minimally invasive surgical techniques. Participating surgeons significantly increased the number of procedures that they performed but also increased the number of other laparoscopic surgeries. Although, it is a single-center study which might limit its generalizability but still can be a starting point in introducing laparoscopy training programs in the hospitals for the continuous training of consultants and residents.

CONCLUSION

Advanced laparoscopic workshops provide an effective platform for training the gynecologists about minimally invasive surgical techniques. In our observation, the practicing gynecologists significantly increased the number of both diagnostic and therapeutic procedures after these advanced laparoscopic workshops.

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AUTHOR'S CONTRIBUTION

Following authors have made substantial contributions to the manuscript as under

Authors Contribution

Raees M: Conceived the idea, designed the study, did data collection, and manuscript writing

Hussain SS: Literature review, statistical analysis, editing

Zeb L: Supervised the study, final approval of the manuscript, bibliography

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.