

Re-Orientation Of Gynaecology Residents On Pelvic Surgical Anatomy Using Human Cadaver

Vidyadhar B. Bangal^{*}, Rajendra N.Wabale^{**}, Kunaal K.Shinde^{***}, Satyajit P.Gavhane^{***}

^{*}Professor Obst –Gynaecology, ^{**}Professor and Head Anatomy, ^{***}Assistant Professor Obst –Gynaecology, ^{***}Assistant Professor Obst –Gynaecology, Rural Medical College, Pravara Institute of Medical Sciences, Loni, Ahmednagar, Maharashtra. 413 736

Abstract : Background and Objectives: The residents of gynaecology should have sound knowledge on pelvic anatomy and have to be adequately trained on common surgical procedures. The training programme was conducted in the dissection hall of Anatomy department of Rural Medical college Loni .During residency, they may not receive adequate training on common surgical procedures for various reasons like shortage of cases, infrequent performance of certain procedures, inability of the faculty to give time ,attention for training in OT and fear of possible complications and medico legal litigations. Material and methods: Twelve residents in Gynaecology and two senior faculty members each from the department of Gynaecology and Anatomy participated in training programme. Five training sessions of dissection of a single human female cadaver ,each lasting for two and half hour duration, were conducted. Pretest and post test were performed with prevalidated and pre tested questionnaire and results compared to assess the impact of training. Level of satisfaction of residents about this innovative method of teaching and training was assessed through 7 point Likert scale. Results: Training programme resulted in significant improvement in the residents knowledge on pelvic surgical anatomy and common surgical gynaecological Procedures. Faculty members identified new insights into the interdisciplinary process of teaching . Conclusion: Surgical training using human cadaver was effective and feasible .It made the teaching process interactive and interesting. Residents expressed happiness about the innovative method of teaching.[Bangal V.B. et al NJIRM 2013; 4(5) : 145-148]

Key Words: Pelvic Surgical Anatomy ,Training In Gynaecological Surgery, Prosected Human Cadavers.

Author for correspondence: Dr.Bangal V. B. Department of Obstetrics and Gynaecology, Rural Medical College, Pravara Institute of Medical Sciences, Loni, Ahmednagar, Maharashtra. e mail-vbb217@rediffmail.com

Introduction: Good knowledge of pelvic surgical anatomy is essential for confident performance of safe gynecological surgery. Residents in Gynecology spend their time in learning various surgical procedures at different phases of their training programme.They learn by observing , assisting and then by performing various surgeries under supervision of senior colleagues and faculty members.¹ Due to long interval between the time of learning basic anatomy in first year of medical training to the entry in residency programme ,the residents have poor knowledge in the subject of anatomy. It adversely affects their learning ability ,surgical skill development and make them prone for surgical errors and complications.² With this background, need arose in re orientation of gynecology residents in pelvic surgical anatomy.Instruction courses in surgical anatomy for gynecology residents using prosected human cadavers were conducted by various workers in the past with satisfactory results . This re-orientation programme aimed at revising and improving the participants' knowledge and understanding of clinically relevant pelvic anatomy

on female cadaver and to assess the usefulness of this re orientation programme .

Material and Methods: An observational study was carried out in a Medical college situated in rural area of Maharashtra, India, in the academic year 2011-12 .Twelve Postgraduate students doing residency in Gynaecology, participated in the re-orientation programme, designed to revise the lower abdominal and pelvic surgical anatomy using female human cadaver . There were 6 residents from first year,4 residents from second year and 2 residents from third year of residency .Two faculty members each, from the department of Gynaecology and Anatomy participated as facilitator cum demonstrator in re-orientation programme. All residents enrolled in the programme were informed about the learning objectives and were guided about reading material in the form of clinical handbooks used for dissection in anatomy and the color atlas available in the central library of the college .The training schedule was adjusted as per the clinical duty arrangements of the residents. Pretest and post test were performed before every training session,

to assess the impact of training on the knowledge of the residents regarding various aspects of lower abdominal and pelvic surgical anatomy. The training programme was conducted in the dissection hall of Anatomy department of Rural Medical college Loni. Actual training session was conducted by senior faculty members of Anatomy and Gynaecology department. Training session started with brief introduction by facilitator, on the need and objectives of the training. It was followed by actual dissection of the human cadaver as per the training schedule. Residents were encouraged to participate in cadaver dissection. The faculty member made a running commentary on various anatomical and surgical aspects during the dissection. Each session lasted for two and half to three hours. Necessary surgical instruments and suture material were made available during each session. Residents were asked to give feedback about the usefulness of the re-orientation programme. Suggestions were invited to improve the contents and the conduct of the re-orientation programme.

Results: There was no drop out or absenteeism by any resident in any of the sessions. There was remarkable improvement in the performance of post test in regards to the knowledge of gross anatomy, surgical anatomy and common surgical procedures demonstrated during training programme. (Table 1)

Many residents gave feedback stating that the course refreshed their anatomy knowledge, helped them to understand principles of gynaecological surgery, improved their confidence level, reduced fear and apprehension regarding pelvic surgery. Residents expressed happiness regarding this newer teaching methodology. They suggested that the same programme be continued in future too. Residents suggested that pelvic floor dissection be included in the programme. (Table 2) Residents were overwhelmed with the quality of cadaver dissection and took photographs of various surgical landmarks for future reference. Some residents confessed that they had not performed dissection in their first year of medical training. Others said that the facilities were not

available or the dissection batches were too big resulting in crowding around dissection table during their first year of medical training. There was exchange of knowledge and ideas among faculty members from the department of anatomy and Gynaecology regarding further improvement of the re-orientation programme. Both were benefited by participation in the re-orientation programme. Faculty members from both the departments identified new insights into teaching issues with the interdisciplinary process of development of course curriculum and teaching. Residents developed interest in the learning process. It also helped in building up of the confidence level, removed apprehension and fear of performing the common surgical procedures. They felt that they could apply the training experience while actually performing or assisting the pelvic surgery.

Table: 1 Showing Details Of Trainees Performance At Pre And Post Test Evaluation

Pre and Post test score	No of students (%)	(%)
A) Pre test evaluation score		
a-Score below 50 %	04 (33)	33%
b-Score between 51-75 %	05 (32)	42%
c-Score above 75 %	03 (25)	25%
B) Post test evaluation score		
a-Score below 50 %	00 (00)	00
b-Score between 51 – 75 %	02 (17)	17%
c-Score above 75 %	10 (83)	83%

Table:2 Residents responses to feedback regarding training programme

Sr. No	Statement	Mean	SD
1	The training programme refreshed my knowledge of pelvic surgical Anatomy	2	1.3
2	I learnt "New anatomy" in the anatomy course	1.9	1.1
3	My understanding of common surgical	2.6	0.9

	procedures improved as a result of training		
4	Training will improve my ability to perform surgical procedures	2.7	1.0
5	Training has given me additional confidence for performing surgical procedures	2.2	0.8
6	The anatomy training course should be continued next year	1.4	1.1

Discussion: Although there have been major changes in modern gynecological surgical practices ,changing from conventional open surgery (Laparotomy) to minimally invasive surgery (Laparoscopy), there is ever increased need to orient the postgraduate students to basic surgical anatomy of pelvic organs and principles of conventional surgical procedures, before embarking on technically advanced endoscopic surgery.³ There have been various conventional modalities of training of postgraduate students like didactic lectures, conducting seminars, case presentations, teaching during ward rounds, use of videos on various surgeries, use of simulators and demonstration of various surgical procedures in operation theatre. For the reasons like inadequate patient turnover, fear of litigations in case of surgical complications ,postgraduate students do not get sufficient opportunity to perform adequate number of surgeries in operation theatre. As a result ,they lack the confidence and the skill required for performing the surgery independantly in later life. For the above mentioned reasons, there is need to provide surgical training to postgraduate students outside the operation theatre. The re orientation on surgical anatomy and demonstration of various pelvic surgical procedures can be performed on human cadaver in the dissecion hall of anatomy department of every medical college. The faculty from anatomy department can be of great help in conducting cadaver dissection. They too are benefited by learning various clinical and surgical aspects of anatomy.(clinical anatomy)

Re-orientation programme during residency provided unique opportunities for postgraduate students to revise and learn through demonstration of surgical anatomy of the reproductive organs and their support structures ,as well as the vascular ,urologic and gastrointestinal systems.It also gave opportunity to residents to observe the steps of surgical procedures from close distance ,which is not possible at operation theatre. All residents were pro active during re orientation programme.he progress in medical sciences and health care professions require specialised anatomical knowledge. The Centre of Clinical Anatomy endeavours to meet the international demands for postgraduate and continuing education by providing: clinically orientated lectures, demonstration of specifically dissected anatomical specimens, hands-on workshops and professional surgical training course, anatomical specimens for research purposes. education for medical doctors and health care professionals, instructional courses for medical technology and engineering, training courses for specific surgical procedures, development and testing of surgical instruments and implants. Present re-orientation programme aimed at revising and improving the participants' knowledge and understanding of clinically relevant pelvic anatomy on prosected female cadaver. The anatomical structures commonly involved in routine gynecological and radical cancer surgery were reviewed including bladder, bowel, ureter, autonomic nerves and major blood vessels.⁵ Surgical anatomy relevant to radical gynaecological cancer surgery, bladder neck surgery, hysterectomy, ovarian masses, retroperitoneal exploration of the pelvic side wall, aortic and pelvic lymphadenectomy and prevention of damage to the autonomic nervous system were covered. During these sessions a number of surgical procedures were performed by all participants with the supervision of experienced facilitators. A well structured orientation cum training programme like this is cost effective and does not require much logistic support. Senior faculty members ,one each from the Anatomy and Gynecology department ,who are interested in teaching postgraduate students can be spared for

short duration for conducting the orientation programme. This teaching activity should become part and parcel of post graduate training programme in every teaching institute.

Conclusion: There is need to conduct re-orientation programme on pelvic surgical anatomy on cadaver at different phases of residency in Obstetrics and Gynecology .Faculty members have to take initiative in organizing such programmes with the help of colleagues from dept of Anatomy. Both the departments get benefited through such programme. Overall learning curve for pelvic surgery becomes smooth and short. Adding certain training components like information on different suture materials ,suturing techniques and surgical knots at early phase of training help them to develop basic surgical skills.

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