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ORIGINAL ARTICLE

Outcome of Difficult Pelvis Surgeries done by Gynecologist versus General Surgeons

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ABSTRACT

Objective: To evaluate the outcomes of difficult pelvis surgeries done by gynecologist versus general surgeons.
Study Design: Retrospective study
Place and Duration of Study: Department of Surgery, CMH Kharian Medical College, Kharian, Department of Surgery, Wah Medical College POF Hospital, Wah Cantt and Ghulam Muhammad Mahar Medical College, Teaching Hospital, Sukkur from 1st August 2015 to 31st July 2018.
Methodology: Fifty professionals (who conducted 500 pelvic surgeries) were included either from the surgery or obstetrics gynecology departments. The study was initiated post-consent of each participant. Surgeons National Surgical Quality Improvement Program (NSQIP) data base software was applied for designing the questionnaire. The NSQIP database collects information from 10 perioperative-variables, as well as preoperative-comorbidities, parity, previous history of pelvic surgery, ureteral obstruction and vesico-vaginal fistula, intraoperative-variables, as well as 30-day mortality and morbidity outcomes including the rate of reoperation and re-admission. Other information regarding ASA classification and malignancy were also collected.
Result: There were 341 procedures performed by surgeons while 159 procedures were conducted obstetrics gynecologists' surgeons. The mean age of the patients was 62.5±11.5 years. The ASA classification presented higher number of surgeries in class 1 and 2 of the ASA class. The apical procedures as Sacrospinous and Sacrocolpopexy were performed highest by obstetrics gynecologists. The 30 days postoperative complication rate was increased significantly in the obstetrics gynecologists group than the surgeons.
Conclusion: Prolapse surgery completed by a surgeon is linked with lower odds of 30-day postoperative-complications than the one performed by the obstetrician-gynecologist.
Keywords: Outcome, Pelvis surgery, Prolapse surgery, Complication

INTRODUCTION

Symptomatic prolapse of pelvic organ is a common condition attributed by 25-35% of the females worldwide. Due to the increasing need in pelvic surgeries various surgeons coming from different training background performs this procedure. With the advancement of the science there is an escalated emphasis in enhancement of patient's early recovery post-surgical procedure. Women are scored as one out of five which suffers from the pelvic floor disorders and requires surgical interventions for the treatment and management.[1-5]

Every year around 300 thousand procedures are performed for pelvic organ prolapses surgeries. The procedures are performed by various medical professionals including urogynecology surgeons, general surgeons as well as obstetrics gynaecologists.[5,6] There has been a very less evidence-based research on the identification of complication rate, pain and recurrence rate in context to pelvis surgeries.[7]

There are multiple approaches for the performance of pelvic prolapse surgeries including vaginal and laparoscopic approaches combined with mesh or without mesh formation.[8] There are two common native tissue procedures for correction of apical procedures including sacrospinous ligament-fixation and the uterosacral ligament-suspension. Women suffer from post-operative pain specifically in the later procedures. The pain however subsides within the time of 6 weeks after operation.[8-10]

Due to increase in the pelvis surgeries various surgeons met from diverse set of training and specialization have initiated in performing the procedure. It is every important to know the outcomes of pelvis procedures conducted by surgeons and obstetrics gynecologist for identifying the variance in outcomes and treatment benefits [10]. The present study was conducted for comparing the pelvis surgeries within gynecologist vs general surgeons for attaining the same objective as mentioned above.

MATERIALS AND METHODS

This was a retrospective study conducted at Department of Surgeries and Department of Obstetrics & Gynecology, CMH Kharian Medical College, Kharian and Ghulam Muhammad Mahar Medical College, Teaching Hospital, Sukkur from 1st August 2015 to 31st July 2018. There were 15professionals (who conducted 150 pelvic surgeries) included in this study either from the surgery department or from the obstetrics gynecology department. The study was initiated post consent of each participant. Surgeons National Surgical Quality Improvement Program (NSQIP) data base software was applied for designing the questionnaire. The NSQIP database collects information from 10 perioperative-variables, as well as preoperative-comorbidities, parity, previous history of pelvic surgery, ureteral obstruction and fistula, intraoperative-variables, as well as 30-day mortality and morbidity outcomes including the rate of reoperation and readmission. The prolapse pelvic surgical procedure information as well as apical procedure containing uterosacral ligament suspension, sacrospinous ligament fixation, and sacro-colpopexy and other procedure including anterior colporrhaphy, posterior colporrhaphy, combined anterior-posterior colporrhaphy, and transvaginal mesh were also detailed. Women undergoing concomitant-mid-urethral slings were also identified. Other information regarding ASA classification and malignancy were also collected. Demographic details including age, body mass index, type of procedure opted, operational time were also documented.. Pelvic surgeries including abdominal hysterectomy and vaginal hysterectomy were opted according to the clinical history and requirements of procedure. The professionals were separated within two groups, where first group was confined to surgeons and second group to obstetrics gynecologist. Results were compared for the outcomes of pelvis surgery performed in context with above mentioned variables. Data was analyzed using SPSS version 26.0 where Chi square test was performed. P value <0.001 was taken as significant.

RESULTS

There were 341 procedures performed by surgeons while 159 procedures were conducted obstetrics gynecologists' surgeons. The mean age of the patients was 62.5±11.5 years. There was insignificant difference within the BMI of both groups. The ASA classification presented higher number of surgeries in class 1 and 2 of the obstetrics gynecologist group while the significant difference within the ASA class 3 between two groups. Majority of the surgeries underwent hysterectomy were performed by obstetrics gynecologist's surgeon (Table 1).

The apical procedures as Sacrospinous and Sacrocolpopexy were performed highest by obstetrics gynecologists with a significant ($p<0.05$) variance (Table 2). Anterior colporrhaphy, posterior colporrhaphy, were highest in obstetrics gynecologists whereas combined anterior-posterior colporrhaphy was highest in surgeons group. Transvaginal mesh was also detailed by obstetrics gynecologists than surgeons. Women undergoing concomitant-midurethral slings were also more in obstetrics gynecologists' group than surgeons' group. The operation time was also higher in obstetrics gynecologists' group (Table 3).

The 30 days postoperative complication rate was increased significantly in the obstetrics gynecologists group than the surgeons. However, the reoperation rate was higher in obstetrics gynecologists in comparison with the surgeons. There was no significant variance on the readmission rate between both groups [$P<0.001$] (Fig. 1)

Table 1: Demographic and surgical features of patients

Characteristic	Overall (n=500)	Surgeon Surgeries (n=341)	Obstetrics gynecologist surgeries (n=159)	*P* value
Mean age (years)	62.5±11.5	62.6±12.1	62.5±11.0	0.84
BMI (kg/m^2)	29.15± 5.55	29.1±5.5	29.2 ±5.6	0.25
ASA class				
1	53 (10.6%)	32 (9.38%)	21 (13.2%)	<0.001
2	317 (63.4%)	214 (62.7%)	103 (64.7%)	
3	130 (26)	95 (27.8%)	35 (22%)	
Smoker	38 (7.6)	25 (7.3%)	13 (8.17%)	0.29
Hysterectomy				
None	375 (75%)	264 (77.4%)	111 (69.8%)	<0.001
Open	125 (25%)	77 (22.6%)	48 (30.2%)	

Table 2: Types of apical procedures performed

Apical procedures	Overall (n=500)	Surgeon Surgeries (n=341)	Obstetrics gynecologist Surgeries (n=159)	*P* value
None	297 (59.4%)	203 (59.5%)	94 (59.1%)	<0.001
Uterosacral	77 (15.4%)	62 (18.1%)	15 (9.4%)	
Sacrospinous	117 (23.4%)	72 (21.1%)	45 (28.3%)	
Sacrocolpopexy	9 (1.8%)	4 (1.17%)	5 (3.1%)	

Table 3: Primary outcomes of pelvis surgeries done by gynecologist versus general surgeons

Characteristic	Overall (n=500)	Surgeon Surgeries (n=341)	Obstetrics gynecologist surgeries (n=159)	*P* value
None	70 (14.1)	47 (13.7)	24 (14.9)	
Anterior	22 (4.3)	18 (5.2)	4 (2.3)	
Posterior	32(6.4)	25 (7.5)	6 (3.9)	
Combined APR	354 (70.8)	230 (67.4)	124 (78.1)	
Mesh	22 (4.4)	21 (6.1)	1 (0.8)	
Obliterative procedure	9 (1.7)	8 (2.3)	1 (0.6)	<.001
Sling	114 (22.7)	87 (25.7)	26 (16.2)	<.001
Operative period (minutes)	105.1 (65.3–155.0)	110.1(68.0–157.1)	93.6 (64.1–149.1)	<.001
Length of stay (days)	1 (1–1)	1 (0–1)	1 (1–2)	<.001

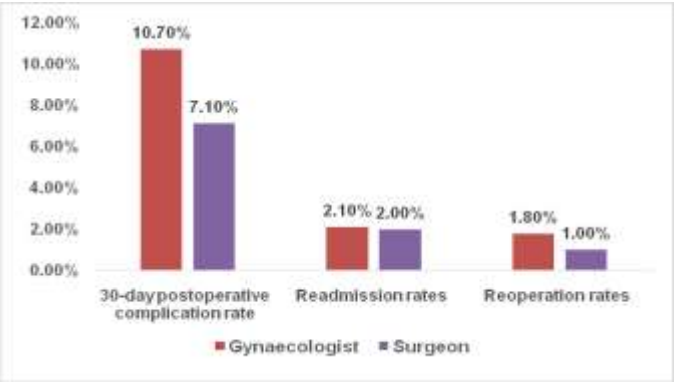

Fig. 1: Secondary outcomes of pelvis surgeries done by gynecologist vs general surgeons

DISCUSSION

The standard differences in the prolapse recurrence rates indicate a major variation in the surgeon practices.[11,12] The present study has highlighted the same where obstetrics gynecologist surgeon has a better outcome of pelvic surgeries than general surgeons. Tseng et al[13] have published the up-skilling of various medical surgeons in context to pelvis surgeries resulting in bringing the prolapse recurrence within the accepted range.

The procedure which was opted for the pelvis surgery was least invasive and having increased recovery time. There was also lower risk of apical recurrence rate and comparative complication rates. The similar results have been reported in other research as well; where complication like hemorrhage, urinary tract infection buttock pain, sciatic nerve damage, urinary retention, rectal injury, vault infection, and ureteric injury have been reported minimally in cases operated by surgeons.[14-17]

There is also evidence from the literature that most of the pelvis surgeries are conducted by surgeons being in learning phase with various competency levels. Post training data has demonstrated apical suspension rate as 86% which could be increased up to 100% depending upon the competency level of a surgeon.[18-21]

CONCLUSION

Prolapse surgery completed by a surgeon is linked with lower odds of 30-day postoperative-complication than the one performed by the obstetrician-gynecologist.

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