

Original Article**Assessment of safety of vaginal repair of pelvic organ prolapse in elderly at Birat Medical College Teaching Hospital, Nepal****Bhanubhakta Neupane*, Gyanendra Man Singh Karki, Hanoon Pokhrel, Ashim Adhikari**

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Article Received: 16th November, 2021; Accepted: 24th December, 2021; Published: 31st December, 2021**DOI: <https://doi.org/10.3126/jonmc.v10i2.41580>****Abstract****Background**

Pelvic organ prolapse in elder women causes sufficient morbidity and decreased quality of life. Despite age related comorbidities and decreased physiological capabilities, elder women with pelvic organ prolapse may be benefitted by surgical repair via vaginal route. The purpose of this study is to evaluate the safety of vaginal repair of pelvic organ prolapse in women of age 60 years or older.

Materials and Methods

This hospital based analytical study was carried out in Birat Medical College Teaching Hospital from September 2020 to September 2021. Fifty-four patients aged 60 years or older with third and fourth degree pelvic organ prolapse were recruited for the study. Necessary information was obtained by self-structured questionnaire and entered into Microsoft Excel. Data was analyzed by SPSS version 22.


Results

Fifty-four women with third or fourth degree prolapse with cystocele and rectocele underwent vaginal hysterectomy with anterior colporrhaphy with posterior colpoperineorrhaphy. No organ injury occurred during operation. There was no mortality or severe intraoperative or postoperative complications.

Conclusion

Vaginal hysterectomy with pelvic floor repair for pelvic organ prolapse in women of 60 years or older is safe.

Key words : *Pelvic Organ Prolapse, Rectocele, Vaginal Hysterectomy*

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Citation

Neupane B, Karki GM, Pokhrel H, Adhikari A, Assessment of safety of vaginal repair of pelvic organ prolapse in elderly at Birat Medical College Teaching Hospital, Nepal, JoNMC. 10:2 (2021) 20-25.



Introduction

Pelvic organ prolapses (POP) means the descent of the pelvic organs into or outside the vaginal canal [1]. Advancing age is one of the risk factors for pelvic organ prolapse [2]. Pelvic organ prolapse is widely prevalent in Nepal, affecting 6-37% of women [3]. In Nepal, individuals over 60 years of age are considered elderly [4]. Based on the level of descent of the uterus, POP can be graded as first degree if the uterus sags into the upper vagina, second degree if the uterus descends to the introitus, third degree if the cervix is outside the introitus, or fourth degree if the uterus and cervix are completely outside the introitus [5]. Symptoms may be vaginal bulge feeling, problems with voiding or incontinence for stool and /or urine. In more advanced stages, POP may lead to incomplete emptying of the bladder with the result of hydronephrosis and even acute renal failure due to kinking of the ureters.

Surgeons are often reluctant to perform major surgical procedures in elderly patients because of associated chronic illnesses and presumed limited life expectancy and because of the perception that elderly patients require prolonged and extensive hospital care. Advances in surgical and anesthesia techniques have made it possible to perform major surgical procedures in elderly individuals [6]. The least invasive option for POP treatment is pelvic floor physical therapy (PFPT). PFPT may be useful for patients with first- and second-degree POP, but it cannot be advised for patients with third- and fourth-degree POP [7]. Pessary therapy is an option for patients with POP refusing surgery or being unsuitable candidates for surgery. In some women, it is not tolerated. Discharge and vaginal injuries are frequent. Therefore, surgical repair of the POP may be necessary in these older women to get rid of symptoms and complications of POP. The transvaginal approach of POP repair is attractive in elderly women as it is less invasive and allows access to all support defects. Surgical repair of pelvic organ prolapse can be performed effectively and safely in elderly women [8]. Usually, third- and fourth-degree prolapse require surgery.

Studies have demonstrated the acceptable safety profile of vaginal repair in the elderly [9,10]. No intraoperative or postoperative complications occurred in elder women who underwent POP repair by vaginal approach [11]. A retrospective analysis showed a high surgical safety of operations for pelvic organ prolapse in elderly patients [2]. Studies assessing the morbidity and mortality of gynecologic surgery in older women reveal minimal [12] or no increase

in mortality attributable to age alone, but related more to underlying disease and comorbidities [13]. A prospective study of vaginal prolapse repair in women over 75 years demonstrated no systemic complications related to anesthesia or surgery [10]. Age alone should not be an exclusion criterion for any surgical procedure in elderly patients [14,15]. Regardless of age, each patient should be assessed individually to calculate the risk-benefit of any treatment [16]. In this study, we investigated the intraoperative and immediate postoperative complications following vaginal hysterectomy with pelvic floor repair for pelvic organ prolapse in elderly women in Birat Medical College Teaching Hospital.

Materials and Methods

This is a hospital based analytical study carried out in Birat Medical College Teaching hospital from September 2020 to September 2021 (one year) after the approval from Institutional Review committee (IRC) of Birat Medical College Teaching Hospital (IRC-PA-072/2077-78). Informed written consent was taken from patients before enrolling into the study. Women aged 60 years or older with third and fourth degree uterovaginal prolapse with cystocele and rectocele were included in the study. Third degree pelvic organ prolapse (POP) was diagnosed if the cervix is outside the introitus, and fourth degree POP was diagnosed if the uterus and cervix are completely outside the introitus. Patients unwilling for surgical repair of POP, known or suspected genital malignancy were excluded from the study. All the patients fulfilling the inclusion and exclusion criteria over the period of one year were included for study by consecutive sampling technique. We retrospectively analyzed the hospital data for previous two years, i.e. 2018 A.D. and 2019 A.D. and the average number of cases of vaginal hysterectomy for pelvic organ prolapse in women aged 60 years or more was 62 per year. On this basis, minimum number of sample size over one year of period was taken as 50. But we could recruit 54 patients in one year of study period. Ultrasound examination of pelvis and pap smear was done to rule out any genital pathology. Any cases of hypertension or diabetes mellitus were treated. All participants underwent vaginal hysterectomy with pelvic floor repair (anterior colporrhaphy and posterior colpoperineorrhaphy) with standard technique.

All the surgeries were performed under spinal anesthesia. Indwelling Foley catheter was inserted at the end of operation and it was removed on second or third operative day. If



patients were unable to pass urine after removal of Foley catheter, urinary bladder was re-catheterized and asked them to remove it after three days at home. If postoperative hemoglobin was less than 8 gm%, blood transfusion was done. Except demographic variables, total operating time, intraoperative complications like excessive bleeding requiring blood transfusion, bladder injury, and rectum injury, postoperative complications like fever, abdominal distension, post-operative bleeding, intensive care unit (ICU) admissions, re-catheterizations and duration of hospital stay were taken in to account. Relevant information was gathered by using self-structured questionnaire and all data were entered into Microsoft Excel and statistical analysis was done by using SPSS version 22.

Results

During the above-mentioned study period, 126 patients underwent vaginal hysterectomy with anterior colporrhaphy with posterior colpoperineorrhaphy in Birat Medical College Teaching Hospital and 54 patients fulfilling the inclusion criteria were recruited for the study. The mean age was 67.46 ± 5.22 years ranging from 60 - 81 years. The mean weight was 55.90 ± 4.25 kg, ranging from 52-70 kg. The mean height was 151.88 ± 3.14 cm, ranging from 144-160 cm. Age distribution is shown in Table 1.

Table 1: Age distribution. (n=54)

Age (years)	Number	Percentage
60-69	26	48.15 %
70 - 79	21	38.88 %
80 or above	7	12.96 %
Total	54	100 %

All 54 patients were multipara. Eight patients were para two, 20 were para three, 11 were para four, six were para five and nine were para six (Figure 1)

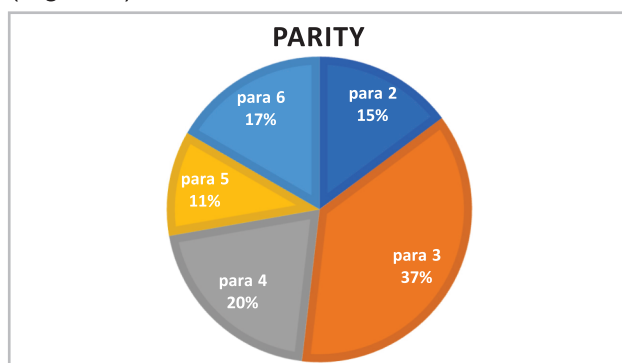


Figure 1: Pattern of parity (n=54)

All patients had complaint of something coming out from vaginal introitus for variable period.

Thirty four (62.96%) patients had associated urinary symptoms like difficulty in passing urine and stress urinary incontinence, and 20 (37.04%) had difficulty in passing stool for which manual repositioning of posterior vaginal wall was required.

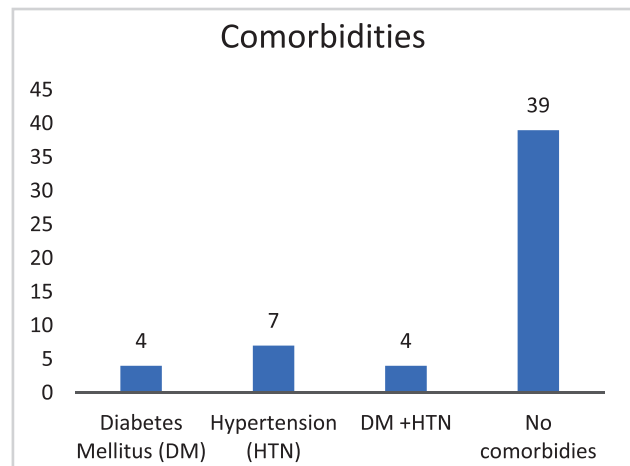


Figure 2: Associated Comorbidities (n=54)

Fifteen patients (27.77%) had associated medical comorbidities, four had diabetes mellitus, seven had hypertension and four had both (Figure 2).

Out of 54 patients, 48 (89%) had third degree and 6 (11%) had fourth degree uterovaginal prolapse with cystocele and rectocele (Figure 3). Decubitus ulcer was present in six patients, whom were operated after treating it.

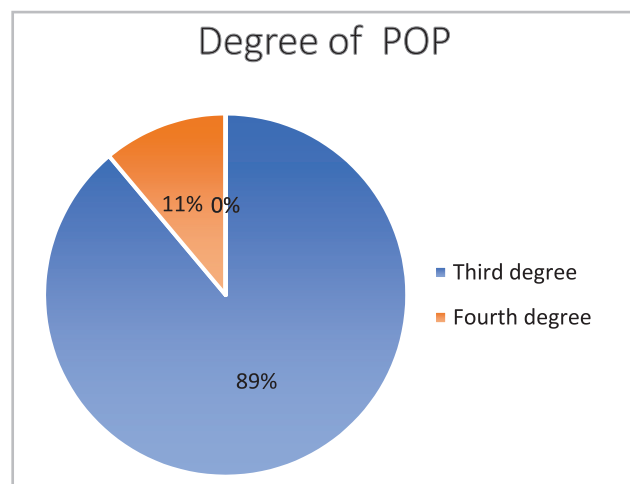


Figure 3: Pattern of degree of POP (n=54) POP= Pelvic Organ Prolapse

All operations were done under spinal anesthesia. None needed conversion to general anesthesia. The mean operating time was 55.11 ± 9.77 minutes ranging from 38 - 80 minutes. The mean total postoperative hospital stay was 3.64 ± 0.67 days, ranging from 3 - 5 days. Thirty-two (59.26%) patients stayed at hospital for three

days, 10 (18.51%) patients stayed for four days and 12 (22.22%) patients stayed at hospital for five days after operation (Figure 4).

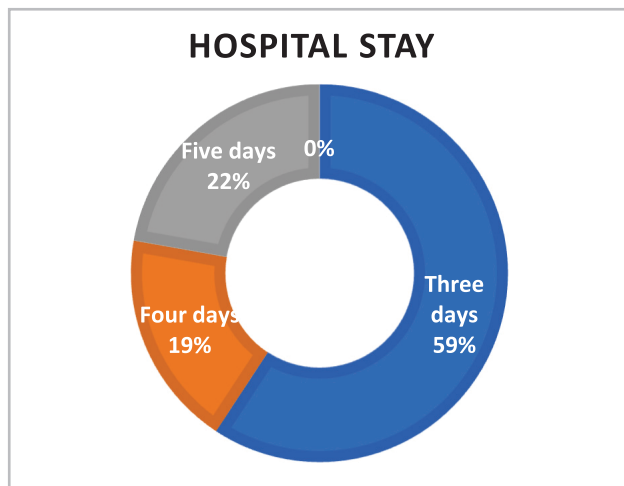


Figure 4: Postoperative hospital stays in days (n=54)

Table 2: Complications (n=54)

Complications	Number	Percentage
Excessive bleeding during operation	2	3.70%
Postoperative fever	3	5.55 %
Postoperative vomiting	5	9.25%
Mild abdominal distension	5	9.25 %
Need to re-catheterization	5	9.25%
Intraoperative organ injury	0	0%
Blood transfusion	6	11.11%
Need to ICU Admission	0	0%
Conversion to laparotomy	0	0%
Mortality	0	0%

ICU=Intensive Care unit

Intraoperatively, two patients suffered excessive bleeding. There was no associated organ injury. On postoperative period, three had low grade fever (up to 100 Degree Fahrenheit), five had vomiting which was managed with antiemetics and five had mild abdominal distension. After removal of Foley catheter on second or third postoperative day, five patients had difficulty in passing urine and urinary bladder was re-catheterized for three more days (Table 2). No patient needed admission in intensive care unit (ICU) after operation due to untoward surgical or anesthesia complications. Blood transfusion required in six patients after operation. There was no conversion to laparotomy during operation. There was no mortality during hospital stay.

Discussion

Pelvic organ prolapse is a common problem among older women. Advanced age is associa-

ted with a high prevalence of comorbidities like hypertension and diabetes mellitus that can lead to restrictive use of surgical treatment [17]. In our study, 27.77% (15/54) of patients had hypertension, diabetes mellites or both. Surgery is the definitive treatment of pelvic organ prolapse (POP) and it is a viable treatment option even in elderly women [18]. Age alone is a poor predictor of postoperative functional recovery suggesting that physiological age rather than chronological age should be considered in surgical planning [1]. Patient comorbidities and not simply biological age should be considered when attempting surgery as there is no specific age cutoff for anesthesia [7]. Gerten LA et al (2008) found that older women undergoing pelvic floor surgery for pelvic organ prolapse have operative risks similar to those of younger women. Women older than 80 years may have satisfactory outcomes and fewer complications with a vaginal repair of POP [19].

Rzepka J et al (2010) found no intraoperative and early complications among 11 women aged 75 years or more who underwent surgical repair for third or fourth stage POP [20]. Similarly, among 305 women aged 65 years or more who underwent surgical correction of POP, only two (0.6%) had urinary bladder injury and two had vaginal hematoma [18]. In a retrospective study including 72 women aged 75 years or more who underwent surgical correction of POP, there were four (5.6%) severe complications (two bowel injuries, one bleeding requiring blood transfusion, one resuscitation) [19]. Tibi B et al (2019) analyzed the outcome of 85 patients aged 70-80 years who underwent surgical repair for various stages of POP. Intraoperative complication was zero and postoperative complications rate was 11 (12.9%). There was no incidence of major organ injury or perioperative mortality [21]. In a retrospective study by Gabriel B et al (2010) including 62 women aged over 80 years who underwent POP repair. An intraoperative complication was observed in only one patient (1.6%), who had blood loss (>500 ml), but not requiring blood transfusion. Importantly, major complications requiring the patient to be transferred to the intensive care unit (ICU), or the need for surgical revision were not observed during the early postoperative period. Two (3.2%) had urinary tract infection, 11 (17.7%) had moderate to severe pain [14]. In 63 patients aged 80 years or more who underwent vaginal hysterectomy with anterior colporrhaphy and posterior colporrhaphy for pelvic organ prolapse, no major intraoperative and postoperative complications occur. No mortality occurred [22].



In our study, two patients suffered excessive bleeding requiring blood transfusion. There was no associated organ injury. On postoperative period, three had low grade fever which subsided itself. Five had vomiting which was managed with antiemetics and five had mild abdominal distension which subsided later on. No patient needed resuscitation. No patient needed to conversion to general anesthesia from spinal anesthesia. No participant needed ICU admission after operation. Blood transfusion required in six patients after operation. No hematoma at surgical site observed during hospital stay. There was no conversion to laparotomy during operation. There was no perioperative mortality. It signifies that vaginal hysterectomy with pelvic floor repair for POP can be performed with minimal or no complications in elder women.

Regarding total operative time and period of postoperative hospital stay, data are comparable with our study. In a retrospective study of 72 women aged 75 years or more who underwent surgical repair for POP, mean length of hospital stay was 4.6 ± 1.97 days, and mean operating time was 75 minutes [19]. In another study, the mean operating time was 85.2 ± 24.2 minutes and mean hospital stay was 3.83 days in 85 patients of age 70-80 years who had surgical repair of various stages of POP [21]. Sixty-two women aged over 80 years underwent POP repair and the mean operative time was 74.4 ± 27.3 min [14]. In another retrospective study, 85 women with mean age 84.38 years had surgical repair of POP and the mean length of surgery was 81 minutes and the mean length of hospital stay was 7.7 ± 3.9 days [16]. In our study, the mean operating time was 55.11 ± 9.77 minutes ranging from 38 - 80 minutes. The mean total hospital stay was 3.64 ± 0.67 days, ranging from 3-5 days. These findings suggest that elder women do not need prolonged hospitalization after surgery and operating time is not much longer.

Conclusion

Vaginal hysterectomy with pelvic floor repair for third- or fourth-degree pelvic organ prolapse is safe in older women aged 60 years or more. Older women with pelvic organ prolapse should be offered for surgical repair via vaginal route.

Acknowledgements

We would like to thank all the participants of this study. We are also very thankful to the Department of Obstetrics and Gynecology of Birat Medical College Teaching Hospital for the help and support to conduct this study.

Conflicts of interests

We declare no conflict of interest.

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