

## Is Advanced Age a Restriction in Urogynecological Operations?

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### Article History

Received 26 July 2021

Accepted 08 Oct 2021

Published Online 15 Jan 2022

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**Abstract:** Recent studies show an increase in pelvic floor disorders with the increasing advanced-age population. Comorbid chronic diseases in the advanced-age population increase the incidence of mortality and morbidity in surgical options, which are effective treatment methods for pelvic floor disorders. We analyzed the feasibility, reliability and outcomes of urogynaecology surgeries performed due to pelvic floor disorders in our study. This retrospective study analysed all females who had undergone any surgical operation for pelvic floor disorders at Atatürk University, Department of Obstetrics and Gynecology between January 2010 and December 2019. Only females over 65 years of age were included in the study. The data on the patients' age, gravida, parity, chronic diseases and degree of pelvic organ prolapse were obtained from medical records. Prolapse was assessed using the POP-Q grading system. The type of surgical procedures, operative parameters, and intraoperative or postoperative complications were determined from the records. Of 105 patients included in the study, the mean age was calculated as 70.32±4.59 years (range, 65-82 years), and body mass index (BMI) was calculated as 27.4±4.44 kg. Intraoperative blood loss exceeding 500 ml was observed only in four of 105 patients. No adjacent organ injury was observed in any of the patients during the operation. Only one case of hematoma at the sixth postoperative hour was observed, while three patients (2.86%) had recurrence in the postoperative follow-up period. We advocate that age should not be a restriction for the surgical treatment of pelvic floor disorders if patients are appropriately selected and operated on by a team of experts. © 2022 NTMS.

**Keywords:** Urogynaecology; Pelvic Organ Prolapse; Geriatrics; Advanced Age; Complication.

## 1. Introduction

Longevity is significantly increasing all over the world (1). In the United States, regular data recording systems calculated the total population growth rate as 9.7%, whereas the population over 65 years of age increased by 15.1% between 2000 and 2010 (2).

This rapid increase in the geriatric population brings with it many problems, including pelvic floor disorders. A study has shown that the proportion of women with pelvic floor prolapse increases with age (26.5% in women aged 40-59, 36.8% in women aged 60-79, and

49.7% in women over 80 years) (3). Pelvic floor disorders (PFD), which are common in women over 65 years of age, have necessitated correct evaluation and treatment of the disease (2).

Surgery is the most effective treatment method in symptomatic PFD (4). However, most women in this age group have at least one chronic disease, and it is well known that morbidity and mortality increase with advanced age. Surgical intervention may result in poor outcomes in advanced-age patients due to the risks it poses (4, 5). The literature is not clear on the consequences that urogynaecology surgery-related risks bear for the very elderly population, the increased risks, and whether these risks are age-specific factors.

The aim of this study was to determine perioperative adverse events in patients undergoing urogynaecology surgery, to demonstrate the effect of preoperative functional capacity on these events, and to analyse the feasibility, reliability and outcomes of surgical treatment for pelvic organ prolapse in women aged 65 years and over.

## 2. Material and Methods

All females who had undergone any surgical operation for pelvic floor disorders at Atatürk University, Department of Obstetrics and Gynecology between January 2010 and December 2019 were retrospectively analysed. The study was initiated after approval was obtained from the Atatürk University Faculty of Medicine Local Ethics Committee. The institutional ethics committee of our university hospital appropriated the retrospectively designed procedure, and informed-consent was surrendered (B.30.2.ATA.0.01.00/138). Research and Publication Ethics have been complied. Only females over 65 years of age were included in the study. The data on the patients' age, gravida, parity, chronic diseases and degree of pelvic organ prolapse were obtained from their medical records. The POP-Q grading system was used for prolapse assessment. The type of surgical procedures, operative parameters, and intraoperative or postoperative complications were also determined from the records. All patients had undergone pelvic examination, ultrasonography and cervical smear tests. Prior to the operation, the patients with symptomatic grade 2, 3 and 4 disease were discussed at the surgery council, and the type of surgery was decided. All patients were provided with the necessary information and signed informed consent forms before undergoing surgery. The medical records revealed that all patients received prophylactic antibiotics, low-molecular-weight heparin and compression stockings before the operation.

Major vascular or organ injuries and blood loss exceeding 500 ml during the operation were considered intraoperative complications, while embolism, abscess and hematoma development were accepted as postoperative complications. Failed first voiding trial after catheter removal or residual urine volume of 200 ml or more in the bladder was evaluated as postoperative urinary retention (6).

The patients were also called for annual control visits after the 1st, 6th and 12th postoperative month follow-ups. Recurrence was defined as the perception of prolapse described by the patient.

### 2.1. Statistical Analyses

The data were analysed using IBM SPSS 20 statistical analysis programme and presented as mean, standard deviation, median, minimum, maximum, percentage and number.

## 3. Results

The study included 105 patients with a mean age of  $70.32 \pm 4.59$  years (range, 65-82 years) and a body mass index (BMI) of  $27.4 \pm 4.44$  kg. A total of 48.7% had hypertension, 12.38% had heart disease, and 18.1% had diabetes mellitus. Demographic data of the patients and perioperative variables are shown in Table 1. Vaginal surgical procedures were found to be preferred in 88 of the patients (83.81%). Hysterectomy was previously performed, and the operation was planned due to cuff prolapse in 17 patients (16.19%). The surgical procedures performed in the patients are shown in Table 2. There was no significant difference between the surgical techniques.

Intraoperative blood loss exceeding 500 ml was observed only in four of the 105 patients. No adjacent organ injury was observed in any of the patients during the operation. Hematoma was observed in one case at the sixth postoperative hour, but no surgical revision was required. Regression of the hematoma was observed during the clinical follow-up of the patient. The records revealed that three patients (2.86%) had recurrence during the postoperative follow-up period. Preoperative evaluation showed that these were Grade 4 recurrences according to the POP-Q grading system- two patients had undergone only vaginal hysterectomy, and one had undergone a vaginal hysterectomy with sacrospinous fixation. One patient underwent a second surgical intervention. The other two recurrent patients were trained for pessary use. Intraoperative and postoperative complications are shown in Table 3.

**Table 1:** Demographic data of the patients and perioperative variables.

Variables	Mean ± SD	Median (Min-Max)
Age	70.32±4.59	70 (65–82)
Duration of surgery (min)	112.02± 34.11	110 (50–240)
Preoperative Hb (g/dl)	13.53±1.54	13.7 (9.6–16.3)
Postoperative Hb (g/dl)	12.08±1.45	12.1 (9.3–16.3)
BMI	27.4±4.44	26.2 (19.9–38)
Parity	3.14±1.53	3 (0–9)
	n	n %
POP-Q stage		
2	11	10.48
3	55	52.38
4	39	37.14
Presence of hypertension	51	48.57
Presence of heart disease	13	12.38
Presence of diabetes mellitus	19	18.10

Hb: haemoglobin concentration, BMI: body mass index

**Table 2:** Surgical procedures performed in the patients.

	n	n %	
Anterior colporrhaphy	68	64.76	
Posterior colporrhaphy	42	40.00	
Sacrospinous fixation	35	33.33	
Surgical method	Abdominal colposacropexy	14	13.33
	Laparoscopic colposacropexy	3	2.86
	Vaginal hysterectomy	88	83.81
Indication	Cuff prolapse	17	16.19
	Uterine prolapse	88	83.81

**Table 3:** Intraoperative and postoperative complications.

	n	n %
Recurrence	3	2.86
Urinary retention	5	4.76
Mortality	0	0
Bleeding	4	3.81
Adjacent organ injury during the operation	0	0
Pelvic abscess	0	0
Vulvovaginal hematoma	1	0.95
Embolism	2	1.90
Re-operation	0	0

#### 4. Discussion

The findings of our study showed that intraoperative and postoperative complications encountered in advanced-age patients were not as high as feared in urogynaecology operations. Unfortunately, the geriatric population is generally considered a suboptimal candidate for surgery. As such, elderly patients who may obtain the greatest advantages from pelvic reconstructive procedures are often deprived of surgical options to correct pelvic dysfunction due to

their age. Although the morbidity rates are found to be quite low in patients undergoing urogynaecology surgery in the literature, Elderly patients, especially in cases of reparative, non-life-saving procedures, are often considered inadequate candidates for surgical operations (1). However, some studies reported serious perioperative complications of nearly 25.8% in the group with a mean age of 79 years (SD±3.4). The most common complications were identified as blood

transfusion or significant blood loss, pulmonary oedema, and postoperative congestive heart failure (7). Solomon et al. found venous thromboembolism frequency of 0.3% in a large retrospective cohort study of 1104 women undergoing urogynaecology surgery in 2010 (8). Intraoperative and postoperative complications, including re-operation, were quite low in our study group. We advocate that age should not be a restriction for this surgical procedure if patients are appropriately selected, and the surgical team includes experts in the field.

Studies have demonstrated that conditions specific to geriatrics are associated with adverse surgical outcomes (9). Therefore, the detection of cardiovascular, pulmonary, renal, hepatic and cerebral pathologies before deciding on surgery will ensure infrequent and preventable postoperative complications (10). Detailed examination of the pelvic floor is of great importance in elderly patients. Thus, if non-surgical alternatives are available for a patient group with high comorbidity, the pessary, for example, can be considered in the foreground. However, although the pessary is used quite frequently in this age group, it has been found to be uncomfortable, probably due to long-term use by the patients, and did not eliminate the cause of the disease (11).

Obliterative methods are technically easier to apply; their operation time is shorter, and they provide a higher success rate compared to reconstructive methods. Although the studies on this subject are of low quality, the success rate of colpocleisis varies between 91% and 100% (12-14). Nygaard et al. recommended an obliterative procedure such as colpocleisis as a good treatment option in the elderly population (15, 16). One of the biggest advantages of this operation, which is the main limiting factor of loss of vaginal function, is that it can be performed with local anaesthetic methods (10). However, Huang et al. reported that moderate sexual desire persists in 30% of women over 65 years of age (17). Again, sexual desire has been shown to persist in advanced ages in the literature (1). Our medical records revealed that the obliterative method was applied in four patients; however, these patients were not included in the study as their data were incomplete, and they were lost to postoperative follow-up. It is noteworthy that this method was less applicable in our study group. Although reconstructive procedures seem to be more demanding, our centre prefers to preserve coital function even in elderly patients when deciding on the surgical procedure. We surmise that it is safe to perform conventional surgical procedures in this age group.

The main limitation of our study is its retrospective nature. However, the reliability of our medical records minimizes this limitation. Our centre is a tertiary referral hospital in the region, and the data collected are valuable. Conservative treatment is an acceptable method in advanced-age patients, and the data of

advanced-age patients on this type of treatment could not be sufficiently obtained from our records. Selection bias may have occurred in the preoperative evaluations of the patients undergoing surgery and might be reflected by our low complication rates, which may not indicate the true incidence. Thus, it would be more useful to provide anatomical and subjective success rates and analyse prolapse recurrence analysis. In examining our data, we found that the operations were performed with conventional methods. We determined that other methods that could have been applied were not preferred in this population. Therefore, further studies should be performed to determine the functional outcomes of the surgical procedure performed in the elderly patient group.

## 5. Conclusions

Carbepenem resistance is increasing gradually and is a In conclusion, we argue that the complication rate of conventional pelvic organ prolapse (POP) surgery is low in patients over 65 years of age. Although clinicians are hesitant about surgical interventions in this age group of patients, surgical procedures that can improve pelvic floor restoration can be offered safely to these patients.

### Limitations of the Study

It is our limitations that it is a retrospective study, the number of cases is low.

### Acknowledgement

None

### Conflict of Interests

The authors declare no conflict of interest.

### Financial Support

This study received no financial support.

### Author Contributions

Conceived and designed the analysis: EPTY, OEY, GNCS. Collected the data: EPTY, GNCS, YET. Contributed data or analysis tools: RAA, MI. Performed the analysis: OEY, YK. Wrote the paper: EPTY, YET.

### Ethical Approval

Ethics committee approval was received for this study from the ethics committee of Ataturk University.

### Data sharing statement

All data relevant to the study are included in the article.

### Informed Consent

Written informed consent was obtained from every patient at the time of the operation.

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