Research Article

Effectiveness of Pelvic Organ Prolapse Surgery in Women with Depressive Symptoms and Decreased Quality of Life

Efektivitas Operasi pada Perempuan dengan Gejala Depresi dan Penurunan Kualitas Hidup yang Menjalani Operasi Prolaps Organ Panggul

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Abstract

Objective: To know the effectiveness of pelvic organ prolapse surgery in decreasing depressive symptoms (based on PHQ9) and improving quality of life in women with pelvic organ prolapse.

Methods: This experimental study without control is conducted at the Obstetrics and Gynecology Department of Dr. Mohammad Hoesin Hospital Palembang/Faculty of Medicine Sriwijaya University, from October 03 2012 until May 31, 2014. Data containing self-administrated questionnaire about depressive symptoms (PHQ9) and quality of life (PFIQ and PFDI) were recorded. Questionnaire was performed before and six months after surgery. Sample included 26 women with pelvic organ prolapse seeking pelvic organ prolapse surgery, which qualified the inclusion criteria. Data were analyzed using Chi Square and Fisher Exact test. Data analysis was done using SPSS 18.0.

Results: According to paired T test there is a significant difference between mean PHQ9 score before (6.69±3.80) and 6 months after surgery (1.96±1.75)(p=0.001). Total PFIQ score decreased from 17.15±9.39 to 2.88±4.01 with 14.27±5.38 reduction. PFDI score before surgery were 29.85±15.73 and decreased to 11.50±10.99, with a reduction of 18.35±4.74.

Conclusion: There was significant reduction in depressive symptoms and improved quality of life in women with prolapse after surgery, compared to before surgery.

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Keywords: depression, quality of life, uterine prolapse

Abstrak

Tujuan: *Mengetahui efektivitas operasi prolaps dalam mengurangi gejala depresi (berdasarkan PHQ9) dan meningkatkan kualitas hidup (PFIQ-7 dan PFDI) pada perempuan dengan prolaps organ panggul sebelum dan sesudah operasi prolaps organ panggul.*

Metode: *Penelitian uji eksperimental tanpa pembanding ini dilaksanakan di Bagian Kebidanan dan Penyakit Kandungan di RSMH/ Fakultas Kedokteran UNSRI Palembang. Waktu penelitian dalam rentang waktu antara tanggal 03 Oktober 2012 sampai dengan 31 Mei 2014. Data berupa kuesioner mengenai depresi (PHQ9) dan kualitas hidup (PFIQ-7 dan PFDI) yang diisi sendiri oleh sampel penelitian. Kuesioner dilakukan sebelum operasi dan diulangi 6 bulan pascaoperasi. Didapatkan 26 sampel yang didiagnosis prolaps uteri yang menjalani operasi dan memenuhi kriteria inklusi. Data dianalisis dengan menggunakan uji Fisher/Chi Square. Pengolahan data dibantu dengan program SPSS 18.0.*

Hasil: *Berdasarkan uji statistik T berpasangan, didapatkan perbedaan yang bermakna antara rerata skor PHQ-9 sebelum operasi (6,69±3,80) dan 6 bulan sesudah operasi (1,96±1,75)(p=0,001). Skor PFIQ secara keseluruhan mengalami penurunan yaitu 17,15±9,39 sebelum operasi, menjadi 2,88±4,01 sesudah operasi dengan besar penurunan 14,27±5,38. Skor PFDI sebelum operasi sebesar 29,85±15,73 dan turun 6 bulan sesudah operasi menjadi 11,50±10,99 dengan besar penurunan 18,35±4,74.*

Kesimpulan: *Terdapat penurunan yang bermakna pada gejala depresi dan perbaikan kualitas hidup pada perempuan dengan prolaps sebelum dibandingkan sesudah operasi prolaps.*

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Kata kunci: *depresi, kualitas hidup, prolaps uteri*

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INTRODUCTION

Pelvic organ prolapse is a condition in which the genital organs are protruding into the vagina. This occurs due to weakness of the muscle, fascia and supporting ligaments. Pelvic organ prolapse can be in the form of cystocele, rectocele, enterocele, cervical elongation, urethrocele, uterine prolapse, and vaginal prolapse. In Dr. Cipto Mangunkusumo Hospital, Indonesia, Junizaf et al reported that 50% of women who have given birth will suffer from pelvic organ prolapse, and nearly 20% of cases undergoing gynecological surgery were pelvic organ prolapse cases.[1]

Gregory WT reported that prolapse has behavioral and psychological implications, which affect the *Quality of Life* (QOL) and health-related QOL specific-condition. Prolapse can increase symptoms of depression and anxiety, while the symptoms of depression and anxiety can affect health behaviors, symptom burden, QOL, and functional impairment before and after surgery. Sze EH reported that the anterior vaginal wall prolapse compartment is a vaginal compartment prolapse that is often experienced, and have severe repercussions for the QOL of patients. Ghetti C reported that women with pelvic organ prolapse had a higher prevalence of depressive symptoms compared to controls without prolapse.[2-4]

Examination of depression and quality of life using a self-administered questionnaire consists of the Patient Health Questionnaire (PHQ-9), Pelvic Floor Distress Inventory (PFDI), and Pelvic Floor Impact Questionnaire (PFIQ).

PHQ-9 is a validated measurement of the severity of depression correlated closely with major depression diagnosis established by the Structured Clinical Interview for the Diagnostic and Statistical Manual of Mental Disorders (DSM). PHQ-9 is selected as a measure of general depression to control depression while investigating the effect of prolapse on body image in the parent study. PHQ-9 was also validated in an ambulatoric gynecologic population.

PFDI and PFIQ are validated self-administered questionnaires used to evaluate the effect of pelvic floor disorders on health-related QOL. Each questionnaire consists of three subcategories. PFDI investigates distress symptoms and contains three subscales, Urinary Distress Inventory (UDI), the Pelvic Organ Prolapse Distress Inventory (POPDI), and Colorectal-Anal Distress Inventory (CRADI) that assesses urinary, pelvic, and colorectal symptoms. PFIQ investigates the influence of the pelvic floor symptoms and contains three scales: Impact Questionnaire Incontinence, Pelvic Organ Prolapse Impact Questionnaire (POPIQ), and Colorectal-Anal Impact Questionnaire.

Depression is often found in women with urinary incontinence and is known as a major cause of disability in women around the world, the relationship between prolapse, major depression, anxiety disorders, and QOL is unknown. Information on the incidence of depression and QOL in women before and after prolapse surgery is still limited. Therefore, it is necessary to perform research on depressive symptoms and QOL in women before and after prolapse surgery.[3,4]

METHODS

This research is an experimental study without comparison. It was carried out in the Department of Obstetrics and Gynecology at RSMH/Faculty of Medicine UNSRI Palembang. Research period was between October 3, 2012 and May 31, 2014.

The study population included all women with prolapse who came and were treated in the Department of Obstetrics and Gynecology RSMH/ Faculty of Medicine UNSRI Palembang. Samples were women with stage II or higher prolapse, who were planned to undergo surgery and met the inclusion criteria. The inclusion criteria were women with pelvic organ prolapse stage II-IV, who were willing to have surgery, and signed the informed consent. Exclusion criteria were leukocyturia and bacteriuria from urinalysis prior to surgery, patients with neurological disorders (central and peripheral nervous system), suffering from systemic diseases such as diabetes mellitus, and patients who are undergoing estrogen therapy.

Before surgery, the patient underwent a guided assessment by self-administered questionnaires in the form of PFDI, PFIQ, and PHQ-9. Pelvic organ prolapse surgery was performed by urogynecology consultants. After 6 months post-surgery the tests by self-administered questionnaires (PFDI, PFIQ, and PHQ-9) were repeated. Data was analyzed using Fisher's exact test or Chi Square. Data processing was assisted by SPSS 18.0.

RESULTS AND DISCUSSION

The number of samples involved in this study was 30 samples, but after 6 months post-surgery only 26 subjects completed the study, whereas 4 other subjects dropped out due to changed addresses and any means of communication being inactive, causing loss of follow-up.

The general characteristics of the subject were analyzed, which included age, parity, education, and residence. Most of the research subjects belonged to the 51-60 years old age group, with as many as 13 subjects (50.0%), with a mean age of 60.58±8.89 years. The lowest age was 49, and the highest was 81 years old.

The most common parity status was 4, which was present in as many as 26.9% of samples, and the second largest group was those with parity 3 and 5 with 4 subjects in each group (15.4%). Only 1 subject belonged to the parity 0 and 1 group (3.8%).

The most common education level of the subjects was high school education for as many as 20 subjects (76.9%). While those whose education level was junior high school were 2 subjects (7.7%) and as many as 4 subjects (15.4%) had DIII/S1 education.

In terms of occupation, the subjects in this study were all housewives. Residence of participants in this study was divided evenly within the city and outside the city, each with 13 subjects (50%). Zeleke BM et al reported that patients with POP in Ethiopia who reside in rural areas amounted to 85.3% and the remaining 14.7% live in urban areas. While in this study, the proportion of the residential area were the same.[5]

Clinical Characteristics

Based on the degree of pelvic organ prolapse, we encountered 9 subjects (34.6%) in each of the pelvic organ prolapse degrees II and III groups. As many as 8 subjects (30,8%) had prolapse grade I. Research by ZY Yuan and Shen YH reported that mild (grade I) or moderate (grade II) prolapse may have no complaints. Usually there is a complaint or the complaint is felt by patients after stage III.[6]

Distribution of surgery that were most commonly done was total vaginal hysterectomy (TVH) with colpoperineorraphy + anterior colporraphy and TVH with anterior colporraphy with 7 subjects (26.9%) undergoing the procedure, respectively, whereas just as much as 6 subjects (23.1%) underwent TVH surgery only. TVH was chosen for cases of uterine prolapse because this technique provides more advantages than abdominal hysterectomy. Advantages include faster healing time, shorter hospitalization times and fewer infections.[7-10]

The mean PHQ-9 score before surgery was 6.69 ±3.80 and decreased after 6 months post-surgery to 1.96±1.75. Based on the paired t test, we found a significant difference in the mean PHQ-9 scores prior to and 6 months after surgery (p=0.001).

Table 1. Distribution of Subjects According to the Degree of Depression

Degree of Depression	Before Operation		6 months after operation	
	n	%	n	%
Not depressed	9	34.6	24	92.3
Mild depression	11	42.4	2	7.7
Medium depression	5	19.2	0	0
Severe depression	1	3.8	0	0
Total	26	100.0	26	100.0
	PHQ-9 scores			p
Prior to surgery	6.69±3.80			0.001
6 months after operation	1.96±1.75			

TVH in patients with pelvic organ prolapse can reduce the degree of depression. This was evident from the results of this study, which found the incidence of depression before surgery to be 61.4% which was reduced after surgery to 7.7%. TVH is effective in reducing depressive symptoms and improving quality of life in female pelvic organ prolapse.

PFDI overall score before surgery was 29.85±15.73 and dropped at 6 months after operation to 11.50±10.99, demonstrating an 18.35±4.74 decline. It has been proven statistically with paired t test that there were significant differences in *Pelvic Floor Distress Inventory* (PFDI) scores before and 6 months after surgery (p=0.001).

Table 2. Pelvic Floor Distress Inventory (PFDI) Scores

Parameter	Before Operation	6 months after operation	p
PFDI	29.85 ± 15.73	11.50 ± 10.99	0.001
UDI	8.35 ± 4.65	3.50 ± 3.31	0.001
POPDI	13.08 ± 5.01	3.15 ± 2.97	0.001
CRADI	8.19 ± 6.98	4.85 ± 4.84	0.001

Paired t test; p<0.05 is significant

The decreasing trend of PFDI scores in this study that assesses urinary (UDI), pelvis (POPDI), and colorectal (CRADI) symptoms before and after the operation was in line with the results of a research conducted by Ghetti C et al, which reported a mean UDI score before surgery by of (52-78) and after surgery dropped to 15 (10-21). They also obtained an average POPDI score before surgery of 76 (64-88) and fell after surgery to 22 (14-30),

while the mean score of CRADI obtained before surgery was 71 (59-84) and after surgery was 26 (17-34).

PFIQ overall scores decreased from before surgery to 6 months after surgery, with 17.15 ± 9.39 before surgery and declining by 14.27 ± 5.38 to 2.88 ± 4.01. Based on statistical tests performed using paired t test, there were significant differences in terms of PFIQ scores before and 6 months after surgery (p=0.001).

Table 3. Pelvic Floor Impact Questionnaire (PFIQ) Scores

Parameter	Before Operation	6 months after operation	p
PFDI	17.15 ± 9.39	2.88 ± 4.01	0.001
UIQ	5.92 ± 3.05	0.96 ± 1.11	0.001
POPIQ	6.46 ± 3.14	0.96 ± 1.45	0.001
CRAIQ	4.77 ± 3.62	0.96 ± 1.53	0.001

Paired t test; p < 0.05 is significant

The results showed that performing prolapse surgery improves the quality of life of patients with prolapse, where we can see a reduction of depressive symptoms.

CONCLUSION

There was significant reduction in depressive symptoms and improved quality of life in women with prolapse after surgery, compared to before surgery. Pelvic organ prolapse surgery is effective in reducing depressive symptoms and improving quality of life in female with pelvic organ prolapse.

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