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Address for Correspondence:Editorial Room Andalas Obstetrics and Gynecology Journal, 3rd floor of KSM of Obstetrics and Gynecology, RSUP DR. M. Djamil Padang, Jl. Perintis Kemerdekaan Padang, Sumatera Barat 25127**Website:**<http://jurnalobgin.fk.unand.ac.id/index.php/JOE>**RESEARCH****Comparison of women's quality of life post abdominal and vaginal hysterectomy**Fauzan¹, Bobby Indra Utama², Firdawati³

Affiliations: 1. Obstetrics and Gynecology Department, Dr. M. Djamil Central General Hospital Padang, West Sumatera, Indonesia; 2. Sub Division of Urogynecology, Obstetrics and Gynecology Department, Faculty of Medicine, Andalas University, Dr. M. Djamil Central General Hospital Padang, West Sumatera, Indonesia; 3. Public health Department, Faculty of Medicine, Andalas University, West Sumatera, Indonesia

Correspondence: Fauzan, email: zans_mails@yahoo.com, Hp: 082120500576

Abstract

Introduction: Hysterectomy is the most common major surgical procedure in gynecology. Approximately 90% of hysterectomies are performed on indications of benign gynecological disease. The number of women affected by hysterectomy is relatively low, but the impact of these complications often changes the quality of life. There are several types of hysterectomy, from partial/supravaginal, complete/total, to radical. Hysterectomy with any surgical technique can cause complications. This can be minimized by careful surgical planning and preparation before surgery. Assessing changes in quality of life after surgery is important for patient decision making and for health care evaluation, as health care becomes more standardized.

Objective: This study aims to determine the difference in quality of life between women who have undergone abdominal hysterectomy surgery and women who have undergone vaginal hysterectomy surgery.

Methods: This research is an analytic observational study with a cross sectional comparative study approach which was conducted on 54 women who had undergone hysterectomy at Dr. RSUP. M. Djamil, Padang. 27 of them underwent abdominal hysterectomy, and 27 others underwent vaginal hysterectomy. All patients were interviewed using the Short Form-36 (SF-36) questionnaire. The assessment is carried out with a scoring system where a score of 0 is the lowest value, and 100 is the highest value.

Results: The average quality of life of the woman's post abdominal and vaginal hysterectomy was 91.71 ± 6.73 and 99.07 ± 1.66 respectively. There is a difference in the mean value of quality of life of women and post abdominal and vaginal hysterectomy ($p < 0.05$).

Conclusion: There was a significant difference between the quality of life of women after hysterectomy, where women who underwent vaginal hysterectomy had a higher quality of life than women who underwent abdominal hysterectomy

Keywords: Hysterectomy, Abdominal, Vaginal, Quality of life.

INTRODUCTION

Surgery is needed at all ages from neonates to the elderly. It can be preventive or curative, for acute or chronic conditions, for diagnostic or supportive therapy in various diseases. Because of its importance, researchers and economists recognize that surgery



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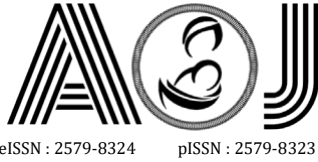
contributes to social and economic development.¹ Hysterectomy is the most common major surgical procedure in gynecology. Approximately 90% of hysterectomies are performed on indications of benign gynecological disease, and are aimed at improving the quality of life rather than saving lives, as well as reducing the length of hospital stay.^{2- 4} Although postoperative morbidity is deemed to be low, this procedure can interfere with local innervation and the anatomical integrity of pelvic organs.⁵

The number of women affected by hysterectomy is relatively low, but the impact of these complications often changes the quality of life. With a large number of hysterectomies being performed each year, the long-term effect of this procedure can have an impact on the health of women around the world.⁶ A Cochrane review of 47 studies conducted in 2015, which included 5,102 patients who underwent vaginal, abdominal, and laparoscopic hysterectomies, reported that vaginal hysterectomy was associated with quicker return to normal activities and better quality of life than abdominal hysterectomy.⁷ But a review conducted by the World Health Organization (WHO) in 2016 came to a different conclusion. WHO stated that there was no statistically significant difference in quality of life between abdominal hysterectomy, vaginal hysterectomy and laparoscopic hysterectomy.⁸ Conclusions from various other studies also provide mixed conclusions.

There are several types of hysterectomy, from partial/supravaginal, complete/total, to radical. Hysterectomy can be performed through an abdominal or vaginal incision.⁹ Although hysterectomies are performed for most gynecologic malignancies, most hysterectomies are performed for benign gynecologic diseases.¹⁰ Vaginal hysterectomy may be performed for small fibroids, while abdominal hysterectomy is generally required for large or multiple fibroids.¹¹ Relative contraindications for vaginal hysterectomy include uterine size disproportionate to vaginal accessibility, adnexal tumors, acute or subacute pelvic inflammatory disease, endometriosis, or ovarian or uterine malignancy.¹² A uterus size of about 12 weeks or less usually allows for vaginal technique, but this limitation may decrease with operator experience.¹³ Although there are various ways to perform hysterectomy, decisions on surgical technique vary widely based on the clinical situation, the patient's health and comorbid status, and the operator's skill.¹⁴

Hysterectomy with any surgical technique can cause complications. This can be minimized by careful surgical planning and preparation before surgery.¹⁵ Early postoperative complications include: bleeding, wound infection, lung infection, urinary tract infection, paralytic ileus, and embolism. Pelvic venous thrombosis with fever and tachycardia is less common with early mobilization and prophylactic antibiotics. Later sequelae that may occur include: Surgical wound hernia, dyspareunia for vaginal surgery, and adhesions causing chronic pain.¹⁶ Menopause caused by hysterectomy along with bilateral ovary removal can also lead to depression.¹⁷

Quality of life is complex and requires an approach from a different theoretical point of view. Measuring and using quality of life in scientific studies is challenging because quality of life can be defined in many ways.¹⁸ For every woman, gynecologic surgery is a 'special'



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experience. Women face various changes in their body sensations and self-perceptions after the removal of reproductive system organs. The impairment felt by a woman is associated with bodily functions they have lost and no longer possess. Some women have a positive attitude towards dealing with and accepting their new body image. However, some feel this loss as a triggering factor for anxiety due to changes in their self-image.¹⁹

Quality of life assessment has become a standard component of comprehensive clinical assessment of patients suffering from any disease. Appropriate medical intervention includes not only an appropriate treatment, but also evaluation of quality of life.²⁰ Assessing changes in quality of life after surgery is important for patient decision making and for health care evaluation, as health care becomes more standardized.²¹ Reports on the impact of hysterectomy on quality of life vary widely.

METHODS

This is an analytic observational research with a cross sectional comparative study approach conducted at Dr. M. Djamil Hospital, Padang during July 2020 to June 2021. Patients who were included were menopausal patients who had underwent hysterectomy for benign gynecologic indications at least 6 months before the interview was conducted. Patients who underwent cesarean hysterectomy, hysterectomy for malignancy, or those who had metabolic diseases such as hypertension and diabetes mellitus were excluded from the study. We obtained 54 samples taken by consecutive sampling until the number of samples was met. All respondents who were included in this study were given an explanation of the objectives and methods to be carried out in this study.

Nowadays, there are more than 1.000 instruments specifically designed for the measurement of quality of life.¹⁸ The selection of the questionnaire to be used can be made based on research needs. Many studies use validated measures to assess changes in quality of life after surgery, such as the Short Form-36 (SF-36) health survey.²² RAND developed the SF-36 as a generic, coherent and easy-to-use quality of life measurement instrument. It relies on patient self-reporting and is now widely used by care organizations for routine monitoring and assessment of treatment outcomes in adult patients. The SF-36 provides eight key assessments: physical functioning, bodily pain, role limitations due to physical health problems, role limitations due to personal or emotional problems, general mental health, social functioning, energy/fatigue, and general health perceptions.¹⁷

The SF-36 assessment consists of two steps. First, the numerical values of each number are rearranged for each scoring key. Note that each scoring key is scored so that high scores determine better health status. In addition, each scoring key is assigned a score in the range of 0 to 100 so that the lowest and highest scores that can be obtained are 0 and 100. The score represents a percentage of the total possible score. Second, the number of questions in the same assessment key is averaged to score against the eight assessment keys. Items left blank



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(missing data) are not taken into account when calculating key scoring scores.¹⁸

Therefore, the score represents the average for all items on the scale that the respondent answers.²⁰

RESULTS

Research has been carried out on 27 respondents after abdominal hysterectomy and 27 respondents after vaginal hysterectomy at Dr. M. Djamil Hospital, Padang. Based on Table 1, it is known that the average age of respondents in the vaginal hysterectomy group was older, which is 62.44 ± 8.43 years. Most of the respondents in the abdominal hysterectomy and vaginal hysterectomy groups was a high school graduate, 22 (81.5%) and 13 (48.1%) respectively. More than half of the respondents in the abdominal hysterectomy and vaginal hysterectomy groups were housewives (IRT), 16 (59.3%) and 24 (88.9%) respectively.

Differences in Women's Quality of Life Post Abdominal and Vaginal Hysterectomy

This study show the mean quality of life in women after vaginal hysterectomy was higher (99.07 ± 1.66), than in abdominal hysterectomy (91.71 ± 6.73). The results of statistical tests showed that there was a significant difference in the mean quality of life between the two groups ($p < 0.05$). The value of the components of physical functioning, bodily pain, and social functioning in the post abdominal hysterectomy group was lower than the post vaginal hysterectomy group.

The lowest mean value for the components of physical functioning in post-abdominal hysterectomy patients was 81.48 ± 17.09 , bodily pain was 81.94 ± 13.69 , and social functioning was 87.96 ± 13.64 . Meanwhile, in patients who underwent vaginal hysterectomy, the lowest mean values for the components of physical functioning, energy/fatigue, and social functioning were 98.15 ± 3.71 , 98.15 ± 5.03 , and 98.15 ± 7.52 , respectively.

DISCUSSION

A randomized controlled trial that was conducted to compare the quality of life between laparoscopic and abdominal hysterectomy in 32 patients showed that the quality of life of patients in the laparoscopic hysterectomy group was better than the abdominal hysterectomy group. Therefore, patients who do not allow vaginal hysterectomy, may opt for a laparoscopic hysterectomy, if the size of the uterus permits.²⁴ Laparoscopic hysterectomy is widely performed in several countries. Several studies have observed for four years with the results that patients treated with laparoscopic hysterectomy have a better quality of life than abdominal laparoscopy, but not all countries provide laparoscopic hysterectomy services.^{19,20} So in our study, we only compared between abdominal and vaginal hysterectomy.¹⁶

Hysterectomy is known to be associated with adverse psychiatric sequelae. However, some studies also state that hysterectomy does not lead to a significant improvement in psychiatric symptoms. The research of Chandana et al., found that 67.4% of patients suffered



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from psychiatric disorders caused by their illness before surgery, and after the operation it was known that the patient's psychological condition had improved.²⁵ Research by Correa-Ochoa et al., stated that there was no difference in the quality of life for the physical and mental components in the abdominal and vaginal hysterectomy groups before hysterectomy. However, there was a difference in the mean SF-12 score two months after hysterectomy on physical and mental health variables between women after abdominal and vaginal hysterectomy.³

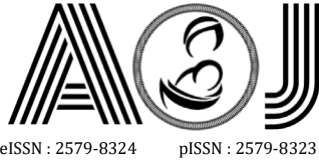
The results of the study by Silva-Filho et al., found that the quality of life score in the abdominal hysterectomy group was lower than the vaginal hysterectomy group. The aspects of quality of life assessed in this study were functional capacity, physical aspects, and pain. The median value of functional capacity in the abdominal hysterectomy group was 72.5, while the vaginal hysterectomy group was 95. Physical aspects were 37.5 and 100 in the abdominal and vaginal hysterectomy group. The pain score in the abdominal hysterectomy group was lower at 51, whereas in the vaginal hysterectomy group it was 84.²⁰

Similar to the results of Silva-Filho et al., our study found that there was a significant difference in the mean quality of life between women after abdominal and vaginal hysterectomy. There is a clear difference in the components of physical function between patients after abdominal hysterectomy and patients after vaginal hysterectomy. The value of physical function in post-abdominal hysterectomy patients was 81.48 ± 17.09 . This value is seen to be lower than the value of physical function in post-vaginal hysterectomy patients 98.15 ± 3.71 . Most post abdominal hysterectomy patients complain of decreased physical function in carrying out light activities such as carrying bags or groceries, moving tables, sweeping, jogging/walking, activities that require a lot of energy, lifting heavy objects, doing strenuous exercise. Others complain of activity disturbances only when walking long distances or climbing/descending stairs.¹⁸

This decline in physical function appears to be related to the presence of a bodily pain component. This can be seen from the number of post-abdominal hysterectomy patients who complain of pain, especially during activities. The difference in the value of the body pain component between patients after abdominal and vaginal hysterectomy can be seen from the average value in table 3, where the average value of bodily pain in patients after abdominal hysterectomy is 81.94 ± 13.69 , while the average value of bodily pain in patients after vaginal hysterectomy is 98.89 ± 3.20 .¹⁷

Decreased social function was also seen in patients after abdominal hysterectomy (87.96 ± 13.64) when compared to patients after vaginal hysterectomy (98.15 ± 7.52). This decline in social function also seems to be related to physical health problems that interfere with the patient's social activities in interacting with family, friends, or neighbors.¹⁵

Overall, in our study, we found that the mean quality of life in women after vaginal hysterectomy was higher at 99.07 ± 1.66 , whereas in abdominal hysterectomy it was 91.71 ± 6.73 . The results of statistical tests showed that there was a significant difference in the mean quality of life between the two groups ($p < 0.05$).^{16,20}



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Based on the results of our study, it can be concluded that there is a significant difference between the mean quality of life of women after abdominal hysterectomy and the average quality of life of women after vaginal hysterectomy, where the mean quality of life of women after vaginal hysterectomy is higher than the average quality of life of women after abdominal hysterectomy. Based on the results of the study, it can be suggested that

further research is needed by considering the relationship between quality of life and other factors such as age and marital status. The competence of participants in the obstetrics and gynecology specialist education program in performing vaginal hysterectomy should be further improved. It is hoped that with this study, vaginal hysterectomy can be the treatment modality of choice, especially in patients who meet surgical indications with vaginal hysterectomy techniques

From the results of the study, it can be concluded that there is a positive correlation between ferritin levels and BDNF levels in preeclampsia.

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