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RESEARCH

Relationship Between Age, Parity, Employment, and Body Mass Index with The Event of The Hip Organ Prolapse Based on The Pelvic Organ Prolapse Quantification Score

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Abstract

Pelvic organ prolapse is a condition that affects the quality of women life. Pelvic organ prolapse can be caused by injury until the birth process, the aging process, the composition of the tissue in a woman, a chronic cough, or often do heavy work. Early detection of prolapse associated with Prognosis of anatomy and functional pelvic organs recovery. So we need training and learning more about Pelvic Organ Prolapse Quantification (POPQ) are clearly. The study was conducted by the method of case control study in the department of OB polyclinic of Dr. M. Djamil Padang Hospital from September 2013 until the total sample of 98 patients with 49 control groups and 49 in the case group. Analyzes were connected to assess the association of age, parity, occupation and body mass index with the incidence of pelvic organs prolapse based on POPQ. Score data are presented in tabular form. Data were tested by t-test and chi square test. If $p < 0.05$ indicates significant results. There is a significant relationship between age and the incidence of pelvic organ prolapse ($p < 0.05$) and OR 27,871. there is a significant correlation between parity and the incidence of pelvic organ prolapse ($p < 0.05$) and OR 52,970. From the statistical analysis of the work, it cannot be tested statistically. From the body mass index, there is no significant relationship to the occurrence of pelvic organ prolapse ($P > 0.05$) and OR 1:00.
Keywords: age, parity, occupation, body mass index, pelvic organs prolapse

INTRODUCTION

Pelvic organ proliferation is a condition that affects a woman's quality of life. Percentage of pelvic organ proliferation reaches 35–50% of women and the incidence increases with increasing parity and age. It is estimated that 50% of women who have given birth will suffer from pelvic organ prolapse, and nearly 20% of gynecological cases that undergo surgery are cases of pelvic organ prolapse. Cases of pelvic organ prolapse will increase in number because the life expectancy of women also increases. A study of 16,000 patients, found 14.2 % suffer from pelvic organ prolapse. Other studies reveal an estimated 11% of all women at risk of undergoing pelvic organ prolapse surgery. In the United States, the age associated with the incidence of pelvic organ prolapse surgery is women aged over 50 years, which is 2.7 - 3.3 pelvic organ prolapse per 1000 women.[1]

Pelvic organ prolapse is a health problem that affects millions of women around the world. Pelvic organ prolapse is an indication of more than 300,000 operations and is third as
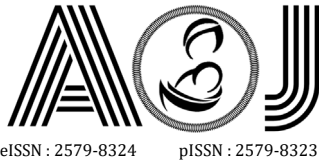
an indication for a hysterectomy.[2]

Although the data are limited, research shows that the prevalence of pelvic organ prolapse increases with age (Olsen, 1997, Swift, 2005). By looking at age-related conditions and demographic changes in the United States, the prevalence of pelvic floor abnormalities will clearly increase. It is predicted that there will be a 45% increase in women who will seek treatment for diseases related to pelvic floor abnormalities in the future.[2]

There have not been many data on pelvic organ proliferation in Indonesia. According to the 2007 Annual Report of the Obstetrics and Gynecology Section of Hasan Sadikin Hospital, there were 30 cases of uterine prolapse during 2007.[1]

The number of patients diagnosed with pelvic organ prolapse who visited the Gynecology Polyclinic of RSUP.DR.M.Djamil Padang in the January 2007 - July 2009 period was 173 people (76.21%). Number of patients diagnosed pelvic organ prolapsus who visited the gynecological clinic of RSUP.DR.M.Djamil Padang who were only outpatient / conservative as many as 67.63% and who were hospitalized for operative measures were 56 people (32.37%).

Pelvic organ prolapse can be caused by injuries during labor, the aging process, the composition of tissue in a woman, chronic coughing, or often doing heavy work.[4]

Pelvic organ proliferation can occur in women of various age groups and generally increases with age. The incidence of pelvic organ prolapse is 2-3% of the total population and reaches 50% of women who are married and giving birth. The ratio of pelvic organ prolapse after 1 x vaginal delivery is 3.0 and increased to 4.5 after ≥ 2 x vaginal delivery. Predisposing factors for prolapse are pregnancy and childbirth, age, menopause, parity, obesity, chronic cough constipation, lifting heavy loads each day. The main symptom of pelvic organ prolapse is a discharge from the vagina. Pelvic organ prolapse has functional effects in the form of urinary disorders, defecation, intercourse and that will have an impact on patient comfort and sexual harmony among couples who experience problems like this. This is also related to the quality of life of a woman, especially women who are married and have children. Early recognition of prolapse is related to the prognosis of anatomic and functional recovery of the pelvic organs. The success of reconstructive efforts and recovery of function is assessed by how much the anatomic and functional recovery of the pelvic organs and improvement of the patient's life.[5]

Until now, there has not been much application in the clinical world so that further training and learning about pelvic organ prolapse quantification (POPQ) is clearly needed

Research needs to be done about the relationship of parity, age, occupation and body mass index with the incidence of pelvic organ prolapse using techniques POPQ examination is simple, easy and inexpensive but has a high sensitivity and specificity. Based on these descriptions, the authors are interested in conducting research on the relationship between age, parity, occupation and body mass index with pelvic organ proliferation events based on pelvic organ prolapse quantification (POPQ) scores.
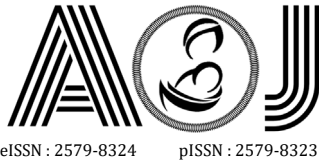
METHOD

This research is a case control study conducted by Obgin RSUP polycilinic. Dr. M. Djamil Padang from September 2013 until 98 people were sampled, divided into 2 groups: 49 in the control group and 49 in the case group. Analyzes were performed to describe the relationship between age, parity, occupation and body mass index with pelvic organ proliferation events based on pelvic organ prolapse quantification (POPQ) scores. Data is presented in tabular form. Data were tested by Fisher's Exact Test and T-Test. If $p < 0.05$ shows meaningful results.

RESULTS

A case control study has been conducted regarding the relationship between age, parity, occupation and body mass index with the incidence of pelvic organ prolapse based on the pelvic organ prolapse quantification (POPQ) score, which was conducted at the Gynecology Polyclinic, Dr. M. Djamil Padang during the period September 2013 - March 2014. During the study, a sample of 98 people was obtained, the number of samples fulfilled was 98 people, which were divided into 2 groups, namely 49 people in the control group and 49 people in the case group.

Characteristics of Research Samples

Table 1. Sample Characteristics

	Group				p-value
	Control n=49		Case n=49		
	f	%	f	%	
Baby's Weight					
2500 – 3000 gr	12	24,5	10	20,4	
> 3000 – 3500 gr	29	59,2	21	42,9	0,342
> 3500 – 4000 gr	8	16,3	18	36,7	
Education					
Elementary School	0	0	2	4,1	
Junior High School	12	24,5	20	40,8	0,235
Senior High School	33	67,3	22	44,9	
Bachelor Degree	4	8,2	5	10,2	
Race					
Minangese	49	100	49	100	

In table 1, it appears that the distribution according to the baby's most weight in the control group is the baby's weight> 3000-3500 gr as many as 29 people (59.2%). In the case group ie baby's weight> 3000-3500 gr as many as 21 people (42 , 9%).

According to the level of education found in the control group the most was high school as many as 33 people (67.3%), while in the case group it was found that the highest level of education was as high as 22 people (44.9%).
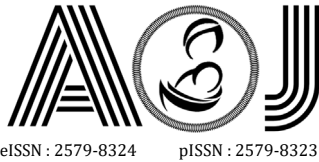
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From the race, it was found that all Minang races were 49 people (100%) in control and 49 people (100%) in cases.

The relationship of age, parity, occupation and body mass index to the incidence of pelvic organ prolapse

Table 2. Relationship between age and incidence of pelvic organ proliferation in case and control groups

	Group		p-value	(OR)
	Control	Case		
Age				
< 50 years	48 (97,9%)	31 (61,3%)	0,000	27,871
≥ 50 years	1 (2,1%)	18 (38,7%)		
Total	49	49		

Based on the age relationship with the incidence of pelvic organ proliferation in the control group with cases, from statistical analysis there was a significant difference between the control group and the case (p <0.05), and an OR of 27.871 (table 2) was obtained. 27,871 times at age <50 years compared to ≥ 50 years. 96% probability.

Table 3. Relationship between parity and pelvic organ prolapse in case and control groups

	Group		p-value	(OR)
	Control	Case		
Parity				
1	38 (80,7%)	3 (7,5%)	0,000	52,970
> 1	11 (19,3%)	46 (92,5%)		
Total	49	49		

Based on the relationship of parity with the incidence of pelvic organ proliferation in the control group with cases, from statistical analysis there was a significant difference between the control group and the case (p <0.05), and an OR of 52,970 was obtained. (Table 3). There is a risk of pelvic organ proliferation 52,970 times at parity> 1 compared to parity 1 98% probability.

Table 4. Relationship between body mass index and the incidence of pelvic organ prolapse in the case and control groups

	Group		p-value	(OR)
	Control	Case		
Body Mass Index				
Not Obese	47 (95,9%)	47 (95,9%)	1,000	1,00
Obesity	2 (4,1%)	2 (4,1%)		
Total	49	49		
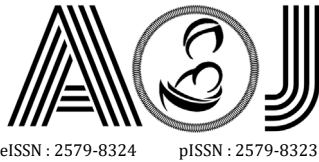
Based on the relationship of body mass index with the incidence of pelvic organ proliferation in the control group with cases, from statistical analysis there was no significant difference between the control group and cases (p> 0.05), and an OR 1.00 was obtained. (table 4). There is no risk of pelvic organ prolapse in obesity compared to non-obese 50% probability of infiltration.

DISCUSSION

Characteristics of research subjects

In this study characteristic data are grouped based on infant weight and education. The highest infant weight gain in the control group was > 3000-3500 as many as 21 people (59.2%), while in the case group the most babies' weight was > 3000-3500gr as many as 21 people (42.9%).

Relationship between age, parity, occupation and body mass index with the incidence of pelvic organ prolapse

In this study, the results of statistical analysis showed that age with the incidence of pelvic organ proliferation had a significant relationship with (p <0.05), with an odds ratio (OR) of 27.871. With increasing age the risk of pelvic organ proliferation tends to increase according to the study of Swift S et al. Getting the prevalence to increase to 21% in women> 70 years old6. In the study of Kim CM et al (2007), age risk factors differed significantly between the age group ≤ 49 years compared to the age of ≥ 70 years with an OR 15,99.[7]

In this study the results of statistical analysis showed that parity with the incidence of pelvic organ proliferation had a significant relationship with (p <0.05), with an odds ratio (OR) of 52,970. In a study conducted by Mant J et al (1997) in a cohort study, the risk of pelvic organ proliferation increased sharply after the first delivery (4-fold), and the second birth (8-fold), the third (9-fold) fourth (10 fold).[8] This is also consistent with the study of Hendrix et al. (2002) parity is closely related to an increased risk of pelvic organ proliferation, with first labor giving an OR 2.13, and increasing with the addition of OR 1.10 for each subsequent delivery.[9] Moderate Tegerstedt G et al. (2006) in their study of 453 women with pelvic organ prolapse found that women giving birth to 4 children had an OR of 3.3 compared to women with one child10. Research by Kim CM et al. (2007) shows that parity is ≥ 3 compared to the number of parities ≤ 2 has an OR 5.56. Vaginal delivery is thought to be a major cause of pelvic organ prolapse, through the mechanism of damage to the levator ani muscle, pudendal nerve, and fascia supporting the pelvic organs.[11]

In the results of statistical analysis of the work of the incidence of pelvic organ prolapse can not be tested statistically because the distribution of work characteristics is uneven.

From this study the results of statistical analysis showed that the body mass index of pelvic organ prolapse events had no significant relationship with (p> 0.05), with an odds ratio
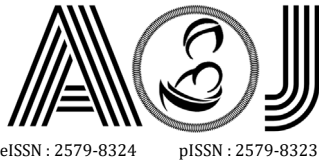
(OR) of 1.00. In the WHI study found a significant relationship between body mass index with pelvic organ proliferation, overweight (BMI 25-30 kg /m^2) associated with uterine prolapse (31%), rectocele (38%), cystocele (39%). Obesity (BMI > 30kg /m^2) is also associated with 40% uterine proliferation, 75% rectocele and 57% cystocele.[9] In the study of Hendrix et al (2002) states that excess body weight is associated with uterine prolapse events. BMI 25-30kg /m^2 (overweight) is associated with a significant increase in pelvic organ prolapse by as much as 31%, whereas obesity (BMI> 30kg/m^2) is associated with pelvic organ prolapse by as much as 40%.[9] The study of Swift S et al excess of ideal body weight and obesity (BMI> 25kg /m^2) has a risk that is twice as high as having a risk of pelvic organ prolapse compared to other women. pelvic organ prolapse.[13] In the study of Washington BB et al (2010) there was no relationship between obesity and pelvic organ prolapse, but obesity can affect the symptoms of pelvic floor disorders such as anal incontinence and urinary incontinence.[14]

CONCLUSION

There is a significant relationship between age, parity and the incidence of pelvic organ prolapse. The employment relationship with the incidence of pelvic organ prolapse cannot be statistically tested. There is no meaningful relationship between body mass index and the incidence of pelvic organ prolapse.

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