

Factors Affecting the Event of The Mioma Uteri in Aceh Tamiang District Year 2018

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Abstract

Myoma is a reproductive disease which contributes to mortality score of women besides of pregnancy problem and childbearing in the reproductive period of women. Prevalence of myoma is 25-50% of mortality score. This disease is in the second level of mortality score after cervical cancer disease. There are many risk factors of myoma disease and we can anticipate it to minimize the death because of myoma disease. This research aims to know the factors which influence Uterine Myoma disease at RSUD Aceh Tamiang. Kind of this research is descriptive analysis research. In this research, the Researcher used cross sectional design. Moreover, the researcher took the respondent as many as 34 people. The researcher used the questionnaires to collect the data started from 20 until 30 July 2018 at RSUD Aceh Tamiang. The result of the hypothesis showed us the influence of historical age ($p=0,012$), the parity ($p=0,029$), and the historical family ($p=0,024$) toward myoma disease but it did not related to the menarche factors ($p=0,308$), the body mass index ($p=0,283$), the diet pattern ($p=0,500$), the menstrual status ($p=0,605$), the historical contraception ($p=0,313$) toward myoma disease at RSUD Aceh Tamiang. The researcher proposes this research to be the information to maximize the services, facilities, and to expand the knowledge in education.

Keyword: Uterine Myoma

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Preliminary

Uterine myoma is the most common gynecological tumor with a prevalence of 70-80% in women who have reached the age of 50 years (Vilos et al., 2015). WHO (World Health Organization) estimates that every year more than 585,000 people die from uterine myoma worldwide (Indonesian Ministry of Health, 2010). Uterine myoma is a common problem that often occurs, the incidence in developing countries reaches 36% of morbidity during productive periods. It is estimated that the incidence of uterine myoma is around 20% - 35% of all women in the world (Aymara et al., 2017). In Indonesia, problems related to pregnancy and childbirth and reproductive system diseases, such as uterine myoma contribute to the mortality rate of women of reproductive age around 25-50% (Ministry of Health, 2011). Until now, the cause of uterine myoma was unknown. The factors that can affect the incidence of uterine myoma are age, age of menarche, pregnancy and number of births (gravida and parity), Body Mass Index (BMI), family history, menstrual patterns and contraceptive use (Pratiwi, 2013). Age plays a significant role in the detection of uterine myoma. Women aged 40 to 44 years show a 5.2-fold increase in the incidence of uterine myoma compared with women aged 25 to 29 years. Uterine myoma has also not been reported before menarche and only 10% are found to still grow after menopause. The increase in incidence occurred by 4.2 times in patients with uterine myoma who had a family history of uterine myoma. Women with a history of pregnancy and childbirth have a reduced risk of uterine myoma. The risk decreases when giving birth to a child by 20% to 50% (Bieber, et al., 2006). There is a reduced risk in postmenopausal women as much as 70-90% and women with more children. Data related to research factors that cause myoma seem to need to be examined more deeply, because not all women with symptoms associated with myoma come to the doctor to have a check-up and not all doctors do radiological evaluation (Vercellini, 2011). Based on preliminary data survey in Aceh Tamiang District Hospital, the incidence of uterine myoma in 2016 was 30 patients and in 2017 increased by 34 patients. From the whole description that the writer describes above, the author sees that the factors that cause the occurrence of uterine myoma still cause question marks. Therefore the authors are interested in conducting research on the topics of factors that influence the incidence of uterine myoma in Aceh Tamiang District Hospital.

Research Methods

The design used in the study was quantitative analytic using cross-sectional methods. This study aims to determine the factors that influence the incidence of uterine myoma in Aceh Tamiang Hospital. This study was conducted in 2018 in the population of uterine myoma patients in Aceh Tamiang Regional Hospital, amounting to 34 people. The sample in this study were all myoma uterine patients who were treated in the gynecological care room of Aceh Tamiang Hospital, which was 34 patients plus 34 patients who did not have uterine myoma. The method of sampling in this study is total sampling, which is a sampling technique where the number of samples is the same as the population. The reason for taking total sampling is because the population is less than 100. There are two data sources collected in this study, primary and secondary. Secondary data is an indirect source of data provide data to data collectors, for example data retrieval is carried out in the medical record section by recording each information listed, especially the respondent's identity in the form of name, telephone number that can be contacted, address, occupation, and patient examination status that supports the research of the researcher. Primary data in this study was obtained by contacting the telephone number that had been obtained and making an appointment with prospective respondents. After the respondent agreed, then the researcher came to the uterine myoma patient who had been treated in Aceh Tamiang Hospital to the address that had been obtained. After the researcher met the respondent, the researcher first introduced himself to the respondent and explained the purpose, the benefits of the study and asked the patient to be a respondent in the study. If the prospective respondent refuses, the researcher will not force and respect the right of the prospective respondent. Data collection will be carried out with an interview method of approximately 15 minutes. Data analysis used was univariate analysis, bivariate analysis using Chi-Square formula, and multivariate analysis using multiple logistic regression statistical test formula. The independent variables in this study were age, parity, family history, age of menarche, body mass index, dietary pattern, menopausal status, contraception. The dependent variable in this study was uterine myoma.

RESEARCH RESULT

Based on the results of research conducted on 68 respondents, get the following results:

Table 1. Frequency Distribution of Respondent Characteristics in Aceh Tamiang District Hospital in 2018:

No.	Characteristics	Frequency	%
1.	Age		
	- > 40 year	51	75,0
	- 20 – 40 year	17	25,0
2.	Parity History		
	- Multipara	36	52,9
	- Primipara	20	29,4
	- Nullipara	12	17,6
3.	Family History		
	- There is no	29	42,6
	- There is	39	57,4
4.	Menarce's Hostory		
	- Menarce's Normal	43	63,2
	- Menarce's Early	25	36,8
5.	Body Mass Indeks		
	- Normal	32	47,1
	- Fat	36	52,9
6.	Diet Pattern		
	- Good	41	60,3
	- Not Good	27	39,7
7.	Menstrual Status		
	- Menopause		

No.	Characteristics	Frequency	%
	- Menstruation	20	29,4
		48	70,6
8.	Contraception History		
	- Not Hormonal	31	45,6
	- Hormonal	37	54,4

Table 2 Effect of Age on Mioma Events in Respondents at Aceh Tamiang District Regional General Hospital

No.	Age	Myoma				Total	ρ -value
		No		Yes			
		N	%	n	%		
1.	> 40 year	30	58,8	21	41,2	51	0,012
2.	20 – 40 year	4	23,5	13	76,5	17	
Total		34	50,0	34	50,0	68	

Table 3 Effect of Parity History on Mioma Events in Respondents at Aceh Tamiang District Regional General Hospital

No.	Parity History	Myoma				Total	ρ -value
		No		Yes			
		N	%	n	%		
1.	Multipara	22	61,1	14	38,9	36	0,029
2.	Primipara	10	50,0	10	30,0	20	
3.	Nullipara	2	16,7	10	83,3	12	
Total		34	50,0	34	50,0	68	

Table 4 Effect of Family History on Mioma Events in Respondents at Aceh Tamiang District Regional General Hospital

No.	Family History	Myoma				Total	ρ -value
		No		Yes			
		n	%	n	%		
1.	There is no	19	65,5	10	34,5	29	0,024
2.	There is	15	38,5	24	61,5	39	
Total		34	50,0	34	50,0	68	

Table 5 Effect of Menarche History on Mioma Events in Respondents at Aceh Tamiang District Regional General Hospital

No.	Histori of Menarche	Myoma				Total	ρ -value
		No		Yes			
		n	%	n	%		
1.	Normal	23	53,5	20	46,5	43	0,308
2.	Early	11	44,0	14	56,0	25	
Total		34	50,0	34	50,0	68	

Table 6 Effect of Body Mass Index on Mioma Events in Respondents at Aceh Tamiang District Regional General Hospital

No.	Body Index	Myoma				Total	ρ -value
		No		Yes			
		n	%	n	%		
1.	Normal	14	43,8	18	56,3	32	0,28,3
2.	Fat	20	55,6	16	44,4	36	
Total		34	50,0	34	50,0	68	

Table 7 Effect of Diet Patterns on Mioma Events in Respondents at Aceh Tamiang District Regional General Hospital

No.	Diet Pattern	Myoma				Total	ρ -value
		No		Yes			
		n	%	N	%		
1.	Good	20	48,8	21	51,2	41	0,500
2.	Not Good	14	51,9	13	48,1	27	
Total		34	50,0	34	50,0	68	

Table 8 Effect of Menstrual Status on Mioma Events in Respondents at Aceh Tamiang District Regional General Hospital

No.	Menstrual	Myoma				Total	ρ -value
		No		Yes			
		n	%	n	%		
1.	Menopause	10	50,0	10	50,0	20	0,605
2.	Menstruation	24	50,0	24	50,0	48	
Total		34	50,0	34	50,0	68	

Table 9 Effect of Contraception History on Mioma Events in Respondents at Aceh Tamiang District Regional General Hospital

No.	contraceptive History	Myoma				Total	ρ -value
		No		Yes			
		n	%	n	%		
1.	Not	14	45,2	17	54,8	31	0,313
2.	Hormonal	20	54,1	17	45,9	37	
Total		34	50,0	34	50,0	68	

Table 10 P-value of each variable before conducting multiple logistic regression tests

Variable	ρ -value	Multivariate Modeling
Age	0,012	Enter Modeling
Parity History	0,029	Enter Modeling
Family History	0,024	Enter Modeling
Menarce's history	0,308	-
Body mass index	0,283	-
Diet Pattern	0,500	-
Menopause status	0,605	-
Contraception History	0,313	-

Table 11 Effect of Age and Parity History on Mioma Events in Respondents in Aceh Tamiang District Regional General Hospital

Variable	ρ -value	OR	IK 95%	
			Min	Maks
Age	0,011	7,867	3,886	11,455
Parity History	0,023	2,925	2,022	7,879

DISCUSSION

Effect of Age on Occurrence of Myoma Uteri

Table 2 shows that of the 17 respondents aged 20 to 40 years there were only 4 respondents (23.5%) who had no myoma and 13 respondents (76.5%) had myoma. Statistical analysis of alternative hypotheses is accepted. This means that there is an influence of age on the incidence of myoma in respondents in the Aceh Tamiang District Regional General Hospital with ρ -value = 0.012. This is in accordance with what was revealed by Breech (2013) that in

women, uterine myoma is often found between the ages of 20 to 40 years, but it is very difficult to find at under 20 years of age. It can be concluded that there is a relationship of age to the incidence of uterine myoma because it is influenced by the role of sex hormones in the formation of uterine myomas

Effect of Parity History on Occurrence of Myoma Uteri

Table 3 shows that out of 36 respondents the history of parity was in the multipara category, there were 22 respondents (61.1%) who did not experience myoma. Twelve respondents whose parity status was nullipara (no children) 10 respondents experienced myoma (83.3%). Statistical analysis of alternative hypotheses is accepted. This means that there is an influence of the history of parity on the incidence of myoma in respondents in the Aceh Tamiang District Regional General Hospital with ρ -value = 0.029. This research is supported by the results of research by Schorge et al. (2008, in Octaviani, 2017) that women who give birth often are less likely to develop this myoma than women who have never been pregnant or have one pregnancy. Data show 60% of uterine myomas develop in women who have never been pregnant or are only pregnant once and the risk is decreased by 70% in women who give birth to 2 or more children. It can be concluded that there is a relationship of parity to the incidence of uterine myoma because its growth is influenced by hormones

Effect of Family History on Occurrence of Myoma Uteri

Table 4 shows that out of 29 respondents the family history was in the category of no experiencing myoma, there were 19 respondents (65.5%) who did not experience myoma. Thirty-nine respondents who had a family history of myoma had 24 respondents (61.5%) having uterine myoma. Statistical analysis of alternative hypotheses is accepted. This means that there is an influence of family history on the incidence of myoma in respondents at the Aceh Tamiang District Regional General Hospital with ρ -value = 0.024. The results of this study are in accordance with the research conducted by Samosir (2017) at Dr. dr. Pirngadi Medan. Analysis of frequency distribution data on family history factors shows that the incidence of uterine myoma is influenced by these factors. In women of childbearing age, patients with uterine myoma who had been treated at Dr. dr. Pirngadi Medan there are 18 people (52.9%) who have a

family history p -value = 0.009. It can be concluded that there is a relationship of family history to the incidence of uterine myoma because genetics can inherit susceptibility to certain diseases.

Effect of Age of Menarche on Occurrence of Myoma Uteri

Table 5 shows that of the 43 respondents who had menarce history in the normal category there were 20 respondents (46.5%) having myoma. Twenty-five respondents with a history of early menarce had 14 respondents (56.0%) having a myoma. Statistical analysis of alternative hypotheses was rejected. This means that there is no effect of the history of menarce on the incidence of myoma in respondents in the Aceh Tamiang District Regional General Hospital with p -value = 0.308. This study was supported by the study of Lilyani et al (2012) in Semarang which showed that of the 68 patients studied, most of those who did not experience uterine myoma were in the normal menarce age category at 82.4% with only a small proportion of patients in the age group of early menarce 17.6%. It can be concluded that there is no effect between the age of menarce on the incidence of uterine myoma probably caused by several factors, including nutritional intake consumed, lifestyle and contraceptives that may be used by some patients to prevent pregnancy.

Effect of Body Mass Index on Occurrence of Myoma Uteri

Table 6 shows that of the 32 respondents whose body mass index was in the normal category there were 18 respondents (56.3%) having a myoma. Thirty-six respondents whose body mass index was in the fat category there were 20 respondents (55.6%) did not experience myoma. Statistical analysis of alternative hypotheses was rejected. . This means that there is no effect of body mass index on the incidence of myoma in respondents in the Aceh Tamiang District Regional General Hospital p -value = 0.283. Recent studies have found that not only is obesity or BMI high, but low BMI and poor nutritional status such as vitamin D deficiency are associated with an increased risk of uterine myoma. The results showed there was a relationship between low serum vitamin D levels and an increased risk of uterine myoma in groups of black and white women from North Africa. There is a significant inverse relationship between serum vitamin D levels and fibroid severity in African American women, which means the lower the level of vitamin D, the more severe the risk of myoma suffered (Brakta et al, 2015). It can be

concluded that there is no correlation between body mass index and incidence of uterine myoma because obesity is not the only influence that can cause uterine myoma.

The Effect of Diet Pattern on the Occurrence of Myoma Uteri

Table 7 shows that of the 41 respondents with dietary patterns in the good category, there were 21 respondents (51.2%) having myoma. Twenty-seven respondents with a diet pattern were in the bad category, there were 14 respondents (51.9%) who did not experience myoma. Statistical analysis of alternative hypotheses was rejected. This means that there is no effect of dietary patterns on the incidence of myoma in respondents in Aceh Tamiang District Regional General Hospital with p -value = 0.500. Another supportive study revealed by Haryanti (2013) in Yogyakarta found that uterine myoma is most common at the age of 35-50 years when estrogen exposure is high and increased, and respondents with unhealthy lifestyles. It can be concluded that there is no correlation between dietary patterns and the incidence of uterine myoma because there is a possibility that respondents have a high body mass index because of using hormonal contraception.

Effect of Menopause Status on Occurrence of Myoma Uteri

Table 8 shows that of the 20 respondents with menstrual status in the menopause category, respondents who did not experience myoma and experienced myoma were 10 respondents (50%) respectively. Forty-eight respondents with menstrual status in the menstrual category were 24 respondents (50.0%) who did not experience myoma and had myoma. Statistical analysis of alternative hypotheses was rejected. This means that there is no effect of menstrual status on the incidence of myoma in respondents at the Aceh Tamiang District Regional General Hospital p -value = 0.605. This research contrasts with the results obtained by Lilyani, Sudiart and Basuki (2012) in Semarang. The results revealed that of the 5 menopausal patients, there were 2 patients suffering from uterine myoma, and out of 63 patients who were still menstruating / not yet menopausal, there were 60 patients suffering from uterine myoma. Statistical analysis showed that there was a significant relationship between menstrual status / menopause with the incidence of uterine myoma (p -value = 0.004). It can be concluded that there is no influence between menopausal status on the incidence of uterine myoma probably due to the previous respondent had suffered from myoma since premenopause and continued to the early stages of menopause.

Effect of Contraception History on Occurrence of Myoma Uteri

Table 9 shows that of the 31 respondents with a history of contraception never or not using hormonal contraception there were 17 respondents (54.8%) having a myoma. Thirty seven respondents with a history of contraception using hormonal contraception there were 30 respondents (54.1%) did not experience myoma. Statistical analysis of alternative hypotheses was rejected. This means that there is no effect of contraceptive history on the incidence of myoma in respondents at the Aceh Tamiang District Regional General Hospital p -value = 0.313. This research contrasts with the results obtained by Bizjak, Turkanović & But (2016) of 921 respondents living in Maribor Municipality, Slovenia. The randomly selected study respondents found that age, body mass index and women who had taken oral contraceptives had a higher prevalence of myoma and a risk factor that was statistically related to the incidence of myoma ($p < 0.05$). It can be concluded that there is no influence between the history of contraception on the incidence of uterine myoma, possibly due to not long enough time of contraception, especially hormonal contraception.

Multivariate Analysis

After data analysis, it was found that the relationship of age with an odd ratio (OR) of 7,869 means the opportunity to get myoma at the age of 20 to 40 years by 7 times than the age above 40 years and statistically significant with a value of $p < 0,011$ [IK 95%: 3,886 - 11,455]. The relationship of parity history with OR of 2.425 means that the chance of getting myoma in the respondents did not have children by 2.4 times than the respondents who had more than one child, this relationship was statistically significant with a value of $p < 0.023$ [IK 95%: 2.022 - 7.879] . Multivariate statistical analysis tests on family history variables ($p = 0.276$) showed no effect with the incidence of myoma in the respondents.

Conclusion

The results stated that there was an effect of age with (p -value = 0.012), history of parity with (p -value = 0.029), and family history with (p -value = 0.024) on the incidence of myoma in the respondents in Aceh Tamiang District Regional General Hospital

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