

Correlation of Junk Food, Genetic Factor, and Menarche Age with Fibroadenoma Mammae at Surgery Polyclinic Rantauprapat General Hospital, Labuhanbatu

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Abstract

There are many risk factors which have an act to distribute Fibroadenoma mammae (FAM) to the women such as junk food consumption factors, genetic factors, and the women who gets the menstruation in age less than 12 years old. In RSUD Rantauprapat, the scores of FAM are increasing in every year. In 2014, the researcher found 202 (27,83%) cases of FAM. Therefore, the cases increased as many as 233 (28,36%) cases in 2015. In 2016, the cases increased too as many as 298 cases (30,52%). This research aims to determine the relation between junk food consumption, genetic factors, and age of menarche with Fibroadenoma mammae cases at surgical polyclinic of RSUD Rantauprapat. The design of this research was analytic design which used case control and the researcher did the data analysis as univariate, bivariate, and multivariate. The result of this research showed us the relation between junk food consumption (p value = <0,015), genetic factors (p value = <0,040), and age of menarche (p value = <0,031). Therefore based on the result of research, the researcher found the genetic factors were the most related factors to FAM cases that were (p = 0,001; OR = 0,005). In this thesis, the researcher wishes all of the women regulate their dietary habit especially to the women who come from a family that has FAM historic disease and the women who gets the menstruation cycle in age less than 12 years old.

Keywords: Junk food, genetic factor, menarche age, fibroadenoma mammae

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## Introduction

According to Bewtra (2009) *NSW Breast Cancer Institute* has given a report, that *fibroadenoma mammae* is happened by women aged 21-25 years old. This disease are occurred by the women aged over 51 years old less than 5%. The prevalence total of this disease is >9% of the female growth population which has *fibroadenoma mammae* disease. Moreover, Bewtra explained *Western Breast Services Alliance* has given a report that the women who got the *fibroadenoma* when they aged 15-25 years old, are one of seven women (15%) will suffer the *fibroadenoma mammae* disease in their life. From the several diseases which includes of the benign breast tumor, FAM is the most common disease of the other diseases. Actually, the average of FAM disease is occurred by one third of the total of the benign breast tumor patients.

According to the result of Riskesdas 2013, *Fibroadenoma mammae* which is the benign breast tumor is the most common tumor in young women and adult women who have the age of 3 decades early in life. In Indonesia, the data of *Fibroadenoma mammae* patients are expected to increase in every year. In Indonesia, the prevalence data of tumor/cancer is 1,4 per 100 inhabitants, in range 330.000 people. According to Zebua (2010) Based on the report of RSUP Haji Adam Malik Medan, the prevalence total of the benign tumor is 30,5% of the total of the breast tumor.

Rukiyah (2012) explains the *fibroadenoma mammae* often occur to the teenager girls because the women are more often stressed and depressed, then the women often on a strict diet to lose their weight and the female estrogen hormones increase actively. Moreover, the predisposition factors of FAM are caused by stress, doing the diet program, the gender, and the age factors.

According to Ai Yeyeh (2012), Wilson on his Christopher\_Davis book explains that *fibroadenoma mammae* or FAM is the benign breast tumor which has a clear border and a lump that can be moved. This tumor usually occurs to young women aged 20-25 years old. This tumor can have a solitary or a multiple form, it is easy to move, it has a living form, it is free from its surrounding system and the size can change if it is affected by menstrual cycle.

Sarwono (2001) expresses that American Cancer Society states the patients with the breast tumors are usually found after they are feeling the symptoms and the signs of the tumor but the women who have the breast tumor but do not feel the symptoms are also often found theirs. Therefore, the women should have their own breast examination. The women should do the clinical examination by doctor. The women should do the radiological examination such as mammography or ultrasonografi examination, or laboratory examination by doing biopsy retrieval without surgical procedures which is an early detection procedure to detect the breast tumor.

Sidauruk (2011) states that in Indonesia, the information about the data of FAM disease is still not fully available but the data can be estimated to increase in every year. The data obtained from badan Jakarta *Breast Center*, the specialized clinic which is handling the breast cases in Jakarta, showed us 2.495 patients visited for treatment in 2001 until 2002, have been found 79% of the benign breast tumor patients and the patients who are suffering the cancer only 14% .

Sidauruk told us, based on the result of medical record data, there were found 103 FAM patients started from 2007 until 2011 at dari RS Santa Elisabeth Medan. That was 5 in 2007, 25 patients in 2008, 23 patients in 2009, 23 patients in 2010, dan 27 patients in 2011.

According to Siti Fitria Dewi research (2008), the researcher got 144 cases of the *fibroadenoma mammae* (FAM) disease which are occurred by women. It is mostly found to

the women aged less than 30 years old (79,90%), that was the women aged 21-25 years old (41,70%), the women aged 16-20 years old (25,70%), the women aged 26-30 years old (9,70%), and the women aged 10-15 years old (2,80%). The right breast is a breast that often suffers the disease (44,50%) and the cases of *Giant Fibroadenoma* are a disease rarely found in the field.

The highly data which are describing the cases of the breast tumor and the tendency to increase this incident in every year, it makes the researcher want to try to do this researcher at RSUD Rantauprapat. This incident happens based on the description of consumption the junk food, the historical heredity factors, and the historical menarche age which related to the breast tumor (*Fibroadenoma mammae*).

The problem formulation of this research likes *Is there the relationship between junk food consumption, the heredity factorsm and the menarche age with the Fibroadenoma Mammae disease at RSUD Rantauprapat Tahun 2018.*

This research aims to analyze the relation of fastfood consumption, heredity factors, and the menarche age with the *Fibroadenoma mammae* disease at RSUD Rantauprapat.

### **The Method of Research**

Kind of this research is an analytic observational research. The research design of this research is case control. The research which is the case control design is done by comparing two groups by giving the comparison between the case group and the control group. (Notoatmodjo, 2010). Therefore, the learning which uses this case control is done by analyzing and identifying the cases groups and the control groups. Then it analyzed and examined the risk factors that allow us to show whether the cases and the controls can be exposed or not as retrospectively. This research aims to determine a big risk of the relation

between junk food consumption, the heredity factors, and the menarche age patients of *Fibroadenoma mammae* disease.

The case population on this research is all of the patients who suffer the *fibroadenoma mammae* disease at Poliklinik Bedah RSUD Rantauprapat. The population is 55 people, it started on August 2017 until December 2017.

The researcher collected the primary data which got in the field directly. The instrument of this research is the questioner through the interview method and the direct observation at RSUD Rantauprapat and the patients' residences. The questioner of this research is the closed field questioner because the respondent only gives the sign to the one of the most appropriate answers. The researcher usually takes the data such as the age data, the marital status, the historical of food consumption which made from the flavoring/junkfood and the alcoholic beverages, the heredity factors and the menarche age.

The secondary data is the data of the medical record and the visitor lists who seek the treatment Poliklinik Bedah RSUD Rantauprapat. The patients who did the first examination and if the patients diagnosed with *Fibroadenoma mammae* disease, they would take the treatment or they would take the surgery on August 2017 December 2017. The researcher took the data such as the names, the addresses, the ages, the faith, the *Fibroadenoma mammae* diagnosis, and the other supporting data.

## The Result and The Conclusion

**Table 1. The Characteristic Distribution of the Respondent of FAM Patients**

<b>1</b>	<b>Age</b>	<b>n</b>	<b>%</b>
	11-20 years old	18	32,7
	21-30 years old	22	40,0
	31-40 years old	15	27,3
	<b>Total</b>	<b>55</b>	<b>100,0</b>
<b>2</b>	<b>Gender</b>		
	Women	55	100,0
	<b>Total</b>	<b>55</b>	<b>100,0</b>
<b>3</b>	<b>Marital Status</b>		

	Married	25	45,5
	Single	30	54,5
	<b>Total</b>	<b>55</b>	<b>100,0</b>
4	<b>Faith</b>		
	Islam	48	87,3
	Kristen	7	12,7
	<b>Total</b>	<b>55</b>	<b>100,0</b>

Based on the table above, the most of the respondent who suffer the FAM disease is the respondent aged 21-30 years old as many as 22 people (40,0%). Based on the gender, the women respondent is 55 people (100%). Based on the marital status, the respondent who are single is the most respondent of all the respondent of marital status as many as 30 people (54,5%). Based on the faith, Islam is the most respondent as many as 48 people (87,3%).

**Table 2. The Characteristic Distribution of The Respondent of Non FAM Patients**

1	Age	n	%
	11-20 years old	10	18,2
	21-30 years old	11	20,0
	31-40 years old	9	16,4
	41-50 years old	11	20,0
	51-60 years old	11	20,0
	61-70 years old	1	1,8
	71-80 years old	2	3,6
	<b>Total</b>	<b>55</b>	<b>100,0</b>
2	<b>Gender</b>		
	Women	55	100,0
	<b>Total</b>	<b>55</b>	<b>100,0</b>
3	<b>Marital Status</b>		
	Married	39	70,9
	Single	16	29,1
	<b>Total</b>	<b>55</b>	<b>100,0</b>
4	<b>Faith</b>		
	Islam	50	90,9
	Kristen	5	9,1
	<b>Total</b>	<b>55</b>	<b>100,0</b>

Based on the table above, the age of the majority respondent who are not FAM patient aged 21-30 years old, 41-50 years old dan 52-60 years old as many as 11 people (20,0%), and the minority respondent who are not FAM patient aged 61-70 tahun as many as 1 person (1,8%). According to the gender, the participant of all respondents which are the women is 55 people (100%). Based on the marital status, the married respondent is 39 people (70,9%). Based on the faith, Islam amounts to 50 people (90,0%).

**Table 3. The Dependent Variable Frequency Distribution of The Respondent of FAM Patients**

No	Junk Food Consumption	Total	%
1	Often	50	90,9
2	Always	5	9,1
3	Less	10	13,7
	<b>Total</b>	<b>55</b>	<b>100,0</b>
No	Genetic Factor		
1	Heredity Factor	38	69,1
2	Non Heredity Factor	17	30,9
	<b>Total</b>	<b>55</b>	<b>100,0</b>
No	Menarche Age		
1	Normal	39	70,9
2	Abnormal	16	29,1
	<b>Total</b>	<b>55</b>	<b>100,0</b>

Based on the table above, the frequency of respondent FAM who often consume the junk food is 50 people (90,9%) and the minority frequency of the respondent who always consume the junk food is 5 people (9,1%). Based on the table, the FAM patients because of genetic factors is 38 people (69,1%) and the minority respondent of FAM patients who do not have the genetic factor is 17 people (30,9%). Based on the menarche age of the respondent, the majority of FAM patients who are abnormal is 31 people (56,4%) and the minority of the menarche age of the FAM patients who are normal amounts to 24 people (43,6%).

**Table 4. The Dependent Variable Frequency Distribution of The Respondent of Non FAM Patients**

No	Junk Food Consumption	Total	%
1	Sometimes	24	43,6
2	Often	31	56,4
	<b>Total</b>	<b>55</b>	<b>100,0</b>
No	Genetic Factor		
1	Heredity Factor	5	9,1
2	Non Heredity Factor	50	90,9
	<b>Total</b>	<b>55</b>	<b>100,0</b>
No	Menarche Age		
1	Normal	39	70,9
2	Abnormal	16	29,1
	<b>Total</b>	<b>55</b>	<b>100,0</b>

Based on the table above, the frequency of the non FAM respondent who often consume the junk food is 31 people (90,9%) and the minority frequency of the respondent who sometimes consume the junk food is 24 people (43,6%). Based on the respondent of non FAM patients, the majority patients have genetic factors as many as 50 people (90,9%) and the minority respondent of non FAM patients who do not have the genetic factors is 5 people (9,1%). Based on the menarche age of the respondent, the majority of non FAM patients who are normal is 39 people (70,9%) and the minority of the menarche age of the non FAM patients who are abnormal amounts to 16 people (29,1%).

**Table 5. Bivariate Analysis**

Junk Food Consumption	FAM Accident				Total		<i>p value</i>
	No		Yes		N	%	
	N	%	N	%			
Sometimes	24	100,0	0	0,0	24	100,0	<0,015
Often	31	38,3	50	61,7	81	100,0	
Always	0	0,0	5	100,0	5	100,0	
<b>Total</b>	<b>55</b>	<b>50,0</b>	<b>55</b>	<b>50,0</b>	<b>110</b>	<b>100,0</b>	

  

Genetic Factor	FAM Accident				Total		<i>p value</i>
	No		Yes		N	%	
	N	%	N	%			
Have Genetic Factor	5	11,6	38	88,4	43	100,0	<0,040
Do not Have Genetic Factor	50	74,6	17	25,4	67	100,0	
<b>Total</b>	<b>55</b>	<b>50,0</b>	<b>55</b>	<b>50,0</b>	<b>110</b>	<b>100,0</b>	

  

Menarche Age	FAM Accident				Total		<i>p value</i>
	No		Yes		N	%	
	N	%	N	%			
Normal	39	61,9	24	38,1	63	100,0	<0,031
Abnormal	16	34,0	31	66,0	47	100,0	
<b>Total</b>	<b>55</b>	<b>50,0</b>	<b>55</b>	<b>50,0</b>	<b>110</b>	<b>100,0</b>	

Based on the table above, the frequency of 24 respondents of non FAM patients who sometimes consume the junk food is 100,0%. Then the frequency of 81 respondents of FAM



patients who often consume the junk food is 61,7%. Moreover, the frequency of 5 respondents of FAM patients who always consume the junk food is 100,0%. Based on the statistical test result, the researcher gets  $p\ value = <0,015$ , it means that it has the relation between the junk food consumption with the FAM disease.

Based on the table above, 88,4% of 43 respondents who have the genetic factor of FAM/Ca Mammae are the majority of the patients who have the FAM disease. Moreover, 74,6% of 67 respondents who do not have the genetic factor of FAM/Ca Mammae are the majority of the patients who do not have the FAM disease. Based on the statistical test result, the researcher gets the  $p\ value = <0,040$ , it means that it has the relation between the genetic factors with the FAM disease.

Based on the table above, 61,9% of 47 respondents in the normal menarche age are the majority of the patients who do not have the FAM disease. Moreover, 66,0% of 47 respondents in the abnormal menarche age are the majority of the patients who have the FAM disease. Based on the statistical test result, the researcher gets  $p\ value = <0,031$ , it means that it has the relation between the menarche age with the FAM disease.

**Table 6 Multivariate Analysis**

Variable	B	Sig.	OR	95% C.I	
				Lower	Upper
The Junk Food Consumption	21.338	0.997	1.072	0.150	4.087
The Genetic Factor	-2.849	0.001	0.005	0.001	0.032
The Menarche Age	1.027	0.150	4.265	0.592	30.731
Constant	-60.255	0.998	0.000		

Table 4.19 shows us the variable of the genetic factor has  $p < 0,05$  score, moreover the variable of the junk food consumption and the menarche age have  $p > 0,05$  score. Based on this table, the dominant variable that related with the FAM disease is the variable of genetic factor ( $p = 0,001$ ; OR = 0,005).

## The Conclusion and Suggestion

1. There is the relationship between the junk food with the FAM disease at RSUD Rantauprapat Kabupaten Labuhanbatu 2018. Its score is  $p = <0,015$ .
2. There is the relationship between the genetic factors with the FAM disease at RSUD Rantauprapat Kabupaten Labuhanbatu 2018. Its score is  $p = <0,040$ .
3. There is the relationship between the menarche age with the FAM disease at RSUD Rantauprapat Kabupaten Labuhanbatu 2018. Its score is  $p = <0,031$ .
4. There is the relationship between the resources with the premarital sexual behavior of teenager at Madrasah Aliyah Negeri (MAN) Pandan 2018. Its score is  $p = <0,033$ .
5. The dominant variable which related to the FAM disease is the variable of genetic factor. Its score is  $p = 0,001$ ; OR = 0,005.

## The Suggestion

1. The researcher suggests the hospital to give the education to the patients who have a big risk to get the FAM disease, so that the patient will maintain their health and their lifestyle especially about the food consumption, because the FAM can reappear even after surgery.
2. The researcher suggests the patients who come to the hospital for treatment to maintain their health. The patient should avoid or control the risk factors of FAM disease.
3. The researcher suggests the next researcher to expand the other variables to be the next research and the other risk factors of FAM, therefore it can complete the result of the existing research.

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