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## CHARACTERISTICS OF TYPES OF DIABETES MELLITUS II IN REGIONAL GENERAL HOSPITAL THAN RONDAHAIM, SIMALUNGUN DISTRICT

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### *Abstract*

Complications caused by diabetes are becoming a more serious problem so controlling blood glucose intensively can reduce diabetes mortality by reducing complications that arise. This study aims to determine the characteristics of Type II Diabetes Mellitus Patients at Tuan Rondahaim Regional General Hospital, Simalungun Regency in 2019. With this type of research Descriptively, this research was carried out at the Tuan Rondahaim Regional General Hospital, Simalungun Regency from July to September 2019 with a total population of 40 people using the sampling technique, namely total sampling where all populations are sampled. The results of this study indicate that the younger a person has diabetes mellitus, it can be seen that the lower the number of people with diabetes mellitus, the number of people with diabetes mellitus is more suffered by women, there are fluctuations in the duration of the disease in the Toba and Simalungun tribes, while in the Javanese the longer they suffer from diabetes mellitus, there is a decrease in the incidence of duration of the disease with adherence to taking medication that has no significant difference compared to Duration of disease with adherence to diet. There was a significant difference between adherents and non-adherents, where the tendency is not to comply with diet rules. It is expected that Efarina University through the Bachelor of Nursing study program can provide counseling about Diabetes Mellitus, specifically Type II Diabetes Mellitus both in the community and in hospitals. adjusted to the portion and condition of the patient in this study, it can be included in the information that has been conveyed by researchers regarding type II Diabetes Mellitus sufferers.

**Keywords:** Diabetes Mellitus Type II

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### INTRODUCTION

The World Health Organization (WHO) predicts an increase in the number of diabetics in Indonesia from 8.4 million in 2000 to around 213 million in 2030. Pratiw (2007) WHO data reveals, the global burden of Diabetes Mellitus in 2000 was 135 million, where this burden is expected to continue to increase to 366 million people after 25 years (2025). in the number of int will increase to 366 million people after 25 years (Purnomo, 2009).

Classification of DM according to WHO is divided into several types. The first is DM type 1 where etiologically there is destruction of beta cells generally leads to absolute insulin deficiency, occurs auto-immune and idiopathic. The second is type 2 DM, which varies in etiology from dominant insulin resistance with relative insulin deficiency to defects in insulin secretion with insulin resistance. The third is Gestational DM, namely diabetes that occurs during pregnancy or because the baby is born with more weight. And then there are other types of DM where there are defects in beta cell function, genetic defects in insulin action, diseases of the exocrine pancreas, endocrinopathies, due to drugs or chemicals, infections, rare immunological causes, and other genetic syndromes related to DM, (Socgondo, 2009)

The latest data from the International Diabetes Federation (IDF) shows the number of diabetics around the world is 285 million people, accounting for 7% of the adult population with diabetes. The highest prevalence rate of diabetes is in the United States of 10.2%, then as much as 9.3% in North Africa (IDF, 2009). In 2006, the number of people with diabetes in Indonesia reached 14 million people. Of that number, only 50% of sufferers were aware that they had it, and around 30% of them took medication regularly. According to several studies, the prevalence of diabetes in Indonesia ranges from 1.5% to 2.3% except Manado which tends to be higher, namely 6.1% (Purnomo, 2009). In the study of Wright et al.,

Based on the results of research and surveys conducted by researchers, the researcher wishes to find out the characteristics of Type II Diabetes Mellitus Patients at Tuan Rondahaim Regional General Hospital, Simalungun Regency in 2019.

### **Formulation of the problem**

From the background above, the formulation of the research problem is what are the characteristics of Type II Diabetes Mellitus sufferers at Tuan Rondahaim Regional General Hospital, Simalungun Regency, in 2019?

## **METHODS**

### **Types of research**

This type of research is cross sectional, which is a research design by making observations at the same time (Hidayat AA 2009).

### **Research sites**

The research was conducted at Tuan Rondahaim Regional General Hospital, Simalungun Regency

### **Research time**

This research was conducted from July - September 2019.

## **RESULTS AND DISCUSSION**

### **Research result**

After conducting research on the Characteristics of Type II Diabetes Mellitus Patients at Tuan Rondahaim Regional General Hospital, Simalungun Regency in 2019 with 40 respondents.

### **Frequency Distribution of Characteristics of Type II Diabetes Mellitus Patients at Tuan Rondahaim Regional General Hospital, Simalungun Regency, 2019 by Age**

Obtained data from the majority of respondents aged > 56 years, namely 22 people (55%) while the minority had ages 35-45 years, namely 4 people (10%). According to Soegondo (2009) Diabetes Mellitus (DM) Type II is the type most commonly found (more than 90%) It occurs more frequently after the age of 40 years with a note that in the 7th decade the frequency of diabetes reaches 3-4 times higher than the average. average adult.

### **Frequency Distribution of Characteristics of General Diabetics in Tuan Mellitus Type II Region at Rondahaim Hospital, Simalungun Regency, 2019 Based on Gender**

According to Irawan (2010), DM is at greater risk for women than men, this is because physically women have a greater opportunity to increase body mass index. Meanwhile, research conducted by Astuti (2013), stated that the proportion of controlling sugar levels bad blood pressure is higher in men (63.6%) than in women (60.4%) There are 15 differences in blood sugar levels in women and men caused by differences in behavior and attitudes towards DM

Frequency Distribution of the Characteristics of Patients with Type II Diabetes Mellitus at Tuan Rondahaim Regional General Hospital, Simalungun Regency in 2019 Based on Medication Compliance, it was obtained that the majority of respondent data adhered to taking medication, namely 21 people (52.5%) while the minority did not adhere to taking medication, namely as many as 9 people (47.5%)

According to Anani (2012), the proportion of poor blood sugar level control was higher in respondents who did not take medication regularly (84%) compared to those who regularly (59.6%) Meanwhile, according to Mihardja (2009) DM sufferers had control of blood sugar levels uncontrolled more in patients who do not regularly take medication

### **Frequency Distribution of Characteristics of Type II Diabetes Mellitus Patients at Regional General Hospitals in 2019 Rondahaim, Simalungun Regency Based on Diet Compliance**

Obtained data from the majority of respondents who adhered to taking medication, namely 21 people (52.5%), while the minority did not adhere to taking medication, namely as many as 9 people (47.5%). According to Anani (2012), the proportion of poor blood sugar control was higher in respondents who did not take medication regularly (84%) compared to those who regularly (59.6%) Meanwhile, according to Mihardja (2009) DM sufferers had control of blood sugar levels uncontrolled more in patients who do not regularly take medication

### **Frequency Distribution of Characteristics of Type II Diabetes Mellitus Patients at Regional General Hospitals in 2019 Rondahaim, Simalungun Regency Based on Diet Compliance**

Based on the results of research conducted on the Characteristics of Type II Diabetes Mellitus Patients at the Tuan Rondahaim Regional General Hospital, Simalungun Regency, in 2019. Age Characteristics With Disease Duration, Medication Compliance and Diet Compliance in Type II Diabetes Mellitus Patients at Tuan Rondahaim District General Hospital Simalungun Year 2019.

From the results of table 519 above, it can be seen that of the 4 (10%) respondents who were aged 35-45 years, the majority were not compliant with the diet, namely 3 people (7.5%), while the minority adhered to the diet, namely 1 person (2.5%). of the 14 (35%) respondents aged 46-56 years the majority were non-adherent to the diet, namely 8 people (20%) while the minority adhered to the diet, namely as many as 6 people (15%), of the 22 (55%) respondents who were >56 years the majority not adhering to the diet as many as 17 people (42.5%) while the minority adherent to the diet as many as 5 people (12.5%)

In Wright's study (2010), showed adherence to diet of 52% Where greater adherence to diet will affect changes in health profile including cholesterol, triglycerides and glucose. Pandang Arang Boyolali Hospital found that 70% (7 patients) did not comply

with the recommended medication for DM patients, and the remaining 30% adhered to the recommended medication (Rahayu, 2011)

Gender Characteristics with Disease Duration, Medication Adherence and Diet Compliance in Type II Diabetes Mellitus Patients at Tuan Rondahaim Regional General Hospital, Simalungun Regency in 2019. The number of diabetes mellitus sufferers is more suffered by women. When viewed from the duration of the disease, we can conclude In the 6-10 year period, there is a two-fold increase in diabetes mellitus in women. However, if seen from the adherence to taking medication, that is a comparison between men and women, it can be concluded that men are slightly more compliant with taking medication than women. When compared with diet adherence, it can be seen that men tend to be disobedient to diets compared to women.

Characteristics of Tribe with Disease Duration, Medication Adherence and Diet Compliance in Type II Diabetes Mellitus Patients at Tuan Rondahaim Regional General Hospital, Simalungun Regency in 2019. If you look at the results of the cross table between tribes and disease duration, it can be concluded that the Toba and Simalungun tribes have fluctuations in duration disease in the Toba and Simalungun tribes, while in the Javanese the longer they suffer from diabetes mellitus, the incidence rate decreases. Whereas the Mandailing and Minang tribes tend not to experience a significant decrease and increase in incidence when viewed from the duration of diabetes mellitus.

## CLOSING

### Conclusion

1. From the age characteristics it can be seen that the younger a person has diabetes mellitus, the less the number of people with diabetes mellitus. When viewed from adherence to taking medication, it can be seen that the longer a person suffers from diabetes mellitus, the higher the tendency to disobey taking medication. Likewise adherence to diet. The longer a person suffers from diabetes mellitus, the higher the tendency to disobey the diet
2. From the cross table it can be seen that women suffer more from diabetes mellitus. If we look at the duration of the disease, we can conclude that in the 6-10 year period there is a two-fold increase in diabetes mellitus sufferers in women. However, if seen from the adherence to taking medication, that is the comparison between men and women, it can be concluded that men are slightly more willing to take medication than women. When compared with diet adherence, it can be seen that males tend to be disobedient to diets compared to females.
3. If you look at the results of the cross table between ethnic groups and the duration of the disease, it can be concluded that the Toba and Simalungun tribes have fluctuations in the duration of the disease in the Toba and Simalungun tribes, while in the Javanese the longer they suffer from diabetes mellitus, the incidence rate decreases. Meanwhile, the Mandailing and Minang tribes tend not to decrease and the incidence increases significantly when viewed from the duration of suffering from diabetes mellitus. When viewed from adherence to taking medication, there is no significant difference between adherents and non-adherents when viewed from ethnic background.

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