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INTERNAL MEDICINE INPATIENT INSTALLATION MOHAMMAD HOESIN HOSPITAL PALEMBANG

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ABSTRACT

Introduction

Diabetes mellitus is Wrong One disease degenerative which becomes threat health resident world on moment this . Amount diabetes sufferers continue increase along with changes pattern Eat And style live . On in 2000, the number resident 171 million people in the world suffer from diabetes soul And estimated amount This will Keep going increase to 366 million on 2030. Research conducted between 2001 and 2005 in the area Depok and in Makassar obtained prevalence of type 2 diabetes is quite high fantastic .

Method

The purpose of this study is to determine the relationship of perception of death of elderly religious activity in Panti Hargodedali Surabaya. This research design uses a cross sectional analytic. This is all the elderly population living at Panti Hargodedali as much as the number of samples of 36 respondents. The data were collected by interview questionnaire and observation analyzed then performed tabulation.

Result

From the results of the study on 86 samples, the distribution of type 2 diabetes sufferers was highest at the age of 45-59 years, namely 40 people (46.51%), and more women, namely 57 people (66.28%). The distribution of blood sugar levels was highest, namely ≥ 200 mg/dL, as many as 66 people (76.74%). The distribution of BMI was highest in the overweight group with a risk of as many as 36 people (41.86%). The most common complication was diabetic gangrene, as many as 36 people (41.86%) .

Conclusion

There is a need for an education program regarding diabetes by relevant parties to the community to suppress the increase in the number of diabetes sufferers and to prevent complications and reduce the mortality rate .

INTRODUCTION

Diabetes mellitus is a degenerative disease that poses a global health threat today. The number of people with diabetes continues to increase along with changes in diet and lifestyle. In 2000, 171 million people worldwide suffered from diabetes, and this number is expected to increase to 366 million by 2030. [1]

For Indonesia, WHO predicts an increase in the number of diabetes sufferers from 8.4 million in 2000 to around 2.3 million in 2030. [2] This number places Indonesia in 4th place in terms of the number of diabetes mellitus sufferers after India, China and the United States. [1]

Research conducted between 2001 and 2005 in the Depok area found a prevalence of type 2 diabetes of 14.7%. Similarly, in Makassar, the prevalence reached 12.5% by the end of 2005. [3] These figures are quite staggering and require special attention.

Type 2 diabetes mellitus occurs due to relative beta-cell failure and insulin resistance. [4] Type 2 diabetes is not particularly dangerous if blood glucose levels are well-controlled. However, if poorly controlled, it can lead to numerous, potentially fatal, complications. This type of diabetes often causes blindness, amputations, kidney failure, coronary heart disease, and even death.

Seeing the high and increasing number of diabetes mellitus sufferers recently, especially type 2 diabetes and the complications it causes, it is necessary to conduct research on the characteristics of type 2 diabetes mellitus and its therapy to get a clearer picture so that it can suppress the increase in the number of diabetes sufferers and can prevent complications and reduce mortality rates.

Diabetes Mellitus is a group of metabolic diseases characterized by hyperglycemia resulting from abnormalities in insulin secretion, insulin action, or both. (ADA 2005)

Type 2 diabetes mellitus, or *non-insulin-dependent diabetes mellitus* (NIDDM), is caused by relative β-cell failure and insulin resistance. Insulin resistance is the decreased ability of insulin to stimulate glucose uptake by peripheral tissues and to inhibit glucose production by the liver. β-cells are unable to fully compensate for this insulin resistance, resulting in a relative insulin deficiency. This inability is evident in reduced insulin secretion in response to glucose stimulation, as well as in response to glucose stimulation combined with other insulin secretion stimulants. This means that pancreatic β-cells are desensitized to glucose .

MATERIALS AND METHODS

This was a retrospective, descriptive study conducted at the medical records department of Mohammad Hoesin Hospital in Palembang from May to June 2008.

The data used in this study were secondary data derived from medical records collected retrospectively from all patients with type 2 diabetes mellitus who were treated at the inpatient unit of internal medicine at Mohammad Hoesin Hospital, Palembang, during the period from January 1, 2007, to December 31, 2007, based on medical records.

The entire population of this study was not sampled. This was due to incomplete medical records and time constraints. From 592 patients with type 2 diabetes mellitus who were treated at the inpatient unit of RSMH Palembang from January 1 to December 31, 2007, a sample was drawn using a formula, resulting in 86

individuals for the study. The sample was drawn using a random sampling technique.

RESULTS

The entire population of this study was not sampled. This was due to incomplete medical records and the researcher's limited time. A random sampling technique was used to select 86 individuals from 592 patients with type 2 diabetes mellitus treated at the inpatient unit of RSMH Palembang between January 1 and December 31, 2007

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Sociodemographic Characteristics

Age

Table 1. Distribution of Type 2 Diabetes Patients 2 Based on Age (n=86)

Age Group (years)	Amount	Percentage
30 – 44	11	12.79
45 – 59	40	46.51
> 60	35	40.70
Amount	86	100

This aligns with the diabetes risk factors mentioned in the literature, which state that individuals aged 45 years and older are at greater risk for glucose intolerance. Epidemiological studies, both cross -*sectional* and *longitudinal* , show that the prevalence of diabetes and impaired glucose tolerance increases with age, plateauing *and* then declining.

Gender

Table 2. Distribution of Type 2 Diabetes Patients by Gender (n=86)

Gender	Amount	Percentage
Man	29	33.72
Woman	57	66.28
Amount	86	100

The ratio of male and female sufferers was found to be around 1:2. This situation differs from the theory that states that male skeletal muscle is more resistant to insulin than female.

Family History

Table 3. Distribution of Type 2 Diabetes Patients Based on Family History (n=86)

Family History	Amount	Percentage
There is	12	13.95
There isn't any	30	34.89
Incomplete Data	44	51.16
Amount	86	100

Body Mass Index

Table 4. Distribution of Type 2 Diabetes Patients Based on Body Mass Index (n=86).

Body Mass Index (BMI)	Amount	Percentage
Underweight	10	11.63
Normal Body Weight	35	40.70
Overweight With Risks	36	41.86
Obes I	4	4.65
Obes II	1	1.16
Amount	86	100

*Source of BMI classification: WHO WPR/IASO/IOTF in The Asia-Pacific Perspective: Redefining Obesity and its Treatment.

DISCUSSION

This is in accordance with the diabetes risk factors mentioned in the literature, which states that one of the risk factors for diabetes is being overweight or a BMI > 23 kg/m2 · Diabetes in people who are overweight (obese) is based on insulin resistance. In patients with overweight (obesity), there is a disruption in tissue sensitivity to insulin due to a lack of insulin receptors found in insulin-responsive cell membranes. The risk of diabetes mellitus will increase linearly according to increasing BMI. Being overweight will increase the incidence of diabetes mellitus 3-4 times compared to people with a normal BMI. This is also seen in another study conducted in America on 11,400 women, which showed that women with a BMI between 25-26.9 kg/m2 have an eight-fold greater risk of developing type 2 diabetes mellitus compared to women with a BMI < 22 kg/ m2 .

The pathophysiology of diabetes that occurs in old age is not fully explained, but it can be based on four factors arising from the diet itself. The first factor is due to changes in body composition, namely a decrease in muscle mass from 19% to 12%, in addition to an increase in fat tissue from 14% to 30%, resulting in a decrease in the number and sensitivity of insulin receptors. The second factor is decreased physical activity, which will result in a decrease in the number of insulin receptors ready to bind with insulin, thus decreasing the rate of GLUT-4 translocation. Both of these factors will reduce both the rate and amount of glucose uptake. The third factor is *lifestyle changes* , and the fourth is neurohormonal changes, specifically *insulin-like growth factor-1* (IGF-1) and plasma dehydroepiandrosterone (DHEAS).

Of the 86 samples, 44 had incomplete family history data. Table 8 above shows that 12 (13.95%) of patients also had family members with diabetes, while the remaining 30 (34.89%) did not have family members with diabetes. According to the literature, a family history is a risk factor for diabetes. Type 2 diabetes mellitus can be genetically inherited. If one parent has diabetes, the chance of passing the disease on to their children is 1 in 20. Other studies indicate that if a person has type 2 diabetes mellitus, the chance of the disease being passed down through the family is 10% - 15%. This study cannot determine whether there are hereditary factors influencing the onset of diabetes mellitus, as more than 50% of the data is incomplet

CONCLUSION

Based on descriptive research on the characteristics of type 2 diabetes mellitus patients and their therapy in the inpatient installation of internal medicine at RSMH Palembang for the period of January 1, 2007 – December 31, 2007. The highest frequency of type 2 diabetes sufferers was in the 45-59 age group, namely 40 people (46.51%) and more women, namely 57 people (66.28%) than men. The highest frequency of random blood sugar levels in this study was ≥ 200 mg/dL, namely 66 people (76.74%). In this study, the distribution of sufferers based on family history could not be seen because the existing data was incomplete. Based on the Body Mass Index, more type 2 diabetes sufferers were overweight with a risk of 36 people (41.86%). Insulin was the most frequently given therapy to diabetes sufferers, namely 52 people (64.20%).

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