



Perception of Type 2 Diabetes Mellitus Patient About Diabetic Wound Prevention

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Abstract

The prevalence of diabetes mellitus increases every year, this case make the risk of diabetes complications increase. One of the complication is diabetic wound. The prevention of wound is needed to avoid diabetic wound. The purpose of this study was to explore the perceptions of diabetics about prevention of diabetic wounds in patients. This study design used a qualitative research with phenomenology approach. Data collection used in-depth interview method that involving five participants. The results of this study got 18 themes with a large theme, that is hoping to be able for carry out prevention activities properly so that injuries do not occur. The conclusion of this study is that diabetes mellitus sufferers realize that diabetes is a disease that can makes unstable blood sugar and is caused by poor lifestyle, Patients know that diabetic wounds can occur on himself, so diabetes mellitus suffer take preventive measures such as wearing footwear and be careful in daily activity, do sports activities and avoid places that has risk and handle injuries immediately. This is measure because the participants are afraid that if there is a diabetic wound on him self, then the participants hope to avoid diabetic wounds with proper prevention.

Keywords: Diabetes Mellitus; Wound Prevention

INTRODUCTION

Diabetes Mellitus is a disease that occurs due to disorders of the pancreas that are unable to produce insulin according to the body's needs or the inability to break down insulin (Maghfuri, 2016 dalam(Wulandari, 2019). Diabetes Mellitus is a metabolic disorder that is marked by the increasing the blood sugar due to a decrease in insulin secretion by pancreatic beta cells and insulin function disorder or insulin resistance (Fatimah, 2015).

Based on the WHO statement (2016) that the number of cases and the prevalence of Diabetes Mellitus have continued to increase over the last

few decades. Diabetes Mellitus is an important public health problem, and is one of the four priority non-communicable diseases targeted for action by world leaders.

According to the International Diabetes Federation data (2017) there are 425 million people in the world who suffer from diabetes. The number of DM sufferers in Asia reached 82 million in 2017, ranking number two regarding the highest number of Diabetes Mellitus sufferers. Data of DM sufferers in Indonesia shows that 10 million people suffer from diabetes mellitus and ranks number 6 in the world (IDF, 2019). The prevalence of diabetes mellitus in the East Java Basic Health Research in

2018 is 113,045 thousand inhabitants (Kemenkes, 2018).

Based on data from the Bojonegoro District Health Office, the prevalence of Diabetes Mellitus in 2018 per puskesmas in 2018 was 13,782 people for NIDDM (Non Insulin Dependent Diabetes Mellitus) and 4,560 people for IDDM (Insulin Dependent Diabetes Mellitus). From the results of a preliminary study, data on the number of prolancic patients suffering from Type 2 Diabetes Mellitus in the Dander Health Center were 43 people and 1 person with diabetes wound. Some factors that can increase the number of people with Diabetes Mellitus include; factors that cannot be changed and can be changed.

According to Waluyo (2009) some risk factors that make it easier for someone affected by DM are heredity, race or ethnicity, overweight or obese, have metabolic syndrome, those who have blood pressure more than 160/90 mmHg, have blood triglycerides more than 150 mg/dl, HDL cholesterol less than 40 mg/dl, obesity with a waist circumference of more than 88 cm in women and 120 in men. In addition, unhealthy lifestyles such as lack of exercise, age over 40 years, a history of diabetes during pregnancy and suffering from an infection that is a viral infection will also damage the pancreas organs.

Diabetes Mellitus is a disease that requires special attention from sufferers themselves. This disease will endanger the health of the body and have a bad impact, causing complications of other diseases. Complications can occur acute (sudden) or chronic (slow) and can be from vascular (blood vessels) or non vascular (not blood vessels). One of the effects or complications that will occur in patients with Diabetes Mellitus is the occurrence of diabetes wounds that we often know occur in the feet of sufferers of Diabetes Mellitus (Yahya,

2018). According to Roza et al (2015) that risk factors for diabetes injury include sex, duration of diabetes mellitus, neuropathy, and peripheral artery disease.

The most common diabetes mellitus (DM) complication is diabetic foot ulcer (DFU), which is costly and has devastating adverse effects. It was found that 6.8 % of DM patients suffered from DFU (Ahs and Maneewat, 2017). Diabetic foot ulcer is defined as the presence of infection, ulceration and/or destruction of deep tissues associated with neurologic abnormalities and various degrees of peripheral arterial disease (PAD) in the lower limb on patients with diabetes. Foot ulceration is preventable, and relatively simple interventions can reduce amputations by up to 80%. Amputation has a major impact on individual, not only in distorting body image, but also loss of productivity, increasing dependency, and expensive cost of treating foot ulcer. This study provides knowledge about risk factors for diabetic ulcers that mortality and morbidity can be reduced (Ibnu *et al.*, 2019). The wound was initially classified as normal, but the wound in this DM sufferer if mishandled and treated will become infected. Chronic wounds can become gangrenous and have fatal consequences and lead to amputation (Maghfuri, 2016 dalam (Wulandari, 2019). According to International Diabetes Federation data (2017) every 30 seconds, a leg or part of a lost leg is amputated somewhere in the world as a consequence of Diabetes Mellitus (IDF, 2019).

Based on the results of Permadani's research (2017) explains that the best way to prevent the problem of diabetes foot injuries is to understand and manage independently by patients as early as possible. In addition, the promotion of health behavior is an important factor in health service activities. The phenomenon that we can find in the

community, is that people with Diabetes Mellitus have habits that can cause diabetes sores. For example, people still do not have a concern in foot hygiene, foot care and habits of not wearing footwear so as to increase the risk of injury to the feet of patients with Diabetes Mellitus(Permadani *et al.*, 2017).

The process of wound healing in patients with Diabetes Mellitus requires a longer period of time compared to those who are not Diabetes Mellitus sufferers. According to Fatimah (2015) If the wound is left, the infection will cause decay in the wound because it does not get blood flow. This is because the blood vessels of people with Diabetes Mellitus experience an increase or narrowing due to increased blood viscosity. If the wound is rotten, then the infected part must be amputated. Based on the phenomena and data above, this research is expected to be able to contribute in science to channel the description and expectations of Type 2 Diabetes Mellitus sufferers in carrying out preventive efforts in preventing the occurrence of diabetes sores(Fatimah, 2015).

METHOD

This study design used a Qualitative Research with phenomenology approach. Data collection was used *in-depth interview* method that involving five participants. The sampling technique used was purposive sampling. Data collection techniques in this study used data triangulation and analyzed by the Colaizzi method.

RESULT AND DISCUSSION

The results of this study got 18 themes with a big theme that is hoping to be able to do injury prevention activities properly so that no injuries occur. The first and second themes discuss about participants knowledge, the third theme is symptoms, the fourth theme causes DM. While the

6th, 7th and 8th themes are discussing the patient's perception of diabetic wounds, the long healing process and wound care. The 9th to 13th theme is to discuss the efforts that DM sufferers can make to prevent injury. The 15th to 18th theme is the hopes and feelings of DM patients.

The participants knowledge is very diverse. Participants said that they wanted to always be enthusiastic in checking their health and wanted to be careful in carrying out every activity. Participants also hope that the injury will not happen to him, because people with Diabetes Mellitus claim to be afraid if the injury occurs and cause amputation. Data from the International Diabetes Federation states that every 30 seconds, a leg or part of a lost leg is amputated somewhere in the world as a consequence of Diabetes Mellitus.

Based on Sulitiyo's *et al* research, the diabetic foot care knowledge and behaviors among participants in their study were not adequate. The gaps of inadequate diabetic foot care knowledge and behaviors of participants indicated the need of interactive educational intervention regarding foot care. To minimize the complications of diabetic foot, health practitioners who directly contact with DM patients should be organized appropriate health education regarding foot care(Ahs and Maneewat, 2017).

Diabetes mellitus is a group of metabolic disease that characterized by hyperglycemia that occurs due to abnormal insulin secretion, insulin action or can be due to both(Chaidir *et al.*, 2017). The function of insulin is to regulate and accelerate the flow of glucose into cells in the body, especially muscles. If insulin production is reduced or ineffective then blood glucose levels become out of control. (Yahya, 2018).

Diabetes is a disease that the treatment and cure takes a long time (Wahyuni, 2016). One

participant said that Diabetes Mellitus is a disease that can not be cured, people who suffer from Diabetes will forever experience the disease. This is in line with the concept of Diabetes which is a progressive chronic metabolic disease that is a disease that lasts longer and is getting worse (Yahya, 2018). Diabetes Mellitus cannot be cured, but rather controlled, in this case participants must always try to maintain blood sugar levels in themselves and control health so that complications do not worsen this Diabetes Mellitus disease.

One of the causes of Diabetes Mellitus is from bad habits and bad lifestyle. Patients with Type 2 Diabetes Mellitus feel happy to eat sweet foods that contain lots of sugar. As the emergence of diabetes, sufferers must have good self-management to regulate and control glucose to remain stable (Lensi and Oktarinda, 2014). Herliana (2013) explains that the body's ability to process food has a limit, if the body consumes too much sugar, insulin will be more difficult to convert it into energy and store it as glycogen (sugar in the blood) if it lasts longer the number will increase and can be the beginning of the occurrence Diabetes mellitus. This also applies to people with Diabetes Mellitus, if you do not control your diet or often eat sweet foods, your blood sugar can increase. If too much sugar in the body it will have a bad impact on the body, one of which is the increase in blood sugar in the body and obesity.

Another cause of Diabetes Mellitus from bad habits and lifestyle is lack of exercise. Participants claimed that they felt lacking in moving and exercising. Most people in modern era do not have the chance to exercise because of busyness and can also be caused by feeling lazy, and the habit of organizing schedules, types and amounts of food that is not good. This is what causes the accumulation of fat in the body and

cause obesity (Herliana, 2013). According to Yahya (2018) being overweight will increase insulin requirements in the body, and can lead to Diabetes.

Amputation is the most recent consequence of Diabetes Mellitus. This is because the handling of diabetes wounds is not good and right, the feet of patients with Diabetes Mellitus that are not treated properly will suffer injuries and quickly develop into gangrene ulcers if not addressed (Alexiadou and Doupis, 2012). In dealing with wound prevention there are not many programs that deal with the prevention of wounds for people with diabetes mellitus. Emotionality and perceptions of control are the most prominent illness representations of those with a family history of diabetes in this sample (Walker and Iii, 2011).

CONCLUSION

Diabetes Mellitus sufferers are aware of the disease. Diabetes is a disease that makes blood sugar unstable and is caused due to a bad lifestyle. Patients know that diabetic wounds can occur in him, so that Diabetes Mellitus sufferers take wound prevention measures such as wearing footwear and being careful in every activity, doing sports activities and avoiding places that are at risk and dealing with injuries immediately.

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