Pathophysiology case study essay sample

Health & Medicine, Diabetes

Introduction

Diabetes is a metabolic disease condition characterized by increase in blood glucose level. It is a chronic disease that affects both young and old. It also affects pregnant women, a condition known as (Gestational diabetes). Due to its chronic nature, diabetes is one of the diseases listed to cause stroke and cardiac diseases. However, with good nutrition, physical activity and weight loss, diabetes can be prevented and controlled thereby lowering associated diabetes complications like diabetic retinopathy, limb amputation due to gangrene and infection caused by diabetes because in diabetes, wound healing is delayed and kidney failure (Tuomi, T. (2005). Hence, the purpose of this paper is to provide the summary of the diabetes disease process, diagnostic tool and the intervention. Summary of the disease process.

Diabetes occurs when the beta cells which are located inside the islets of langerhans normally found in pancreas fail to produce insulin due to dysfunction (CDC, 2010) Diabetes is a chronic disease that need proper medical attention and patient self management knowledge because it can deteriorate other body systems. Diabetes can be classified as Type 1 (insulin dependent); Type 1 diabetes occurs when the body fails to perform insulin production function and it affects children and young adult but with insulin therapy, they can easily be treated. Type 2 (Non – insulin dependent), this type occurs when the body cells failure to react to body insulin and it affects majority cases of diabetes patients (CDC, 2010) but with proper nutrition and good control, damage to the body systems can be prevented. Diagnostic tool

According to current research on evidence based diagnostic tool, the physicians use HbAic blood test to diagnose pre diabetes and diabetes. This blood test done after every 3 months helps to determine how good patient is controlling his or her blood sugar levels(prevention research group, 2002) it has come to clear conclusion that new evidence based research is using AIC tests as a laboratory tool for diagnosing the patient with diabetes. ADAG uses mathematical equation that may be used in converting the AIC test results to estimated average glucose and they were successful in coming up with the ideas. This study of using AIC result could be expressed as an estimated average glucose using the mathematical equation. Based on ADAG current research, they come up with the ideas of comparing the AIC values for each patient, together with daily glucose reading for two days and in four times a day (Nathan, M. et al. (2008)

There are other diagnostic measures and tools for diabetes and such are, Urine Test : this method of testing has been the commonest method of sugar testing, this can be done by comparing the color charts to detects the amount of glucose in the urine by dipping clinistix in urine specimen however it is not accurate sometimes although it simple and fast to read. Post prandial test: this can be done after patient has eaten food. Blood test: this process is when blood is drawn from patient arm after fasting, when patient has not eaten for 8 hours or before breakfast(Tuomi, T. (2005) Oral glucose test: this is when blood draw is done before or after patient has drank sweet syrup or sugar. Comparing to all the diagnostic tool in measuring for diabetes, AIC test still remains the definitive diagnostic tool in measuring for diabetes because this best average system is very easy for the patients and

the doctors to understand, according to current research (American Diabetes Association, 2010) Intervention to manage diabetes

Diabetes is a disease which needs proper intervention. With an evidence based diagnostic tools and good intervention, the diabetes can be controlled and managed safely in order to prevent any complications that might arise as a result of diabetes. According to center for disease control, to be active at least 30 minutes or more daily help to reduce blood glucose level in type 2 diabetic patient because physical activity promotes weight loss and obese patient are linked to type 2 diabetes (CDC, 2010) Good nutritional diets play a significant role in diabetes management, the recent study encourages diabetic patient to eat more fresh fruits, vegetables, 2 grams sodium diet and whole grains as this will help them to stabilize their blood sugar levels. Obese patient are encouraged to lose weight, according to recent research conducted by ADAG, maintaining a healthy weight is crucial in diabetes management. Diabetic patient are encouraged to take their medications as prescribed by physician because sudden interruption in medication compliance can affect blood sugar level in diabetic patient.

Family and friend support help to motivate diabetic patient and it is very important to seek help when one feel stressed out or depressed. Diabetic patient are encouraged to join diabetes support group like diabetes health sense, National institute of diabetes and digestive and kidney diseases and National diabetes education program. It is important to do daily foot exam and check for anybody cut and report appropriately because in diabetes, wound healing is delayed. It is also important to follow up the dental exams

to check for any teeth or gums problems. Blood test and urine test for kidney problems should be done yearly to detect if there is any complications associated with diabetes (Tuomi, T. (2005). Summary

The result from the study helps the physician to have better understanding of AIC glucose level. Physicians are encouraged to relate the AIC measures with the daily measurements on the glucometer (ADA, 2010) this recent study and research evaluate the significance of AIC levels for people with undiagnosed diabetes. The evidence based diagnostic tool and intervention reduce the diabetic population in the country and with recent diagnostic tool and intervention, diabetes can be effectively managed and prevented.

References

Tuomi, T. (2005). Type 1 and Type 2 Diabetes: What do they have in common? Diabetes, 54 (suppl-2). S40-S45. Center for Disease Control. (2010). from www. cdc. gov. Retrieved on Oct 27, 2014 American Diabetes Association. (2010) . from www. diabetes. org. Retrieved on Oct 27, 2014 Nathan. M. et al. (2008)