Type 2 Diabetes: Case Study Of A Male Patient Ade (56-year-old) Of African Origin

For this assignment purpose, with confidentiality interest, I will be discussing a male patient to be known as “Ade”.

Ade is 56-year-old of African origin, is identified with unsealing diabetic foot ulcer on the right big for 6 months with history of other disease condition as a result of untreated diabetes, like hypertension, dyslipidaemia and blurred vision. Surgical history is substantial for an atherectomy of the right popliteal artery, this was done 4 years ago, and he been living with type 2 diabetes for over 11 years.

Mr. Ade’s father is known to be hypertensive, and his mother with history of type 2 diabetes is current recovering from a recent episode of heart attack. Ade works as a night guard in neighbouring estate, an irregular smoker and ex alcoholic, quit one year ago, no known allergies. Initial examination reveals temperature 36oc, heart rate 74 bpm, BP 104/54mmHg, BMI 40.2.

Visual evaluation of right lower limb according to NICE guidance revealed ankle swelling, redness mild tenderness, local rise in temperature, 2×1 cm swelling crack on the heel of the right foot. The diabetic foot ulcer has been previously dressed with silver dressing and was changed every second day for 2 weeks without improvement. He has been taken oral antibiotics (Metronidazole 1 x 500mg and Dicloxacillin 3 × 250mg) alongside with his irregular dose of oral antidiabetic agents for 2 months because of Mr. Ade’s frequent hospital visit for wound dressing, new approach to modify his wound dressing was initiated. Samples were collected after washing of Ade’s wound with portable tap water as recommended by (NICE, 2009) guideline to reduces exudation and odour. Microbial culture of wound sample was collected after sharp debridement with Mr. Ade’s oral permission. Ade’s case is an example of difficulties of delayed diabetes type 2 treatment and I will be focusing on the pathophysiology of diabetes and pharmacology of his drug with future recommendation for similar disease condition.

Health care provider’s concern about late diabetes diagnosis is patients’ risk of developing foot ulcer due to macro and microvascular diseases which in most cases leads to neuropathy, peripheral vascular anomalies, peripheral arterial disease (McCance and Huether, 2018). The typical outcome of untreated case of diabetes is Ade’s leg ulcer and it has also significantly affected his self-confidence and forced him to socially isolate himself from the community by staying indoor. He is also unable to mobilize freely due to pain.

According to Shaw et. al., (2010), incidence of diabetic mellites is anticipated to surge more than 50% by 2030 as it currently affects 9.5% of the world’s population while Catrina and Zheng, (2016) further explained that one of the long-lasting effects of continued hyperglycaemic condition is diabetic foot ulceration (DFU) which is majorly categorised by non-healing wound of the limbs and this may lead to amputation if diabetes is not controlled. Owing to the total number of people living with diabetes worldwide, it has been estimated that 15% of the diabetic population has a higher risk of DFU evolving in their lifetime (Boulton, et. al., 2005), leading to an endpoint of frequent amputation that influences the life quality of diabetic patients,

Mantovani, et. al., (2017) support that 50% of patients who go through amputation do not survive as they are unable to gain their confidence and function in the society.

Type 2 diabetes is fast evolving and it risk level is linked with low income level 40%, uneducated population risk level of 41% and 31% low socioeconomic status (Skyler et. al.,2017). Sidorchuk, (2011) raised concerns about the growing type 2 diabetes prevalence among the youth of Hispanics/Latinos, Pacific Islanders, American Indians, Asians, Africans and Americans of Africa origin as extreme high threat of type 2 diabetes conditions. A raised blood glucose condition is a result of group metabolic disease where the body's insulin hormone secretion capacity, action or both is impaired by either genetic factor, old age or autoimmune deficiency (McCance and Huether, 2018).

In type 2 diabetes, beta-cells of the pancreas tolerate insulin production despite its reduced capability but after a while and they get damaged and can no longer survive the body's insulin organ's receptor signal for glucose uptake. The inability of the beta cells to handle the body's high demand leads to constant raise in blood glucose level then retina, renal glomerulus and the nerves develop diabetes-specific diseases (Agardh, et. al., 2010). Schreiber et. al., (2015) explain that diabetic neuropathy occurs when there is an inconsistency between nerve filament injury and mending following elongated period of raise glucose level in the blood and it affects over 90% of people living with diabetes.