

PREVALENCE OF MICRO-VASCULAR COMPLICATIONS IN TYPE 2 DIABETES MELLITUS AND THE RISK FACTORS ASSOCIATED WITH THEIR DEVELOPMENT – A CROSS-SECTIONAL STUDY IN A SEMI-URBAN GOVERNMENT HOSPITAL IN CENTRAL KERALA

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Background: Diabetes mellitus is one of the most common chronic diseases across the world. Diabetes related long term complications will affect all the organ systems and these complications are responsible for the morbidities and mortalities associated with diabetes. Microvascular complications from T2DM are common and it is the leading cause of preventable blindness, renal failure and non-traumatic lower limb amputations worldwide. Evidence shows that early detection and identification of risk factors for retinopathy, nephropathy, and neuropathy may delay or prevent the progression towards blindness, end-stage renal disease and diabetic foot ulcers respectively. **Objectives:** (1) To determine the prevalence of micro vascular complications in type 2 diabetes mellitus in a hospital. (2) To identify the risk factors associated with the development of micro vascular complications. **Material and methods:** This cross sectional study was conducted in 120 diagnosed cases of Type 2 diabetes mellitus who are attending NCD clinics in community health centre shoranur. Selected patients after getting informed consent were subjected to detailed history and examination, and evaluated for complications like sensory neuropathy, retinopathy and nephropathy. Investigations like renal function tests and urine micro albumin were done. Diabetic peripheral neuropathy was diagnosed with history of numbness, paraesthesia, burning or tingling sensation and confirmed with biothesiometry or monofilament study. Nephropathy was detected when there is urine micro albumin more than 30mg/dl on spot urine sample or a deranged renal function test. Diabetic retinopathy confirmed after doing direct ophthalmoscopy. Data was analyzed in SPSS software using chi- square tests and Fisher's exact test. **Results and conclusions:** The prevalence of diabetes is more common in males compared to females and it increases with increase in age. The most common microvascular complication in Type 2 Diabetes Mellitus is peripheral neuropathy which is followed by retinopathy and nephropathy. Old age and duration of diabetes are significantly associated with any of the microvascular complications. Nephropathy is more common in male patients. Nephropathy and retinopathy are significantly associated with duration of diabetes. **Recommendations:** As the prevalence of microvascular complications are significantly associated with duration of diabetes, screening of all the individuals with risk of

diabetes is essential. This will enable early diagnosis of those with diabetes and initiation of treatment. Strict control of blood sugar level is important to prevent many of the complications associated with diabetes mellitus. Periodic eye examination and assessment of renal function will protect the individual from being blind and occurrence of end stage renal disease. Yearly screening of microvascular complications using urine microalbumin, ophthalmoscopy and biothesiometer should be started at the earliest in all FHC under the existing NCD clinic.