Abstract 14

Prevalence, associated factors and complications of early onset type 2 diabetes mellitus among those attending Diabetic Centre, Teaching Hospital, Jaffna between 2020 and 2023

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Background and objective: Early-onset Type 2 Diabetes Mellitus (T2DM), between 18 and 40 years, is becoming a public health issue. This study aims at determining the frequency of early onset of T2DM and to identify the associated factors and complications observed in the patients attending the Diabetic Centre, Teaching Hospital Jaffna from January 2020 to December 2023.

Methods: This descriptive cross-sectional study selected 184 patients by systematic sampling method, and the data which was analysed using SPSS were gathered through interviewer-administered questionnaires.

Results: Among the 1104 patients registered at the Diabetic Centre between January 2020 and December 2023, 567 (51.3%) were in the age group of 18–40 years, and 417 (74.8%) had T2DM, with a female predominance (64.5%). The number of T2DM admission declined from 2020 (40.7%) to 2023 (33.4%). Majority were aged between 31–40 years, where the females and males were respectively belonging to the age groups of 36–40 and 31–35 years. Most of them were married (males 68.2%, females 75.8%), and not completed GCE (A/L) (males 65.9%, females 64.6%), with the monthly income between LKR 21,000 and 40,000 (males 34.1%, females 21.2%). From the age groups of 18-20 to 36-40 years in both males (0 to 21.2%) and females (4 to 27.3%), the positive family history increased. Smoking (31.8%) and alcohol use (49.4%) were high in males. Frequent sugary drink consumption (males 44.7%, females 37.4%) and "sometimes" fast food consumption (males 48.2%, females 57.6%) were more in males than in females. Inadequate sleep (males 35.3%, females 36.4%), and immediate post-dinner sleep (males 37.6%, females 38.4%) also contributed to early T2DM. Significant associated factors were female gender (64.5%), consumption of refined grains (males 72.9%, females 65.7%), high screen usage time (males 82.4%, females 92.9%) and physical inactivity (over 80%).

Conclusion: This study concludes that early-onset T2DM is strongly linked to female gender, lifestyle and socioeconomic factors such as unhealthy diets, physical inactivity and high screen usage time. The female gender and lower educational levels were the predominant determinants emphasizing the need to educate the community on lifestyle modification to prevent and control the development of T2DM.

Keywords: early onset, type 2 diabetes mellitus, associated factors, complications