Editorial: Achieving Effective Management and Treatment of Diabetes Mellitus in Future Primary Care

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Editorial on the Research Topic

Achieving Effective Management and Treatment of Diabetes Mellitus in Future Primary Care

Currently, 537 million adults aged 20–79 years have diabetes mellitus (DM) worldwide. It has become one of the fastest-growing health challenges of the 21st century, with a disproportionate burden on low and middle-income countries (1). Considering the significant burden of the disease and its complications, tackling DM at the primary care level becomes imperative. Within the health care system, primary care plays a central role by providing diabetes care in the community for the majority of people with type 2 diabetes (T2D) while forging necessary integrated collaborative care with secondary or tertiary health care providers of multidisciplinary professionals (2). For most people with T2D, primary care physicians are the first point of contact. There is strong evidence worldwide that primary diabetes care can provide cost-effective, comprehensive, and patient-centered management to prevent and treat T2D and its related conditions. For people with type 1 diabetes (T1D), although a specialist diabetes team usually manages them, the involvement of primary care in delivering aspects of care such as monitoring and managing secondary complications is increasing.

The cornerstone of managing T2D is promoting lifestyle interventions that include a healthy diet and regular exercise to attain and maintain healthy body weight. Pharmacological interventions include controlling cardiovascular risk factors such as smoking cessation, blood pressure, and blood cholesterol to personalized and safe targets. Physical exercise plays an essential role as a non-pharmacological and cost-effective treatment, improves insulin sensitivity, a better quality of life (QoL), enhances diabetes treatment efficacy, thus lowering morbidity and mortality in people with T2D. Many types of physical exercise have been studied for their effectiveness in the management of
There is growing evidence suggesting that vitamin D deficiency could play an essential role in T2D pathogenesis (5). Thus, the potential of vitamin D supplementation as part of the management of T2DM to optimize glycemic control and prevent complications were investigated in a randomized controlled trial by Cojic et al. They found that oral daily doses of vitamin D significantly decreased the level of HbA1c after 3 and 6 months of vitamin D supplementation with metformin, compared to the metformin only group. However, the effect of vitamin D on insulin resistant index (calculated as homeostatic model assessment; HOMA-IR), and oxidative stress markers (measured as malondialdehyde levels and Tryglicerides/Thiobarbituric acid-reactive substances (TG/TBARS) index), was not statistically significant.

Diabetes is one chronic condition where the evidence is changing at a pace. The collection of studies presented in this Research Topic of Frontiers in Endocrinology has further advanced the evidence for DM management in primary care.

**AUTHOR CONTRIBUTIONS**

IW prepared the original draft. KK, RV, and B-HC critically review and edit the manuscript. All authors have reviewed and approved of the final manuscript.

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Conflict of Interest: KK has acted as a consultant, speaker or received grants for investigator-initiated studies for Astra Zeneca, Novartis, Novo Nordisk, Sanofi-Aventis, Lilly and Merck Sharp & Dohme, Boehringer Ingelheim, Bayer, Berlin-Chemie AG/Menarini Group, Janssen, and Napp.

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