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Editorial

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Characteristic points of latest Standards of Medical Care in Diabetes

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Abstract

The American Diabetes Association (ADA) has presented the Standards of Medical Care in Diabetes-2024, introducing some impressive changes in description. The 2024 edition closely follows the ADA/EASD Consensus Statement. To evaluate various complications, BNP, NT-proBNP, ankle-brachial index (ABI), and the FIB-4 index are measured. The administration of SGLT2 inhibitors, GLP-1 receptor agonists, and tirzepatide is recommended for T2D adults with cardiovascular disease, heart failure (including HFrEF/HFpEF), and chronic kidney disease (CKD). For lipid control, bempedoic acid and inclisiran have been introduced. FreeStyle Libre 2 is now available, automatically sending data to the smartphone in real-time every minute.

Keywords

American Diabetes Association, Standards of Medical Care in Diabetes-2024, ADA/EASD Consensus Statement, FreeStyle Libre 2, Appraisal of Guidelines for Research & Evaluation II

Abbreviations

ADA: American Diabetes Association; AGREE II: Appraisal of Guidelines for Research & Evaluation II

Editorial

The American Diabetes Association (ADA) presented the 2024 edition of the diabetic guideline in January 2024 [1]. Several novel aspects or recommendations were observed, such as smartphone apps with no charge. This article introduces some impressive contents and changed descriptions in the 2024 edition. Regarding the diagnosis, certain recommendations were found. When type 1 diabetes (T1D) is suspected, early diagnosis is required through screening and measuring islet-related autoantibodies and serum C-peptide. Furthermore, screening of first-degree relatives with T1D is necessary. Based on evidence [2], delaying the onset of symptoms by administering teplizumab should be considered.

As for diabetic comorbidities, nonalcoholic fatty liver disease (NAFLD) is important due to obesity being a common complication [3]. Recommendations revised midway for the 2023 edition were also followed in the 2024 edition. Among them, screening and risk assessment using the FIB-4 index and others have increased. Furthermore, an association between NAFLD and heart disease has been described. However, the evidence level for most recommendations has been level B. Screening for bone

diseases and osteoporosis, as well as intake of calcium and vitamin D, were detailed. Although FRAX has been commonly used as a fracture risk assessment tool, it seems to be inaccurate in T2D patients [4]. Regarding bone density, a T score of -2.0 or less should be used as the diagnostic criterion for osteoporosis, distinguishing it from people without diabetes. Additionally, Respiratory Syncytial Virus (RSV) vaccination has been recommended for diabetic patients aged 60 and older to prevent infectious diseases.

From a cardiovascular point of view, diabetes increases the risk of heart failure [5]. A new recommendation is to consider screening for asymptomatic heart failure. Specifically, BNP and NT-proBNP would be measured. If they are more than 50 pg/mL or 125 pg/mL, echocardiography is recommended [1]. Even if the diabetic patient is asymptomatic, screening for peripheral artery disease (PAD) would be recommended using the ankle-brachial index (ABI) for cases over 50 years old. This screening should be considered for cases with a history of 10 years or more [6].

Regarding weight management, a new recommendation would be the measurement of waist circumference, waist/hip ratio, and waist/height ratio in addition to BMI as obesity evaluation items (expert consensus). It is emphasized that weight control, as well as glycemic control, should be a primary goal. The goal has been, so far, a 5% or more reduction in weight. Concerning diet therapy, the amount of description in the guideline was drastically reduced, with more emphasis placed on medical agents and surgery. The principle remains unchanged, where individualized energy restriction should be a 500-700 kcal/day reduction, with no strong evidence for nutrient content. Regarding carbohydrate intake, a short-term (1-2 years) low-carbohydrate diet (LCD) under the supervision of a medical professional may be effective and safe [7]. Additionally, several foods with high nutritional value and high fiber content are recommended.

Concerning drug therapy for T2D, the description in 2024 is similar to that of the 2023 version. The 2024 edition also follows the ADA/EASD Consensus Statement [2]. It is almost unchanged, including starting with healthy lifestyle behaviors, diabetes self-management education and support, social determinants of health, and avoiding treatment inertia. Thus, they recommend comprehensive individualization be taken into consideration. As for the selection of therapeutic drugs recommended by the ADA, metformin is listed as the first-choice medicine for adults, children, and the elderly [1]. For T2D adults with cardiovascular disease, heart failure (both HFrEF and HFpEF), and chronic kidney disease (CKD), the administration of SGLT2 inhibitors and GLP-1 receptor agonists is recommended.

When the patient shows a critical situation such as weight loss, hyperglycemic symptoms, HbA1c > 10%, or blood glucose level ≥ 300 mg/dL, insulin administration would be initiated in the early stage [1]. Otherwise, GLP-1 receptor agonists or tirzepatide will be given priority over insulin [8,9]. In older diabetic patients who are at high risk for hypoglycemia, there is a highlighted need to reduce the use of drugs with a high risk of hypoglycemia and to simplify previous complex treatment management. Concerning simultaneous glycemic variability, continuous glucose measurement (CGM) devices have evolved rapidly, with several reports of efficacy. Recently, FreeStyle Libre 2 has become available in actual practice, which can automatically send measured levels to the smartphone in real time every minute [10,11]. Clinical use of CGM has been strongly recommended for patients with T1D and those at high risk of hypoglycemia [12].

For proper lipid management, bempedoic acid has been administered as an LDL cholesterol-lowering drug [13,14]. Recently, the siRNA drug inclisiran has been newly added [15,16]. The goal is important when administering these drugs. When the patient has hypertriglyceridemia or hypo-HDL-emia, it is important to set adequate goals. In other words, the target is not a numeric value. Patients should be identified as being at high risk for cardiovascular disease and be treated to reduce the risk by reinforcing lifestyle changes and optimizing blood glucose management. When pemafibrate is administered to

T2D patients, it does not improve cardiovascular outcomes, even though the numerical values showed improvement [17].

The quality of clinical practice guidelines has been generally evaluated using a certain evaluation tool, the Appraisal of Guidelines for Research & Evaluation II (AGREE II), which focuses on whether the strategies used in the development process are valid and appropriate [18]. Compared to AGREE II, it seems that the score in the "rigor of creation" area is rather low. There is no specific description of conducting a systematic review or the procedure for creating recommendations. The 2024 edition showed improvements in editorial independence. The majority of the authors of each recommendation were members with no conflicts of interest (COI) in that field, and members with a COI were not allowed to participate in the recommendation development discussions. It was also stipulated that the chairperson of the drafting committee was not allowed to hold a COI for one year after publication.

In summary, 4 years have passed since the onset of the COVID-19 pandemic. Due to advances in ICT, telemedicine has been rapidly developing. However, it is emphasized that it seems to be only a supplement to face-to-face consultations. Concerning the achievement of blood glucose control, telemedicine treatment is inferior to face-to-face treatment [19]. Close attention will be required for adequate management of diabetes in the future.

Conflict of Interest

The author has read and approved the final version of the manuscript. The author has no conflicts of interest to declare.

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