Chapter 49

Need for National Guidelines for Diabetes and Related Disorders

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INTRODUCTION
Diabetes has emerged as one of the major public health challenges in India. The disease has multiple risk factors and associated disorders including obesity, dyslipidemia and metabolic syndrome. If left uncontrolled, it can be associated with complications which can affect various organs including kidneys, nerves, eyes, heart and blood vessels.

Increased urbanization, globalization and easy availability of processed packaged foods coupled with lack of time for cooking is bringing a change in the nutritional pattern in the society. Sedentary jobs, inadequate playgrounds and easy availability of transportation are decreasing the level of physical activity. Fast pace of life is exposing the population to increased levels of stress. These lifestyle changes and increased longevity are bringing an epidemiological transition with increased incidence and prevalence of noncommunicable diseases (NCDs) including diabetes, hypertension, cardiovascular diseases along with associated disorders like obesity, dyslipidemia and metabolic syndrome.

EPIDEMIOLOGY
The epidemic of diabetes is continuing to rise in alarming proportion. The World Health Organization (WHO) (2012) has estimated that 347 million people worldwide have diabetes. In 2004 alone, an estimated 3.4 million people died from consequences of high blood sugar. More than 80% of diabetes deaths occur in low- and middle-income countries. International Diabetes Federation (IDF) has estimated that India had 62.4 million people in 2011 with type 2 diabetes mellitus (T2DM), compared with 50.8 million in 2010. These numbers are expected to rise to 100 millions by 2030. The prevalence in India is continuously increasing and stands at 9%; in some southern areas, it has been reported to be as high as 20%. The range of prevalence varies from 5% to 15% among urban populations, 4–6% in semiurban populations and 2–5% in rural populations. These are the reported prevalence figures; the actual numbers on the ground may be much higher.

Noncommunicable diseases contribute to 50% of the total mortality and this figure is expected to rise to 73% by 2020. In 2008, 36 million deaths in the world were attributed to NCDs. Diabetes, cardiovascular diseases and cancers together account for 40% of the NCD-related disability-adjusted life years (DALYs). The onset of T2DM in Indians tends to be at least a decade earlier as compared to the Western population. Thus, the disease affects in the most productive years of life and has an adverse effect not only on the individual and the family but also on the country as a whole.

AVAILABLE GUIDELINES

International
There are various guidelines on diabetes available at the international level. They include among others IDF and WHO guidelines. American Diabetes Association, Canadian Diabetes Association and Australian Diabetes Association have their own guidelines. American Diabetes Association has the diagnostic criteria of diabetes as glycosylated hemoglobin (HbA1c) greater than or equal to 6.5% along with fasting and 2 hours plasma glucose greater than or equal to 126 mg/dL and 200 mg/dL respectively. The Canadian Diabetes Guidelines recommend screening of all individuals over 40 years of age at every 3 years. These guidelines are revised periodically.

National
In India, there are Consensus Dietary Guidelines which include reduction in the intake of carbohydrates, preferential intake of complex carbohydrates and low-glycemic index foods, higher intake of fiber, lower intake of saturated fats, optimal ratio of essential fatty acids, reduction in trans fatty acids, slightly higher protein intake, lower intake of salt and restricted intake of sugar. The consensus physical activity guidelines recommend a total of 60 minutes of physical activity every day for healthy Asian Indians in view of the high predisposition to develop T2DM and coronary heart disease (CHD). This should include at least 30 minutes of moderate-intensity aerobic activity, 15 minutes of work-related activity and 15 minutes of muscle-strengthening exercises. Consensus guidelines on obesity have revised cut-offs for overweight as 23.0–24.9 kg/m2 and for obesity as greater than or equal to 25 kg/m2. Indian Council of Medical Research (ICMR) workshop on guidelines for management of T2DM in 2005 recommended the diagnostic criteria as fasting plasma glucose and 2 hours postglucose to be greater than or equal to 126 mg/dL and 200 mg/dL respectively. National Institute of Nutrition has also evolved nutritional guidelines. Diabetes and cardiovascular diseases prevention in adults with prediabetes and metabolic syndrome have been recommended in contemporary approaches for cardiovascular risk reduction in diabetes.

NEED FOR NATIONAL GUIDELINES
This high burden of diabetes in India is mostly borne by endocrinologists and general physicians. The swelling numbers of diabetics, paucity of trained personnel for management and revised cut-offs
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warrant immediate attention. But the lack of uniformity in approach is proving to be a hindrance in checking this growing epidemic. There is an urgent need for uniformity and standardization in the management of diabetes by evolving country-specific guidelines.

The heterogeneity of the Indian population in terms of their region, religion and community has a bearing on their food habits and lifestyles. All these will have to be taken into consideration before a consensus is evoked. The urban, periurban and rural milieu will also have to be accounted for in this task. According to the Sengupta Report, 77% of the population is surviving on less than a dollar. On top of that, lack of health coverage results in the majority of the Indian population’s health expenditure being borne by the individual and not the state. The cost of treatment will also have to be an important consideration in evolving the treatment guidelines for this chronic lifelong condition.

SPECIAL POINTS FOR GUIDELINES

Proper strategies to prevent and control the epidemic of diabetes continue to be the need of the hour. They should include:

• Prevention programs
  - Primordial levels
  - Primary levels
  - Secondary levels
  - Tertiary levels
  • Early detection
  • Standardized treatment
  • Management of special groups, e.g. children and pregnant women
  • Adequate referral
  • Prevention of complications.

EVOLUTION PROCESS

Multiple stakeholders involved in the prevention and management of diabetes should be involved in this process. The consensus summit should include specialists of endocrinology, internal medicine, cardiology, nephrology, neurology, ophthalmology, public health, gynecology, pediatrics, nutrition, metabolism, exercise physiology and policy makers including representatives from Ministries of Health, Science and Technology, Sports, Human Resource Development, Rural Development, Women and Child Development and other associated departments to evolve effective and viable guidelines.

A draft document should be prepared by the core group well in advance of the consensus summit and their inputs should be incorporated. The summit should have wider participation with focused discussion on specific aspect. The available research data from India and abroad should be kept in mind while finalizing the consensus statement.

The guidelines should be flexible and should take into account the socioeconomic situation and cultural milieu of the population. There should be an inbuilt mechanism to monitor and review the guidelines. The evolution and effective implementation of National Guidelines on Diabetes and Related Disorders will go a long way in effective prevention and control of diabetes.

BIBLIOGRAPHY