Brief Communication

Physician perceptions and practices in management of diabetes in India: Results from the IMPROVE Control program

A. G. Unnikrishnan, S. K. Wangnoo[1], S. R. Joshi[2], S. Banerjee[3], A. Kumar[4], S. Kalra[5], R. Channabasavaiah[6], R. Shetty[6]

Department of Endocrinology, Amrita Institute of Medical Sciences, Kochi, [1]Endocrinologist, Indraprastha Apollo Hospitals, New Delhi, [2]Consultant Endocrinologist at Joshi Clinic, Lilavati & Bhatia Hospitals, Mumbai, [3]Department of Medicine, Vivekananda Institute of Medical Sciences, Kolkata, [4]Diabetes Care and Research Centre, Patna, [5]Bharti Hospital & B.R.I.D.E., Karnal, [6]Novo Nordisk India Private Limited, Bangalore, India

ABSTRACT

Introduction: The impact of IMPROVE Control Training program was evaluated by a non-interventional study and validated by a physician perception questionnaire. From a survey on 1086 physicians providing diabetes care in India, we report their practices and perceptions about diabetes care and insulin therapy. **Materials and Methods:** The responses were collected using a questionnaire validated by the IMPROVE Control Steering Committee. **Results:** Majority [558 (51.4%)] of the physicians accepted the ADA defined HbA1c target of <7% as the standard for good glycemic control in their practice. However, 541 (49.8%) of the physicians agreed that only 20-40% of their patients were able to achieve this target. For patients who do not achieve the glycemic control with oral anti-diabetic drugs (OADs) within 6 months of initiation of therapy, initiation of an optimal insulin regimen was the preferred choice for 492 (45.3%) of the participating physicians. Premixed insulin was preferred for initiating insulin therapy in patients with type 2 diabetes, by 676 (62.2%) of the participants [as compared to basal by 375 (34.5%) participants]. Once daily premixed insulin, intensified to twice daily was preferred as most optimal insulin regimen for initiation and subsequent intensification of insulin therapy [487 (44.8%) participants]. Most of the participants preferred adopting a multi-targeted approach for treating diabetes, hypertension, and dyslipidemia. **Conclusions:** Physicians prefer treatment goals similar to those recommended in the current guidelines of the American Diabetes Association for managing their patients with diabetes. Premixed insulin is preferred for initiation and intensification of insulin therapy.

Key words: treatment goals, IMPROVE, premixed insulin, oral anti diabetic drugs

Evidence-based medicine has been defined as the amalgamation of latest available clinical research, physicians' experience, and patient values, i.e., their needs and expectations. The treating physician is often confronted with the dilemma of which insulin to begin the patient on, i.e., premixed analogs or basal insulin. In diabetes, the ADA/EASD position statement and the IDF algorithms are useful resources to base treatment strategies upon as they are derived from the latest evidence-based guidelines.[1,2] They recommend the use of a patient-centered approach for attaining the glycemic goals. Similarly, the Indian insulin guidelines (on initiation and intensification of premixed insulin therapy) also recommend the same.[3]

Access this article online	
Quick Response Code:	Website: www.ijem.in
	DOI: 10.4103/2230-8210.104118

A step toward increasing disease awareness and treatment modalities was undertaken by structured education program for practicing physicians across India with IMPROVE Control program. The healthcare professional (HCP) training included a series of workshops in the early part to propagate the need to aim for an early glycemic control with well-defined glycemic target (HbA1c <7% within

Corresponding Author: Dr. A. G. Unnikrishnan, Department of Endocrinology, Amrita Institute of Medical Sciences, Kochi, India. E-mail: unnikrishnanag@gmail.com

180 days of intervention) and also re-emphasize the concepts of metabolic memory, multi-targeted approach in treating diabetes and related co-morbidities. The views and practices of the physicians participating in this program were analyzed using a physician perception questionnaire validated by the IMPROVE Control Steering Committee. An overview of the perceptions from this cohort of physicians is described here.

Overall, 1086 physicians providing diabetes care in India completed the questionnaire and majority [558 (51.4%)] of the physicians accepted the ADA defined HbA1c target of <7% as the standard for good glycemic control in their practice. However, 541 (49.8%) of the physicians agreed that only 20-40% of their patients were able to achieve this target. For patients who do not achieve the glycemic control with oral anti-diabetic drugs (OADs) within 6 months of initiation of therapy, initiation of an optimal insulin regimen was the preferred choice for 492 (45.3%) of the participating physicians. Premixed insulin was preferred for initiating insulin therapy in patients with type 2 diabetes, by 676 (62.2%) of the participants [as compared to basal by 375 (34.5%) participants]. Once daily premixed insulin, intensified to twice daily was preferred as most optimal insulin regimen for initiation and subsequent intensification of insulin therapy [487 (44.8%) participants]. Most of the participants preferred adopting a multi-targeted approach for treating diabetes, hypertension, and dyslipidemia. Physicians prefer treatment goals similar to those recommended in the current guidelines of the American Diabetes Association for managing their patients with diabetes. Premixed insulin is preferred for initiation and intensification of insulin therapy.

Pathophysiologically, type 2 diabetes is a progressive disease and its prevalence is projected to increase in India as well as the rest of the world. The optimal glycemic treatment strategy is still widely debated, but better glucose control reduces microvascular complication rates and the risk of macrovascular disease.[4] Initiating insulin therapy is recommended when diet and OADs fail to maintain an HbA1c <7%. This also means that the majority of patients become insulin-requiring over time by this criterion and it (HbA1c <7%) is the most widely accepted treatment goal for good glycemic control. The focus should also be on simplifying treatment strategies for better management of diabetes patients in India. To make major changes in achieving evidence-based goals in type 2 diabetes, the approaches need to be made more patient-centered. Understanding obstacles to attaining good glycemic control can help identify solutions as well.[5] We need to examine how to improve access to primary care physicians, address and reduce ethnic (and regional) disparities, provide better methods of clinical decision support, and establish better understanding among members of the diabetes healthcare team. There is a need to balance optimal health for the population and more evidence-based treatment goals with a better patient experience at an affordable cost.

These perceptions also reflect that structured educational activities to increase awareness and provide guidance to treating physicians in India should be a focused activity. Better awareness of disease pathophysiology, treatment regimens, and early glycemic control in the management of diabetes can lead to better control of the disease in the country. The preference of premixed insulin in India perhaps reflects better acceptance by the patients. It may also be in sync with the recently released ADA/EASD position statement on management of hyperglycemia in type 2 diabetes that too advocates a patient-centered approach. It states that "*a more convenient but less adaptable method involves 'pre-mixed' insulin, consisting of a fixed combination of intermediate insulin with regular insulin or a rapid analogue*." Since the management of diabetes includes better understanding of disease process and choosing right treatment regimens to achieve recommended targets, continuous education of treating physicians in a structured platform is quite essential. These steps can further improve the overall outlook of management of diabetes and help to attain better clinical practices across India.

References

1. Inzucchi SE, Bergenstal RM, Buse JB, Diamant M, Ferrannini E, Nauck M, *et al*. Management of hyperglycaemia in type 2 diabetes: A patient-centered approach. Position statement of the American Diabetes Association (ADA) and the European Association for the Study of Diabetes (EASD). Diabetologia 2012;55:1577-96.
2. IDF treatment algorithm for people with type 2 diabetes, 2011. Available from: http://www.idf.org/treatment-algorithm-people-type-2-diabetes. [Last accessed 2012 Aug 25].
3. Indian National Consensus Group. Premix insulin: Initiation and continuation guidelines for management of diabetes in primary care. J Assoc Physicians India 2009;57:S42-6.
4. Holman RR, Paul SK, Bethel MA, Matthews DR, Neil HA. 10-year follow-up of intensive glucose control in type 2 diabetes. N Engl J Med 2008;359:1577-89.
5. Zafar A, Davies M, Azhar A, Khunti K. Clinical inertia in management of T2DM. Prim Care Diabetes 2010;4:203-7.

Cite this article as: Unnikrishnan AG, Wangnoo SK, Joshi SR, Banerjee S, Kumar A, Kalra S, *et al*. Physician perceptions and practices in management of diabetes in India: Results from the IMPROVE Control program. Indian J Endocr Metab 2012;16:S428-9.

Source of Support: Unrestricted educational grant from novonordisk India Limited, **Conflict of Interest:** None declared