Identifying and addressing barriers for insulin use in patients with type-2 diabetes mellitus

Ibrahim El Bayoumy, ibrahim.elbayoumy@med.tanta.edu.eg

Tanta University, Egypt

Abstract

Background: DM type-2 is characterized by gradual decrease in insulin sensitivity within the peripheral tissues and liver (insulin resistance), followed by gradual decline in β-cell function and insulin secretion. Thus, patients with poor glycemic control require the utilization of insulin therapy to realize the target of yank Diabetes Association, recommending HbA1c to be but 7% (≥8% despite of optimal doses of anti-diabetic drugs). Aim: This study aimed to guage and addressing the barriers to be used of insulin in type-2 DM patients, where their glycemic control is poor, i.e., HbA1c is ≥8% despite of optimal doses of anti-diabetic drugs. Research Design & Method: We surveyed 200 patients with type-2 diabetes mellitus, i.e., cross-sectional quantitative study; patients showed poor glycemic control HbA1c≥8%, already treated with one or more oral agents, who recently prescribed insulin to regulate their metabolic status. Data were obtained by patient's interview employing a validated questionnaire. The place of the study was in DM clinic in Farwaniyah Primary Health Care Center in Kuwait. Result: Patients with type-2 diabetes failing to initiate the prescribed insulin therapy have reported misconception regarding fear of hypoglycemia in 49% of the entire sample, pain from injections in 68% and self-blame about need for insulin i.e., sense of failure in 61% of total sample of study. Other factors were addressed like sensation by getting more severity of the disease, weight gain fear and other negative self-perceptions and attitudinal barriers were studied. Conclusion: Reducing the negative influence of psychological insulin resistance (PIR) on treatment outcomes should be a clinical priority. Approaching and understanding the multifaceted and sophisticated nature of PIR and discussing the etiology of each patient's PIR is that the first important step. The incorporation of well-validated clinical measures assessing these barriers, also as further research should be conducted on the impact of interventions to beat such barriers. Clinicians should prescribe simple insulin regimen to decrease their patients' fear from dependency of insulin and therefore the use of recent insulin analogs and insulin pen services, may greatly reduce PIR by mitigating the fear of life style changes and side effects, also as social stigma related to using insulin during a vial and syringe.

Treatment Goals

The goal of T2DM therapy is to reestablish normoglycemia and avoid both the excesses of hyperglycemia and the dangers associated with hypoglycemia. For patients with T2DM, the goals for a patient-centered approach to glycemic treatment are evidence based and are predicated on data from landmark trials showing reductions in the microvascular complications of diabetes mellitus associated with glycated hemoglobin (HbA1c) levels of less than 7%; these levels generally correspond to premeal or fasting glucose levels of 70 mg/dL to 130 mg/dL and postprandial glucose levels of less than 180 mg/dL.11,12 In the past 2 years, however, most major organizations have recognized the need for an individualized approach to both treatment goals and treatment options, weighing both the risks and the benefits to the patient. In 2012, the American Diabetes Association (ADA), in conjunction with the ecu Association for the Study of Diabetes (EASD), issued an edge statement for the management of hyperglycemia that emphasizes a patient-centered approach, with the avoidance of hypoglycemia considered a primary tenet, particularly in at-risk patients.12 The ADA and the EASD suggest less stringent goals for HbA1c levels (7.5% to 8.0%) for patients with a history of severe hypoglycemia, a limited anticipation , advanced complications, or extensive comorbid conditions, or for those that have difficulty attaining glycemic control,11,12 drawing on lessons from studies by the Action to Control Cardiovascular Risk in Diabetes (ACCORD) trial,13 the Veterans Affairs Diabetes Trial (VADT),14 and the Action in Diabetes and Vascular Disease: Preterax and Diamicron Modified-Release Controlled Evaluation (ADVANCE) trial.15 However, for younger patients or for patients with disease of short duration, a long life expectancy, and no significant cardiovascular disease, HbA1c goals closer to normal (eg, 6.0% to 6.5%) are recommended.11,12 The American Association of Clinical Endocrinologists concurs with the individualization of treatment goals and has led the way to the development of a comprehensive care plan for patients with T2DM.16 listening to cardiovascular risk factors (eg, high vital sign , high cholesterol levels) is vital for all patients with T2DM, as is focusing on glucose control.

Current Treatment Recommendations

Extended Abstract

The position statement of the ADA and thus the EASD quotes the Committee on Quality of Health Care in America of the Institute of medicine in defining patient-centered care as an approach "to providing care that's respectful of and aware of individual patient preferences, needs, and values and ensuring that patient values guide all clinical decisions."17 This position statement acknowledges that glycemic management in patients with T2DM has become increasingly complex and, to some extent, controversial, considering the increasing number and type of pharmacologic agents now available. I truly believe in a patient-centered approach. The patient possesses to be a neighborhood of the decision-making process. I ask all of my new patients, and that i explain every different medication that's available. I tell them about the risks and benefits of the medications, and that I allow them to decide which medication to require .

Management of T2DM consists of interventions designed to affect the physical activity levels and food intake of a private . However, current treatment recommendations now also include initiation of pharmacotherapy at the time of diagnosis, partially as a results of our improved understanding of the pathophysiologic profile of T2DM.12,18

Metformin therapy has been shown to scale back the danger of microvascular complications related to T2DM.

Biography

Ibrahim El Bayoumy holds Bachelor of Medicine and Surgery in Tanta University, Faculty of Medicine, Egypt (1989) followed by his Master's degree in Public Health, Preventive and Social Medicine (1996) and MD, PhD (Public Health, Preventive and Social Medicine) in 2003 from Tanta University and McGill University, Faculty of Medicine, Canada in Division of Clinical Epidemiology in Royal Victoria Hospital through double channel system as scholarship from Ministry of Education, Egypt. He is a Full Professor of Public Health and Community Medicine in Tanta University, Faculty of Medicine, Egypt. Presently, he is working in Ministry of Health in Kuwait as Consultant of Public Health and Preventive Medicine. He has published many research works in international journals and his research interests are in epidemiology of infectious diseases like HIV, tuberculosis, brucellosis and infectious hepatitis. He is a Reviewer of many national and international journals.

This work is partly presented at International Conference on Diabetes and its Complications on May 28-29, 2018 held in Osaka, Japan