BIOG

Professor George D. Dimitriadis MD, DPhil

Professor George D. Dimitriadis MD, DPhil was educated at the University of Athens Medical School. He was then involved in Postdoctoral training at the Department of Endocrinology-Diabetes, Mayo Clinic/Mayo Medical School, Rochester MN, USA and the Department of Biochemistry, Oxford University, United Kingdom where he received his DPhil in Metabolic Regulation. He has served as a member of the Executive Committee of EASD and was the Secretary General, Local Organizing Committee of the 41st EASD Annual Meeting in Athens, 2005. His research interests include insulin resistance and treatment of type 2/type 1 diabetes. He has over 220 publications in peer-reviewed Journals and books, 10.713 citations and an H-index of 51.

ABSTRACT

The Place of Insulin Therapy in T2 Diabetes

Type 2 diabetes (T2D) is characterized by insulin resistance, β-cell failure, and progressive deterioration of glycaemic control. Early intervention and maintenance of good glycaemic control from the time of diagnosis is strongly recommended as the most effective way to reduce the burden of chronic complications. Insulin remains the cornerstone of diabetes treatment. In people with T2D, insulin can be used as a first-line treatment for those intolerant to other anti-diabetic drugs, or in the presence of renal/hepatic failure. Moreover, although many other pharmacological agents are now available, insulin is still recommended as the preferred treatment for patients with T2D who are not at the target of HbA1c, despite lifestyle changes and maximum dose of non-insulin treatment.

Research has given rise to short-acting/prandial- and long-acting/basal insulin analogues as alternatives to human insulin. These and the availability of novel anti-hyperglycemic drugs (GLP-1RAs/SGLT2 inhibitors) that can be combined with insulin, provide opportunities for treatment that reduce the side-effects of insulin and address the pathogenetic mechanisms of T2D. When oral agents fail to reduce HbA1c, intensification of insulin treatment is a challenge for clinicians and follows three consecutive steps with treat-to-target dose adjustments: (1) administration of basal insulin before sleep. (2) Addition of prandial insulin before the main meal of the day (basal-plus). (3) Addition of prandial insulin prior to each meal (basal-bolus). As an alternative to short-acting/prandial insulins, GLP-1RAs can used as add-on therapy to basal insulin to intensify treatment. This has advantages since GLP-1RAs reduce weight gain, increase insulin sensitivity/reduce basal insulin requirements keeping the dose low, and minimize the risk of hypoglycemia.