The Voice of the Editor-in-Chief

Dear Colleagues,

The 52nd Congress of the European Association for the Study on Diabetes (EASD) was held on 12–16 September 2016 in Munich. As always, the Congress was a platform for the participants to exchange the latest knowledge and experience in the field of diabetes. This meeting provided the opportunity to update the current knowledge on diabetes, both in terms of basic sciences and practical care of patients with carbohydrate metabolism disturbances, based on the results of recent clinical trials — randomised trials and supplementary observational studies.

Based on the trials performed in the recent years, new groups of hypoglycaemic drugs were introduced, such as incretin-based agents [glucagon-like peptide-1 (GLP-1) agonists and dipeptidyl peptidase-4 inhibitors (DPP-4), also called gliptins] and sodium-glucose co-transporter-2 (SGLT-2) inhibitors, also called flozins. These drugs were included in recent standards of care and the guidelines on the management of diabetic patients. These drugs used on every stage of diabetes, both in monotherapy and in combination with other oral glucose-lowering agents and/or insulin, give hope for the change of treatment philosophy and improvement of patients' quality of life. During the Congress, I listened with great interest the discussions about clinical trials whose results were critical for the change of the pharmacotherapy of diabetes and abovementioned treatment philosophy. These landmark trials are: the LEADER study with liraglutide (a GLP-1 agonist) and the EMPA-REG-OUTCOME study that assessed empagliflozin (SGLT-2 inhibitor). Particularly interesting in this context are SGLT-2 inhibitors, because they reduce renal glucose reabsorption and, thereby, increase urinary glucose excretion. Their action is independent from insulin, both in terms of insulin secretion and action. The EMPA-REG OUTCOME is a long-term clinical trial aimed to assess the effect of therapy with empagliflozin on cardiovascular outcomes in high cardiovascular risk patients with type 2 diabetes. This is undoubtedly the first trial that showed unequivocally that this drug added to glucose lowering therapy significantly reduced the risk of cardiovascular episodes. Importantly, the trial was designed specifically to evaluate such results.

The results of the EMPA-REG OUTCOME trial concerning microvascular complications of diabetes were also widely commented during the Congress, because they revealed significant reduction in the risk of diabetic nephropathy development and progression. It is postulated that this effect may result from the drug's influence on intraglomerular pressure via afferent arteriole constriction. Moreover, this finding is a contribution to the discussion about potential combination of flozins and angiotensin converting enzyme inhibitors, which in turn have nephroprotective effect via glomerular efferent arteriole dilation.

Here, it should be mentioned that also the LEADER trial, that assessed cardiovascular safety of one of GLP-1 agonists, liraglutide, in the population of type 2 diabetes patients with high risk of major cardiovascular event, showed significant risk reduction of cardiovascular death. Equally exciting were observations concerning semaglutide and the SUSTAIN 6 trial, especially considering the fact that this is the first oral GLP-1 agonist, thanks to conformulation with the absorption enhancer SNACK. Similarly, there were high expectations related to a new formulation of another GLP-1 agonist, exenatide — ITCA 650, that provides significantly prolonged action and, importantly, reduces fluctuations of blood glucose, which itself unfavourably affects the risk of development and progression of cardiovascular complications and the patients' quality of life.

Despite large-scale preventive interventions, diabetes remains a significant public health problem that becomes increasingly important both from clinical and epidemiological point of view. Our knowledge about diabetes becomes deeper, which results in important changes in our understanding of the disease and in treatment schedules, but the more we know, the more we are convinced that we are far away from getting the full information.

Editor-in-Chief

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