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SGLT2 INHIBITOR's: A new drug treatment for type II diabetes

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Despite the availability of numerous treatment options for type 2 Diabetes, the proportion of patients achieving glycemic goals is unacceptably low; therefore, new pharmacotherapies are needed to promote glycemic control in these patients. Sodium glucose co-transporter-2 (SGLT2) inhibitors offer a novel approach to treat diabetes by reducing hyperglycaemia via increased glucosuria. The kidney plays an important role in glucose metabolism, and has been considered a target for therapeutic intervention. The kidney normally reabsorbs 99% of filtered glucose and returns it to the circulation. Glucose reabsorption by the kidney is mediated by sodium-glucose co-transporters (SGLTs), mainly SGLT2. The SGLT2 (Sodium-Glucose co-transporter 2) inhibitors block the reabsorption of glucose which is secondary active transport to sodium in the proximal convoluted tubule of renal tubular system and thus increase glucose loss in the urine. This is responsible for their modest glucose-lowering effect. SGLT2 inhibitors offer several advantages over other classes of hypoglycemic agents and is generally well tolerated. Due to their insulin-independent mode of action, SGLT2 inhibitors provide steady glucose control without major risk for hypoglycemia and may also reverse β -cell dysfunction and insulin resistance they also cause reduction in both body weight and blood pressure.

Biography

Ayesha Rubina has completed MBBS from JJM Medical College, Davangere. She is currently pursuing her post graduation (MD) from Rajiv Gandhi University of Health Sciences. She has completed various preclinical and clinical studies like antianxiety property of furosemide, antidepressant property of furosemide and is currently engaged in a clinical study of comparative study of Rupatadine and Cetirizine for safety and efficacy in Allergic rhinitis.

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